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EUROPE

1. Many Europeans Still Exposed To Harmful Air Pollutants

Almost a third of Europe’s city dwellers are exposed to excessive concentrations of airborne particulate matter (PM), one of the most important pollutants in terms of harm to human health as it penetrates sensitive parts of the respiratory system. The EU has made progress over the past decades to reduce the air pollutants which cause acidification, but a new report by the European Environment Agency (EEA) shows that many parts of Europe have persistent problems with outdoor concentrations of PM and ground level ozone.

The EEA’s ‘Air quality in Europe — 2012 report’ examines citizens’ exposure to air pollutants and provides a snapshot of air quality in Europe. The report is intended to support the development of more effective clean air policies.

Key findings

- **Particulate matter (PM)** is the most serious air pollution health risk in the EU, leading to premature mortality. The report estimates that in 2010, 21 % of the urban population was exposed to PM10 concentration levels higher than the most stringent, daily, EU limit value designed to safeguard health. Up to 30 % of the urban population was exposed to finer PM2.5 concentration levels above the (less stringent) yearly EU limit values. According to the WHO reference levels, which are even tighter than those imposed by EU law, respectively up to 81 % and 95 % of urban dwellers were exposed to PM concentrations that exceed the reference values set for the protection of human health – underlining the urgency of the coming review of air legislation.

- **Ozone (O3)** can cause respiratory health problems and lead to premature mortality. Exposure in cities is very high – 97 % of EU urban inhabitants were exposed to O3 concentrations above the WHO reference level in 2010. 17 % were exposed to concentrations above the EU target value for O3. In 2009, 22 % of arable land in Europe was exposed to damaging concentrations of O3, leading to agricultural losses.

- **Nitrogen dioxide (NO2)** is a major cause of eutrophication (excessive plant and algal growth in water) and acidification, and also contributes to the formation of PM and O3. In 2010, 7 % of Europeans living in cities were exposed to NO2 levels above the EU limit values. National emissions of nitrogen oxides in many European countries still exceed emission ceilings set by EU legislation and under United Nations agreements.

- **Benzo(a)pyrene (BaP)** is a carcinogen. A considerable proportion of the urban population in the EU (20-29 % between 2008 and 2010) were exposed to concentrations exceeding the EU target value, which must be met by 2013. The increase in BaP emissions in Europe in recent years is therefore a matter of concern.

- **Sulfur dioxide (SO2)** is a big success story: emissions have been reduced significantly in recent years thanks to EU legislation requiring the use of emissions scrubbing technology and lower sulfur content in fuels. 2010 was the first year that the EU urban population was not exposed to SO2 concentrations above the EU limit value.
Carbon monoxide, benzene and heavy metals (arsenic, cadmium, nickel, lead) concentrations in outdoor air are generally low, localized and sporadic in the EU, with few exceedances of the limit and target values set by EU legislation.

In recent years, the EEA has published annual information on air pollutant emissions and exceedances of emission ceilings under the National Emission Ceilings (NEC) Directive. Later this year, the EEA will publish a retrospective analysis of whether the health and environmental objectives of the NEC Directive for 2010 have been met.

The European Commission is preparing a review of EU air legislation in consultation with stakeholders and will put a particular emphasis on air pollution policies in 2013.

On average, air pollution was reducing human lives across the region by roughly eight months, the report said. It also quoted separate European Commission-funded research showing that a reduction in particulate levels could extend life expectancy by 22 months in some areas. The report did not spell out where those areas were, but it said that Poland and other industrial regions of Eastern Europe had particularly high levels or particulate pollution. Alone among British cities, London also exceeded daily EU limits for particulate matter.

Speaking after the launch of the report, EU Environment Commissioner Janez Potočnik said that a review of EU air quality laws next year needed to bring EU limits on pollution levels closer to the stricter World Health Organization (WHO) recommendations on safe levels of pollutants. “This (the report) is a really serious warning about the importance to our quality of life and health,” Potočnik told reporters.

Apart from the impact on health, EEA Executive Director Jacqueline McGlade said that the pollution costs the bloc 1 trillion euros ($1.3 trillion) a year in healthcare and dealing with the wider impact on ecosystems.

In 2010, 97 percent of EU inhabitants were exposed to ozone above the WHO reference levels - and 17 percent above the much lower EU target level. The pollutants come from fumes from cars, industry and household fuel burning. After going through complex chemical reactions in the air, the pollutants get into water and agricultural land, thereby posing a threat to agricultural production.

Janez Potočnik European Commissioner for Environment noted that he has launched a comprehensive review of the EU’s air policy in 2013 which will become “Year of the Air”. In a recent speech, he outlined five key areas to which he will attach specific importance in the review.

“First: To protect our health. There is a very large body of evidence on the health significance of air pollution. This is why I will continue to attach the highest priority to this area. We are cooperating closely with the World Health Organization to review the latest scientific evidence on the health impacts of all pollutants regulated under the EU legislation, along with an evaluation of emerging risks to health from air pollution. This evidence is telling us that 81 % of EU citizens are exposed to levels higher than the limits recommended by the World Health Organization. The conclusions from this work will guide us in identifying what needs to be done to minimize negative health impacts from air pollution.

Second: To protect our natural capital and promote a more sustainable agriculture. The National Emissions Ceilings Directive, adopted in 2001, provides one of the backbones of EU
air legislation by effectively capping emissions of key air pollutants – sulfur dioxide, nitrogen oxides, volatile organic compounds, and ammonia. While there are also health benefits, the main objective is to protect our nature by abating acidification and eutrophication. Since these also reduce crop yields, this should help in promoting a more sustainable agriculture.

The time is now ripe to update and strengthen the provisions of this Directive. In particular, we should integrate the successful revision of the Gothenburg Protocol, agreed in Geneva in May this year, to include more ambitious ceilings for 2020, as well as including Particulate Matter. But we also need to consider how the Directive should evolve in the longer term, up to 2025 or perhaps 2030. It is important to ensure legal certainty and predictability. The NEC revision will be a main feature of the air review next year.

Third: To ensure better implementation. Unfortunately, we are presently facing quite a number of breaches in EU air quality legislation. Some Member States and regions are facing persistent problems in meeting the existing air quality and emission standards. As Jackie (Professor McGlade) just pointed out, a significant proportion of Europe’s urban population live in areas where exceedances of EU air quality standards occur.

We are currently taking infringement action against a large number of Member States relating to breaches of the limit values for Particulate Matter, Nitrogen Dioxide and other pollutants. But prevention is often the best cure: where possible, we try to help regions and cities when they are developing their air quality plans by spreading good practices.

I recognize that part of the problem lies with the coherence of our policies. For example, the breaches of the NO2 limit value reflect the fact that the Euro standards for vehicle emissions have not succeeded in bringing down real-world emissions of NO2 to the levels set out in the legislation. We need to work on changing that situation. But the main issue remains with Member States. They have insisted on flexibility in applying air quality legislation. This has, unfortunately, not led to better implementation. Too often, the response has been too late.

I will work constructively with the Member States to resolve this problem. As said in the Implementation Communication, we need clear commitments from Member States to put measures in place, with benchmarks and timelines, to deliver the required results. These commitments need to be formalized and publicly available, so that stakeholders are confident that their concerns are actually being addressed. Such "partnership implementation agreements" could provide a good mechanism for resolving our implementation problems.

Fourth: To encourage innovation and address emissions at source. Industry, transport, energy production, agriculture and household consumption are important engines of growth and prosperity, but they are also sources of pollution.

For industry, we already have a solid legal framework in place – the Industrial Emissions Directive. It includes some of the most important provisions for reducing pollution to air, and covers over 50,000 installations in the EU. It requires industry to apply "Best Available Techniques", and is therefore also a key instrument to green our economy and push innovation.

When it comes to transport, the industry has innovated to cut emissions from vehicles as a result of the EU-wide provisions called Euro standards, and I am continuing to work closely with Vice-President Tajani to ensure that air quality and transport policies go hand-in-hand. There is an urgent need to address air quality problems linked to the failure of Euro standards to
reduce NOx emissions from diesel cars. Another important achievement in this sector is the directive on lower sulfur limits in marine fuel. This was adopted just a few days ago in Parliament, and will significantly cut sulfur emissions from ships both in the short and medium term. A third challenge will be to stimulate innovation through better emission standards for off-road vehicles.

Turning to agriculture, there is a large untapped potential for doing more. We need to mainstream existing technology options to abate ammonia, and fully exploit win-win opportunities for farmers. A lot will depend on the fate of the proposed support measures for ammonia abatement programs in the Commission's proposals for the reformed Common Agricultural Policy and the rural development programs. I certainly hope that Member States will support these provisions.

Fifth – and this links closely to what I said earlier about the importance of greening our economy – to promote innovation for sustainable growth.

Some still argue that in times of severe economic hardship, air pollution measures are too costly. I would argue that air pollution itself imposes much greater costs on the economy. If you consider all costs, including natural capital accounting, clean air is an investment that makes a lot of economic sense. We cannot afford not to act. The 2005 thematic Strategy concluded that there is a loss in statistical life expectancy in the EU of over 8 months due to emission of particles to the air, equivalent to 3.6 million life years lost annually. In monetary terms, it was estimated that associated costs would amount to between €189 - €609 billion per year in 2020. Our current analysis shows that if we do nothing, we will see 200,000 premature deaths in the EU by 2020 due to particle emissions alone - but with concerted action, this number can be pushed down to 130,000. To invest in clean air means to invest in our future.

But those who argue that it would be too costly are on weak ground even from a strict competitiveness perspective. Let us put aside all the health and environmental benefits for a moment –important as they are – and look instead at the economic arguments: Let's take the US and China as examples.

We know that the US air quality legislation is among the most stringent in the world – with California leading the way. We also know that China is now stepping up their air quality monitoring requirements and emission controls significantly. And we know that other emerging economies will follow suit. This will create an enormous demand for products and industrial processes that emit less. So a strengthened air quality regime in the EU will actually benefit European competitiveness by giving us a lead in these growing markets.

Sustaining air quality is therefore not only an environmental objective, but also an economic opportunity. As part of the review, I am considering setting up an innovation program specifically targeted on clean air, to support our industry to invest in clean technologies for clean air. I would like to launch an appeal to you all for your ideas on what the Commission could do to spur innovation and economic opportunities in this area.

Finally, an ambitious EU air quality policy cannot be implemented without a strong knowledge base. We need scientifically sound, up-to-date information, and for this reason, modern monitoring and reporting tools are crucial because they allow us to evaluate policies and take effective decisions.”
Professor McGlade speaking at the same hearing said EU air quality data has been systematically collected since 2001. “We have an enormous wealth of information ... [but] we're just not seeing the declines that we need” in the levels of some pollutants, she said. On fine particles in particular, the European Union is lagging behind standards set in the U.S. Clean Air Act, McGlade said. Particulate matter is generated by traffic and from industrial sources, and from the burning of coal and other fuels. Amendments to the Gothenburg Protocol, agreed on in May, should be the basis for “a real push” on particulate matter and black carbon, which contributes to global warming, McGlade said.

2. Europe Still Playing Catch-Up On Air Pollution, Despite Reduction Successes

The European Union appears to have met several objectives to reduce the impacts of air pollution, according to the original scientific understanding used to set the objectives. But when using the improved scientific understanding of air pollution now available, it becomes clear that emissions need to be even further reduced to protect health and the environment.

The European Environment Agency (EEA) report ‘Evaluation of progress under the EU National Emission Ceilings (NEC) Directive’ considers whether the EU has successfully addressed environmental and health objectives set out when the Directive was adopted in 2001. The Directive aimed to reduce acidification of soil and freshwater, to reduce the area of ecosystems with excess nutrient nitrogen (which increase the risk of eutrophication) and to reduce exposure of humans, crops and forests to harmful ground-level ozone. These objectives should have been met by Member States limiting emissions of four important air pollutants by 2010, which would in turn reduce harm to health and the environment to agreed target levels.

“We published a report in June on the NEC Directive, showing that although the legislation has brought down emissions, broadly in line with its original objectives, there are still some problems with attainment,” EEA Executive Director Jacqueline McGlade said. “But the report we are publishing today finds that Member States have even further to catch up on air pollution when the latest science is taken into account, showing how important it is that we keep investing in knowledge.”

The ceilings to limit emissions were designed to ensure that the health and environmental objectives were met cost-effectively. There have been significant cuts in air pollutant emissions between 1990 and 2010: sulfur dioxides (-82%), non-methane volatile organic compounds (-56%), nitrogen oxides (-47%) and ammonia (-28%). Nevertheless, twelve EU Member States exceeded at least one of the ceilings agreed for these air pollutants, as documented in a report from the EEA earlier this year.
Countries found it most difficult to reduce nitrogen oxides, with Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Luxembourg, Malta, the Netherlands, Spain, and Sweden exceeding their thresholds. Emissions of nitrogen oxides remained high because of increases in highway traffic, the EEA said. Germany and Spain also exceeded NMVOC limits, and Finland and Spain exceeded ammonia limits.

There are many ways of assessing whether environmental targets have been met. The new EEA report uses two different approaches to ensure that results are both impartial and objective:

- Past knowledge: an assessment using the tools and approaches from the time the objectives were defined a decade ago.
- Present knowledge: a state-of-the-art assessment using, as far as feasible, the latest scientific understanding, including an advanced methodology and higher resolution air quality modeling.

Using these approaches, it becomes evident that the impacts of air pollutants covered by the NEC Directive are in most cases more serious than would have been evident from using past knowledge alone.

Eutrophication: High emissions of nitrogen oxides and ammonia lead to excessive levels of nutrient nitrogen, for example in grasslands, heaths and nutrient-poor lakes. While the objective to reduce areas at risk of eutrophication was met according to past knowledge, present knowledge indicates that eutrophication caused by atmospheric deposition is still a major environmental problem.
Acidification: The EU has the objective to halve, at least, the areas at risk of acidification between 1990 and 2010. Sulfur dioxide, nitrogen oxides and ammonia emitted to the air contribute to acidification of water and soil.

The objective has been largely met across the European Union if the old methodology is used. The risk of acidification also appears to be markedly reduced when new methods are applied, but there are still many areas of Europe where the acidification objective is not yet met. This is because the more advanced methodology takes into account the specific effects on different ecosystems, for example the higher rate of acid deposition in forests.

Ozone: Breathing high levels of ozone can cause respiratory problems and contribute to premature death. The NEC Directive’s objective to reduce human exposure to ozone has been largely met, according to both methodologies, with the exception of some parts of southern Europe, particularly northern Italy.

Ozone also damages vegetation, such as crops and forests. According to the modeling results the targets to protect crops were mostly met, even when using the newer methodology, with the exception of Spain and Portugal. However, the objective to protect forests was clearly not achieved in most of Europe, with the exception of the Nordic countries and the United Kingdom.

While the EEA’s latest report stresses the adverse effects of air pollutants on the environment, a recent EEA assessment of air quality in Europe found that approximately one third of European city dwellers are exposed to pollutants above EU limits to protect health.

The European Commission is currently reviewing the European Union’s air policy. Amongst other initiatives, the Commission is expected to propose a revised NEC Directive in 2013 at the latest, which is likely to set objectives for 2020 and beyond for relevant air pollutants. In the meantime, the NEC Directive remains in force and requires European Union Member States to keep emissions below national ceilings beyond 2010.

The EEA said the European Commission should take into account the more detailed data and models now available in its review of EU air quality legislation, which has been promised for fall 2013.

3. Lawmakers Urged To Back Tough Clean Air Package

With an overhaul of air quality laws due within a year, health advocates are calling for the European Commission to resist pressure to tone down the EU’s pollution standards and instead replace them with stronger UN guidelines. The call for tougher anti-pollution measures came two days after a report by the European Environment Agency showed that nearly one-third of urban residents breathe air that is far dirtier than the law allows. The tally rises to well over 80% when the recommendations of the UN World Health Organization are applied.

“If we are serious about health, we have to apply these [WHO] standards,” Anne Stauffer, deputy director of the Brussels-based Health and Environment Alliance, told reporters. “We know and see that air pollution continues to be a massive problem for the health of individuals and for our economies, and we think that the MEPs need to strengthen the guidelines and should reject attempts to weaken them,” Stauffer told a European Parliament hearing on air quality.
The European Commission is to present revisions to the EU’s 2008 air quality directive in 2013 - designated ‘The Year of Air’ by the EU executive. Air quality is expected to be among the priorities for Ireland when it takes over the rotating European Council presidency on 1 January 2013.

“It is rather clear that we are far exceeding most [levels] of pollutants, in particular the major pollutants, and if we compare to the WHO standards, they are much higher,” said Valentin Foltescu, the EEA's air quality analyst. Speaking at the Parliament’s Intergroup on Climate Change, Biodiversity and Sustainable Development, Foltescu said particulate matter, ozone and nitrogen dioxide are the leading polluters in cities. Nitrogen is one of the byproducts of diesel exhaust.

But any talk of tougher pollution guidelines may seem superfluous given the record of compliance with the existing measures. Some 20 countries have been accused of failing to implement or enforce the air quality directive. The Commission in recent months has filed infringement cases against Poland, Slovenia, Italy, and Portugal.

Some of Europe’s most industrially productive regions have called for more flexibility in enforcing pollution rules at the risk of putting the brake on economic growth - something Stauffer and environmental groups say the Commission and European Parliament must resist.

The Commission has already shown flexibility. In June, the European Court of Justice handed two Dutch NGOs a victory when it ruled the Commission improperly rejected their request for a review of the executive’s decision to give the Netherlands a temporary exemption from the air quality laws. The case was brought by Vereniging Milieudefensie in Amsterdam and Stichting Stop Luchtverontreiniging in Utrecht in 2009, a year after the Air Quality Directive was adopted.

Meanwhile in Britain, the ClientEarth legal organization launched several court challenges in the past year against the British government, arguing is breaching the 1 January 2010 EU deadline for complying with air quality plans for London and 16 other cities. The group contends that the government is neglecting its EU obligations to reduce emissions that contribute to urban smog and particulate pollution.

Those concerns were reinforced in a damning British Parliament Environmental Audit Committee report accusing the government of “putting thousands of lives at risk by trying to water down EU air quality rules”. Both the parliamentary report and ClientEarth contend that chronic pollution and air quality problems in London, Manchester, Birmingham, Glasgow and other cities kill upwards of 30,000 Britons annually.

### 4. Mercedes-Benz Finds Risks of R1234yf Refrigerant in Passenger Cars

Daimler has provided relevant authorities with the findings of an investigation which raises questions on the safe usage of the new internationally recognized R1234yf refrigerant. Up to now, the climate-friendly chemical was set to be used worldwide in the automotive industry and was previously perceived to be safe. This was determined by numerous laboratory and crash tests carried out by international vehicle manufacturers and independent institutions.

Despite multiple confirmations of non-critical results, Daimler carried out a series of additional tests on the new refrigerant as part of a new real-life test scenario developed in-house which goes above and beyond the legally prescribed requirements.
In the new real-life test scenario, the refrigerant is dynamically dispersed at high pressure near to hot components of the test vehicle's exhaust system. This corresponds to a serious head-on collision in which the refrigerant line is severed and the reproducible results demonstrate that refrigerant which is otherwise difficult to ignite under laboratory conditions can indeed prove to be flammable in a hot engine compartment. Similar tests of the current R134a refrigerant did not result in ignition.

Due to the new findings of this study and the high safety demands at Mercedes-Benz, this chemical will not be used in its products. The company therefore wishes to continue to use the proven and safe R134a refrigerant in its vehicles.

Daimler has already informed the relevant authorities of these facts and will also make the results of this investigation available to all relevant associations as well as to other vehicle manufacturers.

5. EU Provisionally Agrees to Tighten Limits on Pollutant Emissions from Motorcycles

EU negotiators have provisionally agreed to tighten emission standards for motorcycles, scooters, and some categories of off-road vehicle sold in the European Union after 2015. Under the Sept. 28 agreement, starting January 1, 2016, mopeds would be required to meet the so-called Euro 3 standard, and heavier motorcycles the Euro 4 standard. In 2020 motorcycles would have to conform to the Euro 5 standard.

The Euro standards are part of the broader technical and safety standards that vehicles sold in the European Union must meet. Current emission limits for motorcycles date from 2002 and cover carbon monoxide, hydrocarbons, and nitrogen oxides.

The European Parliament said in a statement that tougher standards are needed because motorcycles and mopeds emit disproportionally high levels of pollutants. The revision would cover about 30 million vehicles in the European Union, the Parliament said.

The provisional agreement was negotiated by Dutch center-right lawmaker Wim van de Camp for the European Parliament and by Cyprus, which currently holds the rotating presidency of the EU Council, which represents the governments of EU member states. Both institutions would have to ratify the agreement before it is adopted. The full European Parliament is scheduled to vote on the measure in November.

6. MEPs Vote for Cleaner Shipping Fuel

Environmental groups have welcomed a European Parliament vote which will help cut back air pollution by significantly decreasing the amount of sulfur allowed in marine fuels. The Directive on Sulfur in Marine Fuels which was tentatively agreed upon before the summer break by the European Parliament negotiators, the Commission and the Council, has now been formally adopted by an overwhelming majority of MEPs.

Members voted 606-55 in favor of the legislation, which would bring EU countries into line with updated International Maritime Organization limits.
Under the law, shipping fuels used in European waters would have to have a sulfur content of no greater than 0.5 percent by 2020, compared to a limit of 3.5 percent in force since January 1, 2012.

For the Baltic Sea, the North Sea, and the English Channel, which have been designated “sulfur emission control areas,” the limit will be 0.1 percent by 2015, compared to 1 percent currently.

Green groups welcomed the adoption of the new law as a very significant step towards the reduction of air pollution from shipping. T&E shipping specialist Antoine Kedzierski said: “This is a very encouraging first step. Now the EU needs to follow the USA and Canada by making the entire EU coastline a low-SO2 and low-NOx-zone, and by beefing up its enforcement regime.”

In addition to being a danger to human health, sulfur emissions are a major driver behind environmental problems such as acid rain affecting soil and water and damage to biodiversity.

Louise Duprez, Policy Officer on air pollution at the European Environmental Bureau (EEB), said: “Today’s vote is good news for all EU citizens. Shipping air pollution causes 50,000 premature deaths in Europe every year¹ so this reduction will bring clear benefits to people’s health, quality of life and environment, as well as leading to important public health savings.”

The law will be finally adopted when the EU Council, which represents member states, approves it at a forthcoming session.

Green NGOs are now stressing the need for the European Commission and Member States to address other types of pollutants from ships, such as CO2. Nitrogen oxides emissions from ships are also of great concern, say the NGOs, but there are still no EU standards or measures in place for controlling their release. They call upon the Commission to propose measures to address nitrogen oxides from both new and existing ships as soon as possible.

7. EU Member States Back Stricter Limits on Sulfur in Shipping Fuel

EU member states meeting in the EU Council on October 29th adopted a revision to a 1999 law that reduces the proportion of sulfur permitted in marine fuels, the final step before the measure’s publication in the EU Official Journal. The revision writes into EU law updated International Maritime Organization limits on sulfur that aim to reduce air pollution. Under the revision, ships in EU waters will by 2020 have to use fuel with sulfur content no greater than 0.5 percent. In certain “sulfur emission control areas” (SECAs), or environmentally sensitive areas, the limit will be 0.1 percent by 2015. Current limits are 3.5 percent for shipping outside SECAs and 1 percent in SECAs.

In a statement, the EU Council said the tighter limits will “considerably” reduce “air pollution in the form of sulfur dioxide and particulate matter, which harm human health, and contribute to acidification.”

Under the legislation, EU countries will be required to introduce “effective, proportionate and dissuasive” penalties for noncompliance, though the exact form of sanctions will be left to individual nations.

The law will enter into force 20 days after publication in the Official Journal, which is expected in coming weeks. EU countries will then have 18 months to write it into their national legislative codes.

The EU Council decision to approve the legislation was a formality following a September European Parliament vote in favor of the law. The Council adopted the law without debate at a meeting of transportation and energy ministers.

8. EU To Monitor Shipping Emissions from Next Year

Global steps to reduce greenhouse gas emissions from the shipping industry are moving too slowly so the European Union will introduce its own system next year in a bid to accelerate reform, its executive body said recently. International shipping accounts for around 3 percent of the world's emissions of carbon dioxide and this share could go to 18 percent by 2050 if regulation is not in place, according to the International Maritime Organization.

There is currently no international regulation of greenhouse gas emissions from ships. Despite years of efforts in the IMO and the United Nations' climate division, global measures have been limited. The IMO agreed last year to introduce energy efficiency measures for the design of new ships from 2015, but this measure alone will not be enough to ensure emissions are cut quickly enough, the EU Commission said in a statement. "Discussions about further global measures are ongoing at IMO level, but we need intermediary steps to quickly deliver emissions reductions, such as energy efficiency measures also for existing ships," it added.

The EU Commission has threatened to enforce its own shipping regulations if the IMO fails to find a global solution, as it has with aviation. The aviation sector was included in the EU's Emissions Trading System (ETS) from January 1 this year but opposition and threats of retaliation from non-EU airlines have led to a major diplomatic row.

The EU Commission has said it was considering several options to cut shipping emissions, such as a fuel or carbon tax, mandatory emissions reductions per ship or inclusion in the ETS.

A global approach towards setting a system for monitoring, reporting and verification of emissions based on fuel consumption is seen as a starting point towards a globally-agreed market-based solution. It is "our intention to pursue such a monitoring, reporting and verification system in early 2013...This will help make progress at global level and feed into the IMO process," the Commission said.

However, environmental groups were disappointed by the EU Commission's plan, saying monitoring did not address the main issue of reducing emissions from ships. "The call for improved energy efficiency for existing ships is a welcome move and efforts should proceed in parallel at the EU and IMO level but should not delay an early decision on an EU market-based
“measure,” said non-governmental organizations Transport & Environment and Seas at Risk in a joint statement.

The sector is opposed to entering the EU's emissions trading scheme (ETS), one of the policy options being considered by the European Commission has part of its consultation. Although resistant to a regional scheme, the sector would prefer paying into a compensation fund. This charge on fuel would encourage emission reductions and fund the development of low-carbon technologies and contribute to international climate finance. Other options are a carbon tax or binding targets.

Although talks on carbon emissions are dragging on, the UN maritime agency has made important progress on another front. The energy efficiency design index (EEDI), phased in from next year, sets increasingly stringent standards on the fuel efficiency of cargo transport for ships built across the world. It will be the first time a mandatory climate-related regime applies to a global industry, covering new bulk cargo carriers, container ships and similar vessels. It should cover 72% of new ships' emissions. The IMO expects the EEDI to cut CO2 emissions by about 45 million tons in 2020, and by 180-240Mt in 2030.

The EEDI mainly applies to ships powered by conventional heavy fuel oil (HFO). But the sulfurous fuel seems to be on the way out, being killed off by its price and tighter pollution limits agreed at international level.

The price of oil has leapt up in recent years and now forms about half of vessels' operating costs. Tighter restrictions on the sulfur content of maritime fuels will drive up costs even further over the next decade. But oil is not the only fuel for ships. Gas power and other propulsion technologies are being increasingly adopted, although take-up is still limited. Liquefied natural gas (LNG) is about half the cost of low sulfur HFOs on the European market and ships running on it emit about a quarter less CO2. LNG also produces virtually no sulfur oxides and reportedly about 80% less nitrogen oxides – facilitating entry into emission control areas (ECAs), such as the North Sea and around North America. LNG is being considered by Japan and other states.

But the main problem with LNG is its limited availability. Infrastructure costs are significant, future demand is uncertain and handling the liquefied gas at -162 degrees centigrade is challenging. LNG-fuelled ships are also about 20-25% more expensive to build and gas needs about 60% more storage space than oil.

The end result is what EU commissioner Siim Kallas calls a "chicken and egg" situation, with ship owners reluctant to build ships they may be hard-pressed to fuel. The EU executive has had talks this year with ship owners and ports on how to speed up LNG adoption and will launch a stakeholder platform this year. The European Maritime Safety Agency is also set to publish rules and standards on gas bunkering by the end of the year, following consultation this November.

Barriers to LNG adoption are much lower for ships such as the Finnish-built Viking Grace which are designed for a point-to-point route, particularly within emission control areas. This state-of-the-art gas-electric ferry, the first of its kind, will ply the waters between Finland and Sweden from next year.

Other environmentally friendly technologies being introduced include more streamlined hulls, low-friction coatings and fixed sails. Mitsubishi also claims its bubble lubrication system cuts fuel
consumption by 7% or more. The firm is building it into two ships for the German cruise line AIDA.

But such developments may not be appropriate, or possible, in existing ships. Accordingly, the IMO agreed a counterpart to the EEDI last year – the ship energy efficiency management plan (SEEMP). Under the agreement, ships more than 400 tons will be required to have such plans from January. Combined with the EEDI, SEEMP plans should cut CO2 emissions by up to 180Mt each year by 2020, or 9-16% compared with business-as-usual, says the IMO. By 2030, it should save up to 390Mt, and between $85-150bn in fuel costs each year.

Nevertheless, SEEMPs, the high price of oil and tough business conditions worldwide are giving greater impetus to improving energy efficiency. Routing to avoid adverse weather, optimizing draft and monitoring fuel consumption are all already commonly implemented, or planned, by shipping firms. But a lack of certainty on the cost and benefits of particular measures often holds back action.

There are also structural barriers, such as owners having little incentive to save energy, as charterers pay for fuel. And contract terms and first-come-first-served policies at ports may thwart cutting speed, which is an easy way of cutting CO2. But shipping organizations are starting to resolve these issues and there will be more pressure on them to do so as carbon measures start to bite.

9. With Its New Cruise Ferries, Fjord Line Moving To LNG

Fjord Line has chosen Rolls-Royce as the supplier of the LNG engines for its new cruise ferries. This is a well-proven technology, produced in Norway, which has been used on a number of ferries and ships used in the offshore industry. When MS Stavangerfjord is put in operation in 2013, it will be the first and largest cruise ferry in the world to sail with a single LNG engine.

Both ships will be powered solely by liquefied natural gas (LNG) instead of heavy fuel oil. This means that they can offer the greenest sea routes between Norway and the EU. LNG contains no sulfur or heavy metals. It reduces CO2 emissions by 20-30 percent and emissions of NOx by around 90 percent compared to heavy fuel oil.

The two new cruise ferries, MS Stavangerfjord and MS Bergenstjord, were both designed and built to be operated using LNG instead of heavy fuel oil from the beginning. Other shipping companies base gas operation of their vessels on dual fuel engines. When a dual fuel engine is operating an amount of liquid fuel oil is injected together with the injected gas also when the engine is operated in so-called gas mode. A single LNG engine is operating as a spark plug engine solely injected by LNG and not with any mixture of liquid fuel
oil. By using only LNG as fuel, the environmental improvement will be significant, both along the coasts and in the harbors where the cruise ferries will operate.

10. New Guidelines Issued For Inland Waterways and Nature Protection

The Commission is issuing new guidelines on inland navigation and nature protection to assist this important sector in applying EU environmental legislation. The guidelines – "Inland waterway transport and Natura 2000 – sustainable inland waterway development and management in the context of the EU Birds and Habitats Directives" – explain how best to ensure that activities related to inland navigation are compatible with EU environmental policy in general and nature legislation in particular. The document also emphasizes the significance of the inland navigation for securing the long-term sustainability of the EU transport network and highlights the achievements of this sector in integrating nature protection into its activities to date.

"Inland waterway transport plays an important role in the transportation of goods across many parts of Europe," said Vice-President and Commissioner for Transport Siim Kallas. "This transport sector is considered to be safe, energy efficient and more environmentally friendly than other transport modes. But as it is one of many users of our rivers, it needs to be developed in an ecologically sustainable way." Janez Potočnik, Commissioner for Environment, hoped that the document will be "a useful tool to increase understanding between investors, planners, decision-makers and nature conservation promoters, enabling them to design sustainable navigation projects that meet the objectives of inland waterway transport while still respecting the ecological values of rivers."

The guidelines take a holistic approach to inland waterway transport and nature protection. They explain the policy context of inland navigation and biodiversity conservation in Europe. They stress that Natura 2000 sites are not designed to be ‘no development zones’ and that new developments are not excluded, provided that they guarantee a sufficient level of nature protection. The document also explains the legal obligations of infrastructure developers and managers from the point of EU environmental legislation, with a particular focus on the Birds and Habitats Directives. A number of case studies are presented, with examples of good practice showing how inland waterway development and management can go hand-in-hand with nature protection. The guidelines particularly emphasize the benefits of integrated planning, whereby environmental requirements are taken into consideration at every stage of the infrastructure development process and the participation of different stakeholders, including NGOs and civil society, is ensured in an active and transparent manner, securing win-win solutions for both sectors.

This document is the fourth guidance document on application of EU nature legislation in the context of strategic EU sectors. Previously published guidelines concerned wind energy, non-energy mineral extraction industry and developments in ports and estuaries.

11. EU Biofuels Rules a Step Forward, But Not Perfect, Commissioners Say

Concluding that crop-based biofuels such as ethanol and biodiesel are driving up food prices and not helping to reduce greenhouse gas emissions, the European Commission proposed on October 17th to limit their contribution to a renewable energy target for the transportation sector. The new rules to limit how much food can be made into biofuels are "not perfect" and make it harder to achieve overall goals on switching to low carbon energy, European Commissioners
said. But they insisted the proposals sent out the right signal to the biofuel industry, which would have to move on to new-generation fuels that do not compete with demand for food.

The Commission's proposal would amend the current Renewable Energy and the Fuel Quality Directives. Some of the key points of the proposal are:

- To increase the minimum greenhouse gas saving threshold for new installations to 60% in order to improve the efficiency of biofuel production processes and to discourage further investments in installations with low greenhouse gas performance;

- To include indirect land use change (ILUC) factors in the reporting by fuel suppliers and Member States of greenhouse gas savings of biofuels and bio liquids;

- To limit the amount of food crop-based biofuels and bio liquids that can be counted towards the EU's 10% target for renewable energy in the transport sector by 2020, to the current consumption level, 5% up to 2020, while keeping the overall renewable energy and carbon intensity reduction targets;

- To provide market incentives for biofuels with no or low ILUC emissions, and in particular for biofuels produced from feedstock that do not create an additional demand for land, including algae, straw, and various types of waste, as they will contribute more towards the 10% renewable energy in transport target of the Renewable Energy Directive.

In the absence of any significant sources of non-crop based biofuels, the 5% limit will put into doubt the 10% target for biofuels in the transportation sector. In order to meet the 10% target, at least nominally, the Commission proposes to multiple-count the share of biofuels made from certain feedstock. Biofuels from algae, certain municipal and industrial waste, straw, animal manure, sewage sludge, palm oil mill effluent, crude glycerin and some other sources would be counted towards the regulatory targets at four times their energy content. Biofuels from used cooking oil, animal fats, and non-food cellulosic and ligno-cellulosic materials would count twice their energy content.

The Commission had announced a major policy shift in September, saying it planned to limit crop-based biofuels to 5 percent of consumption, as part of a goal to draw 10 percent of transport fuel from renewable sources, mainly biodiesel and bioethanol. It has now formally published the proposal, which biofuel producers have said could devastate their business and green campaigners say fails to address the problem.

"Our analysis in the Commission is that it's still possible to achieve the 10 percent target, but if you were to ask me whether this proposal will make it easier, I would answer 'no',” Climate Commissioner Connie Hedegaard told reporters. Hedegaard and Energy Commissioner Guenther Oettinger earlier told a news conference that the proposal was "not perfect".

"Our analysis in the Commission is that it's still possible to achieve the 10 percent target, but if you were to ask me whether this proposal will make it easier, I would answer 'no',” Climate Commissioner Connie Hedegaard told reporters. Hedegaard and Energy Commissioner Guenther Oettinger earlier told a news conference that the proposal was "not perfect".

Science had moved on from when the Commission agreed the 10 percent biofuel target in 2008 and as knowledge increased, further changes could be necessary, the Commissioners said. The Commission's proposal, which would require EU member state and European Parliament approval, calls for adding indirect land use change (ILUC) criteria to the renewable energy target outlined in the EU Fuel Quality and EU Renewable Energy directives. The reason some first-generation biofuels are now considered problematic is that they can displace food
production into new areas, forcing forest clearance and draining of peat land. As a result, in some cases, first-generation biofuels can be worse for the environment than fossil fuels. Another human cost is the possibility of adding to food price inflation.

The new proposal includes ILUC factors to measure the indirect emissions of biofuels made from cereals, sugars and oilseeds, but they carry no legal weight in a watering-down of an earlier draft proposal. The proposal introduces three ILUC emission factors—for cereals (12 gCO2eq/MJ), sugars (13 g) and oil crops (55 g). As ILUC emissions must be calculated when biofuels are used to meet the 6% GHG intensity reduction in transportation fuels, the high ILUC factor for oil crops could disqualify most biodiesel made from rapeseed, soybeans, and palm oil.

While the proposal does not affect the possibility for Member States to provide financial incentives for biofuels, the Commission stated that in the period after 2020 biofuels should only receive financial support if they lead to substantial greenhouse gas savings and are not produced from crops used for food and feed.

12. Switch to Greener Cars Likely Good for Jobs, Says Study

A move to more fuel efficient cars and electronic vehicles would have a positive impact on employment, according to a study issued ahead of EU discussions on draft rules setting out how manufacturers should meet a 95gCO2/km target for 2020. The study by Dutch environmental consultancy CE Delft is a review of 30 existing research papers and reports commissioned by governments or lobby groups.

Recently a large number of studies have been published that claim that accelerated uptake of electrical vehicles (EVs) and fuel efficient cars in the market for automotive transport may have positive employment benefits. Given the sharp rise in unemployment in the EU over the last three years, these studies have attracted the attention of policy makers and environmentalists, many of whom claim that more efforts should be undertaken by policy makers, car manufacturers and consumers to increase market penetration of advanced powertrains and/or fuel efficient cars.

The European Climate Foundation has asked CE Delft to undertake a literature review on this issue and to investigate if it is possible, from this literature, to determine whether a large-scale switch to advanced powertrains would yield positive employment benefits. In this literature review they investigated 30 studies, of which 23 studies have been identified as particularly useful. The literature review has been hampered by the fact that none of the 23 studies has taken a traditional economic analytical perspective where policy induced changes in demand for cars translate themselves into changes in quantities and prices in all relevant markets. The current literature should therefore be regarded as partial, fragmented and rather weak in its economic argumentation.

The reviewed literature mentions several direct and indirect impacts on employment, most of which are highly uncertain. An increase in fuel efficiency of cars with internal combustion engines (ICEs) for instance, may lead to more direct employment in the car industry due to the application of additional or more expensive components and through an increase in domestic and foreign demand. This positive impact is however, dependent on the competitiveness of the EU car industry. Shifting consumer preferences, a changing oil price, a tightening or loosening of credit constraints, changing exchange rates and the response of foreign competitors may either strengthen or weaken this impact.
In turn, a switch to EVs is likely to reduce direct employment due to the lower labor-intensity of the manufacturing process as compared to traditional manufacturing, the need for new, more capital-intensive plants and the imports of batteries. The additional need for EV charging infrastructure and the lead taken on foreign competitors could however reverse this negative impact and lead to an overall positive impact on employment in the EU. Again, many uncertainties surround this result.

Although it is difficult to come with a final verdict from this literature because of all the uncertainties, we believe that employment benefits are likely because of two conditions. First, the switch to fuel efficient cars and advanced powertrains can be done in such a way that the total costs of car owner-ship (purchase costs and mileage costs) are reduced. This would imply that consumer spending in other sectors of the economy will rise, certainly in the short run. Given the fact that the EU is currently in a situation of decreasing consumer expenditures and underinvestment, such a process may just be healthy for the EU economy.

Secondly, a final switch to EV manufacturing should enhance the competitive position of the EU car manufacturers in the long run. An ageing population is likely to create labor shortages for some occupations, for instance a lack of qualified engineers. EV manufacturing is considered less labor-intensive than manufacturing of ICEs. EV manufacturing may be better suited to the labor situation in the EU in the long run and thus preserve the competitive edge of car manufacturing in the EU.

Campaign group T&E urged lawmakers in the European Parliament and the Council of Ministers not to focus the debate too much on the concerns of a few sectors that are bound to lose out. Overall, such a switch will be good for jobs given the large indirect benefits such as lower oil imports, it says.

13. Stricter CO2 Target for Vans Possible, NGO Study Shows

A tighter CO2 target for new light commercial vehicles would raise their purchase price but pay for itself quickly through fuel savings, campaign group T&E said recently as it released a study that backs its call for cleaner vans. The study, by Dutch consultancy TNO, will also give ammunition to a cross-party group of MEPs calling for a more ambitious CO2 target for 2020. According to some estimates, vans account for 8% of road transport emissions in the EU.

The consultancy concludes that the 147 grams per kilometer target proposed by the European Commission would be considerably less challenging for manufacturers to meet than the 95g/km target adopted for cars. The study suggests that a 118g/km target would impose comparable costs on industry. This would help ensure that consumers are not tempted to buy cheaper, higher-emission vans to use as passenger cars, say authors.

This stricter target would increase the cost of a van by about 10%, or €2,000, on current prices. But this initial loss would be recovered within three years, well within the typical period of first ownership, they add. It would save about €6,500 in fuel costs and 23 tons of CO2 over a van's 13-year lifetime, says the report. Across the entire European fleet, it would save about 2.7 million tons of CO2 more each year than a 147g/km target.

The commission tabled its proposal to implement the 147g/km target in July. In an initial study commissioned by the EU executive before the proposal's publication, TNO had estimated that a 113.3g/km target would be feasible, based on the average marginal costs of meeting the 95g/km limit for cars.
The European Parliament's environment committee is expected to hold initial discussions in late November. A rapporteur has not yet been appointed.

14. France Plans to Increase Taxes on Air Pollution

The French tax on air pollutants such as sulfur oxides and solvents is going to triple, France's government has announced in its budget proposal for 2013. The tax will also be extended to five pollutants including benzene, mercury and arsenic. The decision confirms pledges made by French Prime Minister Jean-Marc Ayrault in September at a conference on future environmental policy. It will help the country comply with its air quality obligations under EU legislation.

According to the budget proposal, the existing tax on sulfur oxides, non-methane hydrocarbons, solvents and other volatile organic compounds will be set at €136.02 per ton compared with €45.34 now. In total, the measure is expected to raise about €38m from next year.

France is the member state with the second lowest level of green taxation in the EU after Spain. In country-specific recommendations issued in May as part of the European Semester, the European Commission said France had "ample room" for increasing green taxation to decrease the tax burden on labor.

In the transport sector, the French government wants a further tightening of the 'bonus-malus' tax for cars emitting high levels of CO2. The government expects to raise €177m from this tax. Subsidies to boost the purchase of cleaner vehicles will also be increased to €404m compared with €234m this year.

15. EU Environment Ministers in Disarray over Doha Stance

On October 25th, the European Union finalized its position on international climate negotiations ahead of the U.N. climate summit in Doha, Qatar, amid a disagreement about potential limitations on surplus emissions credits held by some countries. Environment ministers from the European Union's 27 member states, at a European Council meeting in Luxembourg, reaffirmed that the bloc would back a second Kyoto Protocol commitment period, would push for a broader international deal to replace the Kyoto Protocol to be agreed on by 2015 so that it can go into force by 2020, and would seek to make progress on measures approved at the 2011 U.N. climate summit in Durban, South Africa. However, the talks ended in disarray after coal-dependent Poland led opposition to more ambitious attempts to curb atmospheric pollution. The bitter spat over a huge surplus of U.N. pollution permits was highly technical, but EU officials said it had serious implications for U.N. efforts to tackle climate change.

"We have not moved at all," an EU official said on condition of anonymity. "The lack of agreement could endanger a second commitment period."

The European Union has taken a leading role in the Kyoto process, the only international framework for tackling climate change, whose first phase expires at the end of this year. Many EU nations have said the European Union's environmental integrity would be undermined if it held on to an excess of allowances - officially named Assigned Amount Units (AAUs) and referred to disparagingly as "hot air".

But Poland has repeatedly opposed efforts to stop it keeping its hoard of AAUs and it has garnered the support of other eastern European and Baltic states. Former communist countries
hold large AAU surpluses as a consequence of the decline in their industrial emissions in the 1990s when their economies collapsed, meaning that in most cases their emissions today are much lower than 1990, the base year for the Kyoto Protocol’s first commitment period. Poland holds the largest AAU surplus among EU countries. Poland has been backed by Bulgaria, the Czech Republic, Hungary, Lithuania, Latvia, Romania, and Slovakia in rejecting any limitation on the use of AAUs.

EU officials referred to "an east-west divide". Polish Environment Minister Marcin Korolec confirmed an agreed text had merely repeated previous wording and effectively "side-stepped" the AAU question. "This is a slight problem for negotiation (in Doha)," he said.

Cyprus, holder of the rotating EU presidency, said the AAU discussion could continue. "We will attempt to obtain an agreement in Doha. This is the mandate that the council (of environment ministers) has given to both the presidency and the EU," Sofoclis Aletraris, Cyprus’ minister of agriculture, natural resources and environment, told reporters.

Korolec said the so-called hot air, was "an acquired right". Poland has met its emissions-cutting goals, he said, leaving it with permits to spare, which can be sold to countries that have exceeded their pollution limits.

On the opposite side of the debate, nations, such as Britain, Denmark, France and Germany, have argued the excess permits need to be cancelled, not only to ensure EU integrity and climate ambition, but to create a level playing field for all nations, including developing countries. Emerging economies were not part of the first Kyoto commitment period and therefore have no surplus permits to retain or sell on.

Agreement on AAUs proved impossible a year ago when, as then EU president, Poland was at the head of the EU delegation to the Durban conference on climate change.

Last year’s Durban deal managed to keep the Kyoto process alive, but was heavily criticized for its lack of detail. Debate beginning in Doha on November 26th will attempt to plug major gaps, such as fixing the length of a second commitment period.

EU leadership was crucial to achieving any kind of accord in Durban last year, when its negotiating hand was strengthened by an alliance with small nations, including islands, which are sinking as ice caps melt and sea levels rise.

Apart from the problem with the AAUs, that alliance could be undermined by the reluctance of the world’s richer nations to agree on new sources of financing to help poor countries cope with the challenge of climate change, non-governmental organizations have warned. The European Union has committed cash for the period 2010-12, but has repeatedly failed to come up with any figures beyond then. The recent EU environment ministers’ meeting in Luxembourg only agreed vague wording on financing, leaving it for EU finance ministers meeting on November 13th to make any more precise commitments.

The 18th Conference of the Parties to the U.N. Framework Convention on Climate Change takes place in Doha Nov. 26-Dec. 7. Cyprus presently holds the rotating presidency of the EU Council, which represents EU member states, and will lead the EU negotiating team in Doha.
EU Parliament Sticks to Slow Carbon Reform Timetable; Temporary Fix a No Brainer

EU politicians have ignored European Commission efforts to hasten plans to bolster the bloc's carbon trading scheme (ETS), in which prices have plunged under a burden of surplus allowances generated by recession. That means that a European Parliament vote, as part of the proposals to prop up the Emissions Trading Scheme (ETS), will not take place until February, after the start of the next phase of the market, which runs from 2013-2020.

Early this month, the Commission said it was in talks to try to accelerate progress.

A temporary fix is "a no brainer", EU climate Chief Connie Hedegaard said recently, and reiterated her plea for political agreement on the issue before the year-end. The Commission is expected in November to publish plans to bolster the ETS, which earlier this year saw allowances collapse to a record low, far below the levels needed to spur green energy, chiefly because of a surplus of allowances generated by recession. Recently allowances were trading around 8 euros a metric ton, up from the low of 5.99 euros hit in April.

The short-term proposal, referred to as back loading, would temporarily remove a certain number of permits from the next phase of the ETS beginning 2013. "To stop over-flooding a market that is already over-flooded, that should be a no-brainer really and I hope that most member states can support that," Hedegaard told reporters during a visit to Dublin, which takes over the EU presidency in January.

The Commission is hoping to get agreement on the back loading proposal through a fast-track EU process. While the Commission has sought a faster pace in parliament, it too has been accused of not moving quickly enough since detail on its proposal is not expected before November. But the Commission aims to get swift agreement on withholding allowances, and this will continue with another meeting of officials representing the 27 member states.

The big decision for the committee is how many allowances to withhold. A Commission analysis presented three options -- withholding 400 million, 900 million or 1.2 billion allowances over the first three years of the market's next phase.

So far, the most outspoken opponent to reform of the ETS has been Poland, which is heavily dependent on carbon-intensive coal and says intervention could have negative economic consequences.

Aside from a short-term proposal, the Commission is expected to lay out plans for more far-reaching reforms, such as the permanent removal of carbon allowances, which would take longer under EU process.

The ETS is meant to be the cornerstone of the EU's policy on combating climate change, but allowances are so cheap that it costs less to burn coal for power than natural gas, which only emits around half as much carbon as coal. Another problem is the international row stirred by the EU decision to make all flights using EU airspace buy allowances on the ETS to cover their emissions. The law has led to threats of a trade war and legislation in the U.S. Congress that would shelter U.S. airlines from compliance.

To resolve the row, the European Commission is looking to the U.N.'s International Civil Aviation Organization (ICAO) to come up with a global scheme for curbing airline emissions and provide
a justification for modifying the EU law. ICAO is expected on November 9 to debate the issue, but cannot take a final decision until its triennial general assembly. The next one will be in November 2013. “We think that there is a will on the part of the leadership of ICAO and we have people up there now seeing how much progress can be achieved this November paving the way for substantial decisions to be taken at next year’s ICAO general assembly,” Hedegaard said. “That is what we are aiming at, that next year at the general assembly, we should really have substantial progress and we will test whether countries are really willing to engage on that.”

17. Impact of Electric Cars Similar to Conventional Vehicles, Norwegian Study Says

The environmental impact of electric cars is similar to that of conventional vehicles due to emissions-intensive production factors, according to a Norwegian study. While there is a perception that electric vehicles cause little pollution due to zero tailpipe emissions, lower maintenance requirements, and other features, the total environmental impact over the life of an electric vehicle may not be much less than a fossil-fuel powered vehicle, according to “Comparative Environmental Life Cycle Assessment of Conventional and Electric Vehicles.” The study was published Oct. 4 in the Journal of Industrial Ecology.

Researchers in Norway looked at the total life-cycle effects—from production to disposal—of electric vehicles compared with those of conventional diesel and gasoline vehicles.

Electric vehicles have a greater potential to cause human and freshwater toxicity than conventional vehicles due to their higher use of copper, nickel, and other metals with toxic production byproducts, the study said. They also are about three times more likely than conventional vehicles to use scarce metals in their production, contributing to a greater metal depletion potential.

The results reveal a case of “problem-shifting,” where transitioning to electric vehicles may be a matter of “moving emissions away from the road rather than reducing them globally,” the study said.

Producing electric vehicles has a greater environmental impact than producing conventional vehicles, according to the study. Almost half of an electric vehicle’s life-cycle global warming potential comes from its production, compared to 10 percent for a conventional vehicle, the study said. Elements of electric vehicle production, including making batteries and electric engines, are more environmentally intensive than the processes that go into making conventional vehicles, according to the study.

The majority of global warming potential for both types of vehicles comes during the use phase when driving the vehicle, when conventional vehicles contribute to emissions through fuel combustion and electric cars contribute to emissions through electricity production.

Lower emissions from driving electric vehicles sometimes compensate for the steeper environmental impact up front but not always, the study said; it depends on the electricity mix.

Electric vehicles with a lifetime of 100,000 kilometers, or 62,000 miles, reduce global warming potential by 9 percent to 14 percent over gasoline vehicles and have indistinguishable environmental benefits over diesel vehicles. Increasing the vehicle lifetime to 200,000 kilometers, or 124,000 miles, raises the global warming potential benefits of electric vehicles to 27 percent to 29 percent compared with gasoline vehicles and 17 percent to 20 percent.
compared with diesel vehicles, according to the study. These numbers were estimated using the electricity mix available in Europe.

A conventional diesel vehicle with a lifetime of 200,000 kilometers, or 124,000 miles, would have a lower environmental impact than an electric vehicle that had its battery replaced in its lifetime, the study said.

“Although EVs are an important technological breakthrough with substantial potential environmental benefits, these cannot be harnessed everywhere and in every condition,” the researchers said. “Our results clearly indicate that it is counterproductive to promote EVs in areas where electricity is primarily produced from lignite, coal, or even heavy oil combustion.”

The environmental impact of electric vehicles can be lowered by focusing on the production supply chain and using clean electricity sources in electricity infrastructure, such as solar, wind, or geothermal, the study said.

18. Green Energy Would Save EU Trillions by 2050: Report

A green revolution to make EU energy almost totally carbon-free by 2050 would generate 3 trillion euros ($3.9 trillion) in fuel savings, a report commissioned by environmental campaigners said. The energy shift would already create around half a million extra jobs by 2020, researchers from German aerospace center DLR, which also specializes in energy and transport, found.

The European Union has legislated to ensure that 20 percent of the energy mix is green by 2020, as part of a set of three main environmental goals. But it has yet to achieve agreement on binding targets beyond 2020, even though non-binding roadmaps have laid out the need for a virtually carbon-free electricity mix by 2050.

Commissioned by Greenpeace and the European Renewable Energy Council (EREC), the 2012 Energyevolution report lays out steps towards almost carbon-free energy. They include curbing energy demand through greater efficiency, increasing investment in wind and solar power and phasing out subsidies for carbon-intensive energy, such as coal.

To bring about the energy transformation, it sees a need to invest about 99 billion euros between now and 2050, but it says the financial gains are much greater. “Because renewable energy has no fuel costs, the fuel cost savings in the Energyevolution scenario reach a total of 3,010 billion euros up to 2050, or 75 billion per year,” the report said.

Another benefit is job-creation. The report finds almost totally green energy would lead to half a million extra jobs compared with business as usual, as renewable energy initially demands more workers than carrying on with fossil fuel.

The energy revolution requires political will and the report calls on the European Union to agree new targets beyond the 2020 goals to cut carbon by 20 percent, improve energy efficiency by 20 percent and to draw 20 percent of energy from green sources. "A continuation of the successful triple targets for 2030 will provide industry certainty, mobilize investment in renewable and energy saving technologies and secure the necessary climate ambition,” the report says.
European Climate Commissioner Connie Hedegaard has repeatedly stated her belief in targets as the way to bring about change, but member states have been haggling over whether there should be another set of three goals, as opposed to just a carbon cutting goal or even no binding targets at all. The report urges a binding goal of 45 percent renewable energy by 2030 and also wants to raise the 2020 ambitions to introduce a binding 30 percent carbon cut rather than the existing 20 percent cut.

"I believe we need a binding target for renewable energy," Energy Commissioner Guenther Oettinger said recently, adding that national subsidy schemes were not enough to drive green energy. Oettinger also cited the need for a carbon-cutting goal, but he did not mention energy savings. He was addressing the launch of a partnership to unite firms supporting the continued use of gas as a flexible, transition fuel to complement renewable energy, which is intermittent.

The founding members of the partnership are Alpine Energy, a subsidiary of Spanish builder FCC, Dong Energy, First Solar, GE Energy Germany and Royal Dutch Shell. Like the EU member states, they are divided over how many targets the bloc needs after 2020.

Denmark's Dong Energy backs a more ambitious version of the existing three 2020 targets - a 20 percent cut in carbon, a 20 percent share of renewables in the energy mix and a 20 percent improvement in energy savings. Jan Ingwersen, Dong vice president, energy markets, called on the EU to fill what he termed as the post-2020 "policy gap" and urged that incentives for gas be included in tandem with renewables. Dong supports reform of the EU's carbon market, in which the cost of emissions permits has fallen so low that burning coal has become cheaper than gas, which is only around half as carbon-intensive as coal. "Renewables and gas are a strong match in Europe's quest for a low-carbon and cost-efficient energy supply," Ingwersen said. "Right now, there's no business case for gas, and new coal production capacity is coming on stream in greater and faster volumes throughout Europe."

Shell cautioned against too much regulation. "Less is more if you're talking about climate policies. The Christmas tree is too full," said Dick Benschop, president director at Shell Netherlands.

Oettinger has said the bloc needs to establish the rules for 2030 before the end of the current Commission's mandate in 2014.

19. Norway to Increase Environmental Budget, Raise Carbon Taxes on Vehicles

Norway's government is proposing to raise the Environment Ministry's budget 11.4 percent in 2013, to hike the tax on carbon dioxide emissions from petroleum activities, and to strengthen the environmental component of vehicle taxes. The ministry said on October 8th that the plan constitutes "a powerful boost for environmental protection." But the pan-Nordic environmental group Bellona said it does not do enough to rein in the offshore oil industry. While oil-rich Norway is widely viewed as one of Europe's most environmentally friendly countries, emissions from its offshore oil and gas extraction activities continue to prompt criticism.

The plan includes a 200 kroner ($35) per metric ton hike in the carbon dioxide tax on petroleum activities, a near-doubling of the current rate, for a proposed total of NOK 410 ($72) per metric ton.
NOK 630 million ($110 million) would be allocated for the purchase of carbon dioxide credits to satisfy Norway's obligations under the EU Emissions Trading System in 2013, compared to NOK 515 million ($90 million) in 2012.

The plan also would raise both the carbon dioxide and the nitrogen oxides elements of the tax on new vehicles. The vehicle re-registration fee would be reduced 40 percent for most commercial vehicles and 12 percent for other vehicles to spur purchases of used vehicles. The vehicle scrapping fee would be raised by NOK 500 ($87). The vehicle scrapping scheme is being increased from NOK 221 million in 2012 to NOK 281 million in 2013.

In addition to the environmental commitment entailed by the Ministry of the Environment's budget, many important measures have been incorporated into other ministries' budgets. One of the most important measures here is investments, operation and maintenance of Norway's railways, with an appropriation of NOK 11.4 billion in 2013. This is an increase of NOK 1.4 billion. The incentive scheme for improvements in public transport in urban areas will receive NOK 262 million more in 2013, bringing it up to NOK 673.1 million.

The proposed budget also would increase spending on deforestation prevention, clean energy, and climate change adaptation in developing countries, and increase spending for public transportation and electric vehicles.

Parliament is expected to approve the budget by the end of 2012, with most measures taking effect on January 1st.

20. New Car Safety Standards Will Help Fuel Efficiency

On November 1, 2012, Europe will mandate a basket of new safety requirements for new types of motor vehicles. Measures which become mandatory include safety belt reminders, safety requirements for electric vehicles, easier child seat anchorages (ISOFIX), better protection of passengers against the displacement of luggage in case of the accident and tire pressure monitoring systems. In addition, cars will be also equipped with gear shift indicators to help drivers save fuel and reduce CO2 emissions. These new features are required under the General Safety Regulation1, adopted in 2009. This one regulation replaced more than 50 directives without weakening any safety standard. It thus constitutes a sweeping simplification of European legislation and reduction of regulatory and administrative burden for the vehicle industry.

They will apply to all new cars sold on the EU market from 2014.

The vehicles will need to have a dashboard indicator that lights up when tire pressure goes below a minimum level. This will encourage drivers to re-fill them, which would cut noise, improve safety and reduce CO2 emissions.

Tires fitted to new vehicles must also comply with rolling resistance standards aimed at lowering resistance. These vary according to different tire categories (C1, C2 and C3). Tougher requirements will kick in at a later stage.

In combination, tire pressure monitoring and rolling resistance requirements would cut emissions from a typical small family car by about seven grams of CO2 per kilometer, according to estimates published when the rules were proposed in 2008.
New cars will also have to be fitted with gear shift indicators that light up when drivers of manual cars under 2.6 tons should select a more appropriate gear. This requirement is also expected to save fuel.

As they are a legal requirement, the three energy efficient technologies do not count as eco-innovations that may be used to help European carmakers cut average new car CO2 emissions to 130 grams per kilometer.

The new rules applying from 1 November also require electric carmakers to ensure users cannot get an electric shock from parts in the vehicle or engine compartment. A host of other safety-related measures will also become mandatory.

Under separate legislation agreed at the same time, tires will also have to display a fuel efficiency and noise rating label.

21. EC Shows Optimism Ahead Of ICAO Meeting

There are encouraging signs that other countries are willing to engage in discussions on reducing greenhouse gas emissions from the aviation sector, the European Commission said ahead of an international meeting. The meeting of the International Civil Aviation Organization (ICAO)'s governing council in November will be a “test of our partners’ genuine commitment”, the EU executive said in a note recently submitted to EU environment ministers.

"There is a shared view on the need to step up efforts for addressing international aviation emissions", it says. The commission hopes a deal on national or regional market-based measures could be reached at ICAO's September 2013 meeting. "Such a framework should... not rely on complicated bilateral agreement structures, and it should have at its core the principle of non-discrimination to minimize any risks of competitive distortions,” according to the note.

22. Call for EU Guidance on Low-Emission Zones

The Czech Republic is seeking European Commission guidance on low-emission zones (LEZs) to harmonize the schemes put in place by member states and facilitate the free movement of vehicles between countries. These non-binding guidelines will also help raise awareness of LEZs and may encourage more member states to use them, the Czechs explained in a note that will be presented to environment ministers.

So far, 11 member states have introduced the zones, designed to improve air quality in congested cities or along motorways. This has led to a series of incompatible systems that act as a barrier to movement between member states, according to the Czech briefing note.

Last month, the Czech environment ministry published a draft decree on LEZs, replacing one vetoed last year. To enter the zones, vehicles would have to display a vignette demonstrating compliance with Euro emission standards, costing about €3. The LEZ law is expected to enter force next month. It would be compatible with Germany's, allowing vehicles with Czech LEZ Euro 4 vignettes to enter central Berlin or Hannover without making a further payment.

Brussels is already seeking to harmonize road-charging schemes across the EU, having opened consultation in August. It is also considering how to encourage more towns and cities to adopt sustainable urban mobility plans which could include LEZs.
23. Netherlands Issues Plan to End NOx Scheme

Arrangements for the closure of the Netherlands' pioneering industrial air pollutant trading scheme were set out recently. Companies will have to continue to monitor and account for their emissions of nitrogen oxides (NOx) until the scheme closes at the end of 2013. But if this would require investment in new monitoring equipment or payment for measurements by third parties, the firms in the scheme will be able to estimate their emissions, using the most accurate alternative methodology.

The Dutch trading scheme began in 2005 and is comparable to the EU regime for industrial CO2 emissions. It aimed to ensure compliance with the National Emission Ceilings (NEC) Directive, a goal which the Netherlands failed to achieve. The scheme never provided the anticipated financial incentive to invest in emissions reduction, as obligations to cut NOx emissions under the Integrated Pollution Prevention and Control (IPPC) Directive created a large oversupply of allowances.

The decision to shut down the Dutch NOx scheme, which had become solely a burden on business, was taken by the government in March.

Separate pollutant trading schemes established by some EU member states under the large combustion plants directive, known as national emissions reduction plans, have run into similar problems to the Dutch scheme.

Trading schemes under the transitional national plans established by the new Industrial Emissions Directive (IED) should not experience oversupply problems. This is because emissions caps will be steadily reduced.

24. Ireland Rolls Out National EV Charging System

A smart electric vehicle charging system is being set up across Ireland by national electricity utility ESB and global IT giant IBM. Drivers can pay to charge their vehicle at hundreds of public charge-points using a swipe-card. About 1,000 charge-points have already been installed. Of these, 450 are public connections in streets, covering 85% of Irish towns, as well as 30 fast charge-points. The rest are in homes or companies.

ESB expects the remainder of towns with populations of more than 1,500 to have charge-points installed by early 2013, when a raft of new EV models comes on the market. The aim is to have 1,500 public charge-points in total.

The Irish government wants one in ten of its cars to be electric by 2020. ESB says it is relatively easy to install domestic charge-points because home ownership is high in Ireland (75% of homes were occupied by their owners in 2009).

IBM is involved as part of its Smart Cities project, which aims to develop business systems that support smart recharging and to grow the EV market worldwide.

ESB claims the project is one of the "biggest, integrated and operational electric vehicle's infrastructure initiatives" in Europe. It will run until mid-2014 and will help inform plans for a full roll-out of EV IT infrastructure in Ireland.
Ireland is one of ten demonstration regions in the EU-funded Green eMotion project, contributing data on EV usage such as charging patterns and driver behavior.

25. France Moves to Cut Gasoline, Diesel Prices

The French government and major fuel suppliers have agreed to take steps aimed at lowering costs to consumers of gasoline and diesel. Finance Minister Pierre Moscovici said the government will trim taxes on vehicle fuel by 3 euro cents/l. for 3 months beginning August 29th. Refiner-marketers in France agreed to lower prices by 1-3 euro cents/l. against unspecified base levels.

During his recent election campaign, President Francois Hollande promised to lower fuel prices.

26. MAN Promises 25% Cut In Fuel Use As It Unveils New Concept Truck, Trailer

German truck maker MAN has unveiled an aerodynamic road train it says can cut fuel consumption and carbon dioxide (CO2) emissions by 25%. The design study, launched at the IAA Commercial Vehicles fair in Hanover, Germany, makes use of the MAN Concept S truck and the Krone AeroLiner trailer.

MAN says the vehicle has the load volume of a conventional truck, while at the same time achieving the low drag coefficient of a passenger car. The manufacturer adds that curbing CO2 emissions is becoming increasingly important, as there are indications that a law regulating CO2 emissions from trucks over 12 t will also be passed in Europe in the near future.

One area in which considerable CO2 savings are possible, is in looking at the truck and trailer as a unit, and considering the aerodynamic design of the vehicle as whole, says MAN Truck & Bus CEO Anders Nielsen.

Until now, the external form of the truck meant that these vehicles had to cope with a great amount of air resistance. Depending on the route profile, overcoming this resistance requires up to 37% of the total energy used by the truck. This costs fuel and results in higher CO2 emissions.

The rectangular block form of today’s trucks follows the need for maximum utilization of the space available within the statutory limitation imposed on the length of European road trains at 16.5 m. While the Concept S, AeroLiner combination makes it possible to benefit from the as-yet-untapped aerodynamic potential offered by heavy commercial vehicles, it also, however, means that the tractor and trailer have to be somewhat longer towards the front and rear. This is needed to accommodate the more streamlined front end of the vehicle with its rounded radiator, as well as the aerodynamic rear end, while keeping the loading capacity the same.

MAN says manufacturers of commercial vehicles are capable of putting an aerodynamically optimized vehicle, such as the Concept S, on the road as early as the next truck generation, but emphasizes that this can only happen when the European statutory regulations restricting the length of road trains have been amended.
“Politicians could achieve big gains in environmental protection with a minor change to the law, while simultaneously utilizing the innovative strength of Europe's commercial vehicles industry – 2.3 m more length would suffice,” notes Nielsen.

In comparison with a conventional 40 t European road train, the MAN Concept S with trailer and optimized auxiliary units reduce fuel consumption, and thus CO2 emissions, per ton-kilometer by up to 25%.

Truck developers considered airflow around the train as a whole, starting with the tractor's rounded front section, the reduced area of its mirrors and the streamlined, integrated tanks. In a newly developed concept, the spoiler is integrated in a form-fitting manner into the roof of the driver’s cab. It closes the gap between tractor and trailer completely, allowing an even airflow over the vehicle, without separation.

The trailer's full-size side finishers and tapered rear complete the optimal flow of air around the road train. This has additional synergetic effects as it also reduces noise.

The design of the MAN Concept S was continuously adjusted in a wind tunnel until the desired air resistance was attained. “Our Concept S, in conjunction with an aerodynamically optimized semitrailer, is as streamlined as a modern passenger car. We proved it in the wind tunnel. The savings in consumption are absolutely realistic,” promises MAN Truck & Bus head truck designer Holger Koos.

27. MPs Say UK Needs More Ambitious Electric Car Grant Scheme

Britain needs a more ambitious program to encourage the uptake of low-carbon vehicles, as sales of the cars have disappointed, a committee made up of UK Members of Parliament said recently. As part of its aim to reduce carbon dioxide emissions to 80 percent below 1990 levels by 2050, the government has offered 25 percent off the price of a plug-in electric car capped at 5,000 pounds. Plug-in cars, such as the Chevrolet Volt, Nissan Leaf, Toyota Prius and Vauxhall Ampera, typically cost in excess of 20,000 pounds ($32,500).

The government expects to see tens of thousands of plug-in vehicles, which have a longer driving range than all-electric vehicles but which still need to be charged, on the roads by 2015, but demand has been weak, said a report by the Transport Select Committee. In 2011, 1,052 vehicles eligible for the plug-in car grant were registered. The committee said consumer demand was lagging behind and that the subsidy was ineffective because the purchase price was still too high.

“So far, Department for Transport expenditure on plug-in cars - some 11 million pounds - has benefited just a handful of motorists,” said Louise Ellman, chair of the committee. “Ministers should not sit back and hope that the government's policy on plug-in cars will reduce transport carbon emissions. Far more work is required to ensure that this program is a good use of public funds.”
Emissions from domestic transport account for around a quarter of the UK's total carbon dioxide emissions, with car emissions accounting for over half of that amount.

There is also uncertainty over the number of charging points being installed across the country. "It is unclear whether the provision of public charging infrastructure encourages demand for plug-in cars. Indeed, the government does not even have a register of all the charge points installed at public expense," Ellman said.

The government should set milestones for the number of plug-ins it expects to see on the roads so the success of its low-carbon vehicle strategy can be assessed, the report said.

### 28. EU Plan to Tackle Ships’ CO2 Unlikely This Year

A European Commission proposal to tackle carbon dioxide emissions from international shipping might not come out before 2013, delegates heard at a debate held in Brussels by the European Policy Centre. “We are not going to sit back and wait indefinitely [but] there is no set date [for its publication],” a commission official told the participants.

The commission's climate department is likely to focus on the adoption of its "backloading" proposal to push the CO2 price up in the third phase of the EU's emissions trading scheme (ETS). This has a knock-on effect for shipping, since one of the options under consideration is the sector's inclusion in the ETS.

A draft impact assessment shows that a market-based mechanism to cut CO2 from ships could deliver up to €15bn in annual net cost savings by 2030, the official said. Environmental and societal benefits would come on top. Up to 10,000 new jobs could be created in technology development and no jobs would be lost.

These are interesting findings given current economic difficulties, but the uncertainty hanging over the EU carbon market and the political fall-out from the EU's attempts to regulate international aviation emissions have made EU policymakers wary.

At international level, the next meeting of the International Maritime Organization's marine environment protection committee (MEPC) in October also looks unlikely to make much progress. The IMO discussions are encouraging but "the tangibility of those discussions has to be validated", said the official.

IMO discussions remain blocked by persistent disagreement over whether and how the concept of "common but differentiated responsibilities" should apply to ships. The UN maritime body has always maintained a policy of non-discrimination.

Sveinung Oftedal from the Norwegian environment ministry suggested that the international organization could achieve more in the short-term by focusing on expanding the scope of the Energy Efficiency Design Index (EEDI) for new ships, and tackling black carbon and methane emissions from ships.

Action at the regional level could complement this by expanding the infrastructure for liquid natural gas as an alternative fuel for example, he added.
29. Beneficial Effects of Congestion Charging Increase Over Time

Congestion charging in Stockholm has become more successful over time, according to a study by Swedish researchers. Although the total cost of a journey that enters the congestion charge zone has fallen in real terms since the charges were first introduced in 2006, there has consistently been around 29% less traffic within the zone, compared with levels in 2005.

Congestion charges have been introduced by several cities, such as London and Durham in the UK, and Rome and Milan in Italy, to reduce traffic volumes. Reducing vehicle numbers also has benefits for public health, particularly as air pollution from traffic is a growing health hazard.

In Sweden, congestion charges were introduced for a six month trial period in Stockholm in 2006, before being introduced as a permanent measure in 2007. Since then, people have questioned the long-term effectiveness of the charges.

The results of this study suggest that congestion charging can work over the long-term, supporting plans to introduce such charges in other cities across Europe. The findings also demonstrate that some concerns about the charges, such as increased congestion on other routes, are not supported by the evidence, and that public acceptability may increase over time.

The researchers investigated how traffic levels within the congestion charge zone in Stockholm have changed when external factors, such as population growth, employment levels and fuel prices, were considered, and how inflation and other price factors have affected the charges. They also looked at the effects of charging on congestion on other roads, on sales of alternative fuel vehicles which were exempt from the charges, and on changes to public and political acceptance.

They found that the overall reduction in the amount of non-exempt traffic across the congestion charge zone, taking account of external factors, has remained stable at around 29%, compared to levels in 2005. However, inflation reduced the congestion charge by 2% per year and the charges were made tax-deductible for commuters in 2007, so the cost of the average journey has fallen in real terms. Despite this, traffic volumes were consistently reduced, suggesting the charges were having a progressively greater effect as people found it easier to adapt in the long-term and find alternative routes or use other forms of transport. The researchers caution, however, that charges will probably need to increase in future if their effects are to be maintained, particularly if population and employment continue to grow.

There has also been concern that congestion charges would increase traffic on relief roads in and around Stockholm. However, the researchers found no significant increase in congestion or traffic volume on other routes, except that caused by population growth.

Excluding alternative fuel vehicles from the charges also seems to have increased sales of such vehicles, although this led to a small increase in traffic volume within the congestion zone.

Finally, the researchers looked at public and political acceptability. Support for congestion charges grew from 36% in 2006 to 70% in 2011. This may be because residents have seen that the charges do reduce congestion whilst not having a major effect on them personally. Their

attitudes may also shift as they accept unavoidable charges, and become more familiar with the idea of road pricing.

30. EC Sticks to Accounting Rules for Green Fuels

There is no need to establish specific rules on how electricity, hydrogen and bio methane should be accounted for in the EU’s 10% target for renewables in the transport sector, the European Commission has concluded. The commission was required by law to report on the appropriateness of adopting such rules. In an impact assessment released on Monday, the EU executive said that good methods were already in place to calculate the contribution from electricity and bio methane. And rules for hydrogen are not needed before 2020.

Brussels also pointed out that having different rules for electricity and bio methane risked giving them an unfair advantage over other forms of renewable energies used in transport. The need to maintain a level playing field in this area was flagged up by several industry stakeholders during a consultation last year.

One of them, Finnish company Neste Oil, had also asked for more precise energy values in annex III of the 2009 renewable energy directive, which are used to calculate the final gross consumption of various green fuels in the member states.

Guidelines on accounting rules were issued by the commission in 2010. More recently, it said that biofuels from municipal solid waste, aquatic materials, agricultural, aquaculture, fisheries and forestry residues and renewable liquid and gaseous fuels of non-biological origin could count four times more than others.

31. Russia Will Not Cut Emissions Under Extended Kyoto Climate Pact

Russia has confirmed that it would not make cuts in greenhouse gas emissions from 2013 under the U.N.’s Kyoto Protocol, joining Canada and Japan in rejecting an extension of the plan for fighting climate change. The foreign ministry said Moscow would not join industrialized nations led by the European Union in signing up for cuts beyond a first round of commitments ending on December 31, 2012.

Earlier this month, Deputy Prime Minister Arkady Dvorkovich said that a decision “had not been made” on new obligations, suggesting the government was still mulling participation. It now says that it would focus on a U.N. plan, agreed last year, to come up with a new international deal by 2015 obliging both developed and developing countries to limit gas emissions that would enter into force from 2020.

"The Russian Federation finds the extension of the Kyoto protocol in its current state ineffective and does not intend to take on obligations to lower greenhouse gas emissions as part of the so-called second round of liabilities,” Foreign Ministry spokesman Alexander Lukashevich said in a statement. "The content of the climate obligations and actions may be different for developed and developing countries, but they must be reflected in a single document. Without that, it will be useless," he added.

Moscow has committed only to a voluntary pledge to cut emissions, which come mainly from burning fossil fuels, by 15-25 percent by 2020.
Russia’s emissions have plunged since the collapse of Soviet-era smokestack industries. In 2010 they were 34 percent below 1990 levels, far below Moscow's target under Kyoto of not exceeding the 1990 level in the years 2008-12.

The likely list of "Kyoto 2" participants accounts for only 15-17 percent of global greenhouse emissions, Lukashevich said, while the countries that participated in the first round of cuts accounted for 30 percent of global emissions. That makes the target of limiting the global temperature rise to no more than 2 degrees Celsius (3.6 Fahrenheit) above pre-industrial times impossible to reach, he said. Two degrees Celsius is seen as a threshold to dangerous climate changes such as floods, droughts and rising sea levels. Temperatures have already risen by about 0.8 Celsius.

A group of Russian industrial and energy companies, including Rusal, the world's largest aluminum company, and TNK-BP, one of Russia's biggest oil and gas producers, have been lobbying the government to take on a post-2012 Kyoto target. That would allow them to continue to earn carbon credits for emission reduction projects under the U.N.'s Joint Implementation mechanism.

Last month, a leaked draft government decree revealed Moscow was working on firming its conditional 2020 domestic emission reduction pledge into an absolute target of a 20 percent emission reduction target under 1990 levels. That target reached, it could pave the way to a regional cap-and-trade scheme comparable in size to the EU carbon market.

32. Greenhouse Gas Emissions Fell in 2011, EU Reports

The European Union's greenhouse gas emissions were 2.5 percent lower in 2011 than the previous year, according to estimates published on September 7th by the European Environment Agency (EEA). The decline—to 2009 levels—was mostly due to a mild winter in most of the 27-country bloc and to reduced consumption of natural gas, the agency said. An increase in energy from renewable sources also “contributed to the observed decrease in emissions.” The reductions meant that emissions from the European Union as a whole were 17.5 percent below 1990 levels in 2011, compared to an 8 percent reduction target for most EU countries under the Kyoto Protocol. EEA said the figures were provisional, with detailed estimates due to be published in October. Confirmed data will be published in mid-2013 in the EU greenhouse gas inventory report, which is submitted in accordance with the Kyoto Protocol to the United Nations Framework Convention on Climate Change, EEA said.

33. Top EPA Transportation Air Quality Official Announces Plan to Step Down

Margo Oge, director of EPA's Office of Transportation & Air Quality (OTAQ), has announced her plan to leave the agency at the end of September in an email to staff that touts her decades of work at EPA that includes the landmark greenhouse gas (GHG) rules for passenger cars and rules that "transformed" fuels used by mobile sources.

In the email, Oge said that OTAQ -- which is responsible for crafting regulations to curb air pollution from vehicles, engines and fuels -- “made history” with the passenger car GHG rules. EPA in 2010 finalized its first-ever GHG and fuel economy rules for model year 2012-2016 vehicles, and last week issued the next round of GHG vehicle rules that apply to model years 2017-2025. Both rules enjoy broad support among the auto industry and activists.
Oge has been at EPA for more than 30 years, including 18 years at OTAQ. “Working together, this office -- this team -- made history. Cars, trucks, buses, locomotives, marine engines and every other piece of equipment that moves and produces emissions have been transformed. The fuels they burn have been transformed,” she wrote.

Touting the health benefits from the mobile source emissions rules, Oge said that “as a result of our actions, tens of thousands premature deaths, respiratory illnesses and other ailments will be prevented.”

In achieving the vehicle and other rules, Oge touted a “mix of regulatory and voluntary” programs and “smart strategies” OTAQ used to implement the Clean Air Act. The efforts in the transportation sector have been a plus for the economy by creating innovations that “extend far into the future,” Oge said. “Our success spanned three administrations, and we adapted and prevailed even as the nation faced challenges both seen and unforeseen.”

34. Climate and Cost Concerns Mount in Wake of "Superstorm"

Fishing huts destroyed by Hurricane Sandy are seen on an island near Fire Island, New York October 30, 2012. Photo: Lucas Jackson

The mammoth storm that caused severe flooding, damage and fatalities to the eastern U.S. will raise pressure on Congress and the next president to address the impacts of climate change as the price tag for extreme weather disasters escalates.

Hurricane Sandy devastated the east coast of the United States, claiming dozens of lives so far, cutting power to over 8 million people and damaging major roadways, buildings and infrastructure, such as New York's 108-year old subway system.

Eqecat, one of the three primary firms used by the insurance industry to calculate disaster exposures, said Sandy could cause anywhere from $5 billion to $10 billion in insured losses and from $10 billion to $20 billion in economic losses. This would outdo the roughly $4.5 billion in insured losses caused by last year's Hurricane Irene, which also hit the northeast United States.

Sharlene Leurig, senior manager for insurance and water programs at Ceres, warned that in addition to the physical damage caused by Monday's storm, there would also be damage "on the balance sheet of taxpayers in the U.S.,” raising pressure on Congress to take action on climate change. “The sort of storm we just saw is likely to be more common in some of the most populated and valuable areas of the country." She said the government's national flood
insurance program (NFIP) is already in nearly $20 billion in debt since 2005's Hurricane Katrina and would likely cost taxpayers more as such storms become more frequent.

Some taxpayer groups have called on Congress to further reform the flood insurance program and said that reinsurance companies are better positioned to absorb the costs and risks related to extreme weather occurrences. "It appears likely that Sandy will exhaust the NFIP's remaining $3 billion of statutory borrowing authority, meaning it will need to request more money from Congress to pay its claims," said R.J. Lehmann, a senior fellow at free market policy research group R Street.

Sustainability-focused investor group Ceres said that while 2012 private insured losses were lower so far this year than last year, when floods, heat waves, tornadoes and other extreme weather events gripped the U.S., total economic losses are likely to be significant. On top of Hurricane Sandy, this year's drought alone is expected to cost insurers $20 billion, with most of those costs being shouldered by the federal crop insurance program.

Environmental groups and some political analysts said the exclusion of the climate change issue in this year's presidental and vice presidential debates was a missed opportunity to bring the issue back into the national debate. Although the House of Representatives passed a comprehensive climate change bill in 2009, similar efforts failed in the Senate. The issue became a taboo subject after the Tea Party and some stiffly opposed Republicans ramped up efforts to derail climate legislation and regulatory programs to slash greenhouse gas emissions.

Former President Bill Clinton, who has been campaigning on President Barack Obama's behalf, took aim at a quip made by Republican challenger Mitt Romney at the Republican convention that the president cared more about the rise of ocean levels than families. At a campaign speech in Minnesota, Clinton addressed the climate impacts of Hurricane Sandy. "All up and down the East Coast, there are mayors, many of them Republicans, who are being told, 'You've got to move these houses back away from the ocean. You've got to lift them up,'" he told the crowd. "Climate change is going to raise the water levels on a permanent basis. If you want your town insured, you have to do this," Clinton said.

In a surprise announcement shortly after Clinton's comments, New York Mayor Michael R. Bloomberg said that Hurricane Sandy had reshaped his thinking about the presidential campaign and that as a result, he was endorsing President Obama. Mr. Bloomberg, a political independent in his third term leading New York City, has been sharply critical of Mr. Obama, a Democrat, and Mitt Romney, the president's Republican rival, saying that both men had failed to candidly confront the problems afflicting the nation. But he said he had decided over the past several days that Mr. Obama was the better candidate to tackle the global climate change that he believes might have contributed to the violent storm, which took the lives of many New Yorkers and caused billions of dollars in damage.

"The devastation that Hurricane Sandy brought to New York City and much of the Northeast — in lost lives, lost homes and lost business — brought the stakes of next Tuesday's presidential election into sharp relief," Mr. Bloomberg wrote in an editorial for Bloomberg View. "Our climate is changing," he wrote. "And while the increase in extreme weather we have experienced in New York City and around the world may or may not be the result of it, the risk that it may be — given the devastation it is wreaking — should be enough to compel all elected leaders to take immediate action."
Mr. Bloomberg’s endorsement is another indication that Hurricane Sandy has influenced the presidential campaign. The storm and the destruction it left in its wake have dominated news coverage, transfixed the nation and prompting the candidates to halt their campaigning briefly.

35. EPA Issues Temporary Fuel Waivers to States Hit By Hurricane Sandy

The US Environmental Protection Agency temporarily waived federal clean gasoline requirements for 16 US states and the District of Columbia following the passage of Hurricane Sandy and associated storms. It granted the multistate waiver on October 31st in coordination with the US Department of Energy.

The waiver applies to Alabama, Mississippi, Georgia, Tennessee, South Carolina, North Carolina, Virginia, Maryland, the District of Columbia, Delaware, Pennsylvania, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, and New Hampshire.

EPA Administrator Lisa P. Jackson determined that extreme and unusual supply circumstances as a result of the storm may result in temporary shortages of gasoline that complies with federal regulations in those states and Washington, DC. The waiver allows the sale and distribution of conventional gasoline in areas where reformulated gasoline is required, and allows a number of additional states to mix reformulated and conventional gasoline to remove potential gasoline supply barriers in the region, EPA said. The waiver followed one that EPA issued to New Jersey waiving clean diesel fuel requirements in the state, allowing the use of home heating oil in most pumps and generators in emergency service following the storm.

36. Most Americans Link Weather to Global Warming: Survey

Nearly three-quarters of Americans say global warming influences U.S. weather and made this year’s record-hot summer worse, according to a new survey. Conducted by Yale and George Mason universities, the survey found 74 percent of Americans believe that global warming is affecting weather, up 5 percentage points since March 2012, the last time the two organizations asked these questions.

Seventy-three percent of Americans said global warming made the record-high temperatures of summer 2012 worse, and 61 percent said weather in the United States has been worsening over the past several years, an increase of 9 percentage points since March.

"Extreme weather is clearly having a serious impact on millions of Americans, though the impacts are different in different parts of the country," survey co-investigator Edward Maibach of George Mason University said in a statement.

The survey found most Midwesterners -- 71 percent, up 21 points since March -- said extreme weather caused more harm to crops over the past few decades. Eighty-three percent said they personally experienced an extreme heat wave, while 81 percent said they had experienced drought in the past year. That was an increase of 55 percentage points from March. A smaller majority of Southerners -- 56 percent -- said the weather in their localities has been getting worse over the past few years. Only 40 percent of those in the Northeast said drought has become more common. In the West, 49 percent said extreme weather is causing more forest fires, up seven points since March.

The dramatic change in attitudes in the Midwest is in line with this year’s weather events throughout the central part of the country, where extraordinary summer heat accompanied
drought that was the worst in more than half a century. This year had the hottest first half for the continental United States since record-keeping began in 1895, and July 2012 was the hottest month since the Dust Bowl summer of 1936, the National Oceanic and Atmospheric Administration said.

The survey was conducted from August 31 through September 12, with summer heat and drought fresh in respondents’ minds, said Yale’s Anthony Leiserowitz, a principal investigator on the project. He acknowledged that a cool autumn and snowy winter might have an impact on future responses.

Last month tied for the warmest September in the global modern record, scientists at the U.S. government’s National Oceanic and Atmospheric Administration recently reported. This September tied with the same month in 2005 for the record. The land-and-sea global average temperature was 60.21 F (15.67 C), or 1.21 F (.67 C) above the 20th century average.

In addition to being hottest since 1880, the month was the 36th consecutive September and 331st consecutive month with a global temperature above the 20th century average. The last time September temperatures were below that average was 1976, and the last time any month was below that average was February 1985, NOAA scientists said in a statement.

September’s globally averaged temperature on land was third-warmest for that month. The average combined global land and ocean surface temperature so far this year was the eighth-warmest first nine months of a year on record.

Central Russia, Japan, western Australia, northern Argentina, Paraguay, western Canada and southern Greenland had higher-than-average temperatures in September, while eastern Russia, western Alaska, southern Africa, much of China and parts of the upper Midwest and southeast United States were notably below average.

“The irony of this is that we (in the United States) finally did get a little relief from breaking and threatening heat records for months,” said Deke Arndt, chief of climate monitoring at NOAA’s National Climatic Data Center. “The thing is the United States takes up about 2 percent of the globe.” Arndt noted that September in the continental United States was still the 23rd warmest on record, out of 118 years in the U.S. record. “It’s nothing to sneeze at,” he said by telephone. “It’s very close to the front of the line.”

Arctic ice cover shrank to its lowest extent ever last month, far eclipsing a record set in 2007, while Antarctic sea ice had its all-time high ice extend on September 26. Arndt cautioned against equating these two polar records. “The magnitude of the records in each (Arctic and Antarctic) is vastly different,” he said. “The Arctic is plumbing new depths, completely leaving the rest of the record behind ... there kind of aren't enough superlatives to describe what has gone on there over the last five or six years.”

To put 2012's Arctic sea ice record in context, compare it to the previous record set five years ago, when U.S. ice experts called the drop in ice cover around the North Pole "astounding" and a sign of the accelerating impact of human-caused global warming. This year, that "astounding" low level of sea ice in the Arctic was equaled or surpassed every day in September, and on some days in August and October as well, Arndt said.

So if the record-large amount of sea ice in the Antarctic is "king of the hill," Arndt said, "the Arctic record is just building an entirely different hill and an entirely different neighborhood. The
change is bigger, the change is more rapid, it is establishing a new characteristic there."
Conditions in the Arctic are important, since the Arctic is sometimes called "Earth's air
conditioner" for its ability to influence weather around the globe.

Temperatures were near average over Antarctica in the southern winter. Scientists at the U.S.
National Snow and ice Data Center reckon the increase in Antarctic sea ice was due to stronger
circumpolar winds, which whip around the southern continent and blow the sea ice outward,
increasing its extent.

37. California Defends Greenhouse Gas Regulation for Fuels

California attorneys advocating for a program to reduce greenhouse gas emissions from fuels
came under stern questioning from a three-judge panel recently, in a case that threatens a key
component of the state's ambitious effort to combat climate change. A packed courtroom at the
Ninth Circuit Court of Appeals heard arguments from attorneys on both sides of the debate over
California's low carbon fuel standard, which assigns a carbon intensity score to a wide variety of
fuels based on the energy used in their production and transportation.

The state says the program is a necessary component of its effort to reduce the amount of
carbon used in the economy, but Midwestern gasoline, diesel and ethanol producers say the
program tips the scales against their products and violates the U.S. Constitution's commerce
clause.

Last year a federal judge in Fresno agreed with the out-of-state producers and ruled the
program unconstitutional, but a stay from the Ninth Circuit has allowed California to continue
implementing the program while the panel weighs the arguments.

At the hearing, one member of the panel of judges asked whether the state could alter the
lifecycle analysis so that geographical location isn't factored into a fuel's rating, which she said
gives California-produced fuels a 10 percent advantage "right out of the gate." "Can the lifecycle
process be modified so that it's regulated in a more neutral way or not in a way that appears to
give favorable assumptions to California versus the Midwest or folks outside of California?"
Justice Mary Murguia asked. California Deputy Attorney General Elaine Meckenstock said that
since the distance a fuel travels is a necessary component in weighing its overall environmental
impact, geography could not be stripped entirely out of the equation.

But she said the regulation cuts both ways, since California ethanol producers that import corn
will see their score rise to reflect the energy used to transport the feedstock. "That's another
demonstration of the way in which this is not a proxy for geography," she said.

But out-of-state fuel producers said the regulation amounted to economic protectionism by the
state, and should be struck down. "A penalty for transportation inherently discriminates by
origin," said Peter Keisler, who represented petrochemical producers at the hearing.

Judge Dorothy Nelson drew attention to statements from the California Air Resources Board,
which said the regulation would provide employment in the state while increasing the tax base.

"Isn't this unambiguous evidence that the board was motivated by protectionism?" she asked.
Sean Donahue, an attorney representing environmental groups backing California in the case,
said those comments were plucked from a longer economic analysis, and said the program was
based on sound science, not economic protectionism. "Lifecycle is unquestionably the
scientifically appropriate way of regulating carbon from fuels," Donahue said. "Our groups do not support this because we are in cahoots with California ethanol producers," he said.

A ruling from the court could take anywhere from two to ten months, attorneys involved in the case said.

38. Environmentalists Sue California to Stop Fracking

Environmental groups sued the state of California recently in an effort to stop hydraulic fracturing as regulators attempt to devise new rules for the controversial oil and gas extraction practice. The lawsuit accuses the regulator, the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources, with failing to evaluate the risks, even though fracking was used for more than 600 wells in the state last year.

Fracking, or pumping chemical-laced water and sand into a well to open cracks that release oil and gas, has generated a fierce debate across the country, leading to bans in one state and several municipalities. Yet the industry insists the practice is safe so long as wells are properly built.

A non-profit environmental law firm, Earthjustice, filed the lawsuit in Alameda County Superior Court on behalf of the Center for Biological Diversity, Earthworks, Environmental Working Group and the Sierra Club. "Public outcry has finally forced the Department to take a look at fracking," Earthjustice attorney George Torgun said in a statement. "They've held workshops and say they're considering regulations. But the problem needs attention now before too much damage is done."

In July, the Department of Conservation hosted several workshops to discuss potential regulation in anticipation of increased horizontal drilling in the state, which combined with fracking has unlocked oil and gas reservoirs around the country.

Given the public scrutiny, new rules are not expected to be finalized until mid-2013, officials said, though a draft set of rules are expected soon. State legislation to halt fracking, however, has so far received little support.

John Krohn, spokesman for oil and gas industry group Energy In Depth, pointed to the regulators' new rules on fracking and also said that California already had strict oil and gas rules that protect groundwater. "But fringe environmental groups will not settle for anything less than a ban, which is why they are taking the regulators to court," he said in a statement.

The lawsuit acknowledged that fracking had been taking place in California oil wells since the 1950s, but the plaintiffs asked that the regulator not allow any more fracking until it has prepared "programmatic" environmental impact reports to cover the practice in various types of wells around the state.

39. Honda Offers $3,000 Worth of Fill-ups For Natural Gas Civic Buyers

American Honda and natural gas fueling station operator Clean Energy Fuels Corp are offering $3,000 for fill-ups to customers buying a 2012 Honda Civic Natural Gas car, the companies said recently. Buyers of the new compact Civic will get debit cards that can be used at any of the 163 Clean Energy stations in the United States.
Honda has sold 1,576 of the car, which runs on compressed natural gas, since it was introduced last October, Honda spokesman Marcos Frommer said. American Honda is the U.S. sales arm of Honda Motor Co. Honda claims the model’s owners can save up to 40 percent on fuel compared with conventional gasoline-powered compact cars. The 2012 Honda Civic natural gas gets about 200 miles to a full tank, about half that of many compact cars. The average price for natural gas in July was $2.02 for the equivalent of a gallon of gasoline, compared with the average price for gasoline in July of $3.38 per gallon.

The Civic Natural Gas, which is sold at 199 dealerships in 36 states, is the only natural gas-powered car made by a major auto manufacturer that is available in the United States.

Peter Grace, a vice president at Clean Energy Fuels, said the $3,000 natural gas debit card represented two to three years of free fuel. The debit card incentive to buy the natural gas Civic is valued at about half the cost premium of the car from a similar gasoline-powered Civic. The Honda Civic Natural Gas costs $26,305 for the base model without destination charges, which is about a $5,650 premium to the gasoline-powered Honda Civic EX.

According to NGVA’s website, there are about 120,000 natural gas vehicles in the United States and more than 15 million worldwide.

Richard Kolodziej, president of the NGVA, said on Tuesday there are about 1,100 natural gas filling stations in the United States, and about half of those are open to the public. He said natural gas filling stations are being built in the United States at a rate of 20 to 25 per month.

**40. Much of U.S. Could Not Meet Strictest Ozone Standard Being Considered**

The Environmental Protection Agency's science advisers have said the agency could be justified in considering an ozone standard between 50 parts per billion and 70 ppb. Much of the country would have great difficulty in meeting a standard on the more stringent end of that spectrum, particularly in areas where background levels of ozone are around that level.

EPA is in the process of reviewing and possibly revising the ozone national ambient air quality standards and has said it expects to issue a final rule in September 2014. The Clean Air Act Scientific Advisory Committee (CASAC) will hold a teleconference on November 5th as part of the review. In a draft review of the agency's first draft policy assessment of the ozone standards, the science advisers said EPA has provided a “strong rationale” for considering setting ozone air quality standards at 60 ppb or 70 ppb, and it has provided “adequate justification” for considering a standard between 50 ppb and 60 ppb.

Bill Becker, executive director of the National Association of Clean Air Agencies, told reporters that he does not expect the standard to be set as low as 50 ppb, although such a standard likely would mean most every major metropolitan area of the country would be in nonattainment. He said some areas have natural background ozone levels that are approaching that level.

During the last review of the ozone standards, the Clean Air Scientific Advisory Committee recommended that EPA consider a standard between 60 ppb and 70 ppb, but EPA ended up setting the standard at 75 ppb in 2008. After President Obama took office, EPA said it would reconsider the 75 ppb standard, and public health groups advocated for a 60 ppb standard. Obama eventually blocked the agency from issuing the reconsidered rule.
The Clean Air Act requires EPA to set national ambient air quality standards at a level that will protect public health, and the agency cannot consider implementation costs when setting the level. Becker said he expects EPA will end up setting the new standard at the higher end of the range the committee recommends, rather than the lower end. “There is an ability to find a number that addresses the recommendations from CASAC and at same time doesn't make this such a daunting and overwhelming challenge that states just throw up their hands,” Becker said.

Becker said the process of implementing a new 2014 standard would take a decade. States would have to monitor air quality, propose attainment designations, and develop implementation plans with pollution-reduction measures. “A standard set in 2014 won't yield emissions reductions until well into the 2020s, and so we have a decade or more to prepare for any new standard,” Becker said. Becker said it would be more difficult for states to meet a new standard if EPA does not implement federal standards to reduce pollution, including nitrogen oxides, an ozone precursor.

EPA must address transported pollution, although the Cross-State Air Pollution Rule has been struck down by the U.S. Court of Appeals for the District of Columbia Circuit. It would have reduced emissions of nitrogen oxides and sulfur dioxide that cross state lines. Also, Tier 3 vehicle and fuel standards, which EPA has not yet proposed, would reduce nitrogen oxides emissions by 240,000 tons immediately, Becker said.

41. Energy Sector May Face Tighter Controls with Possible Stricter Ozone Limit

Energy producers might face stricter emission controls that could force them to invest in cleaner technologies to reduce pollution if EPA proposes to tighten its existing ozone national ambient air quality standard (NAAQS), which the agency's science advisors are suggesting the agency consider. Members of EPA's Clean Air Scientific Advisory Committee (CASAC) are recommending the agency assess stricter ozone limits as low as 55 parts per billion (ppb) for its review of the ozone NAAQS, which could prompt industry opposition as the limit would be significantly tighter than the existing 75 ppb standard.

During the last day of a September 11-13 teleconference to discuss EPA's latest scientific and policy papers for the review, CASAC members did not suggest a specific limit for a revised ozone standard. But panel Chairman Jonathan Samet, a professor at the University of Southern California noted that there was at least a “weak opinion” from the group that the agency should consider a limit below the 60-70 ppb CASAC suggested for the last review in 2008.

“It looks to me that it would not be unreasonable to use 55 ppb” as a lower limit when conducting the analysis for a forthcoming second draft of EPA’s policy assessment (PA) for the revised ozone standard, Samet told agency officials.

In the first draft PA floated recently, EPA staff says that the latest science on ozone's health impacts bolsters CASAC's call for a tighter ozone limit of between 60-70 ppb but does not advocate a specific limit.

Comments from CASAC members on the teleconference suggest a need for EPA to consider an even stricter ozone NAAQS -- possibly as low as 55 ppb -- in order to protect public health, noting recent studies show adverse health impacts from ozone at lower levels than the existing 75 ppb limit and the 2008 recommended 60-70 ppb range.
CASAC's recommendation to consider a lower standard falls in line with conclusions from EPA officials who told the panel that the agency will likely review limits below the 60-70 ppb range in the second draft PA.

In a September 13th presentation for the CASAC meeting, which took place in Raleigh, NC, agency officials noted that after considering recent scientific data on ozone, “staff reached [a] preliminary conclusion that the new evidence also supports analyzing [a] standard [at] levels somewhat below 60 ppb.”

EPA has said it plans to issue the second draft PA early next year and finalize the document by summer 2013 with the revised NAAQS completed a year later. The Clean Air Act requires the agency to review its NAAQS every five years, and since the standard was last revised by the Bush EPA in 2008, a final updated limit is due for release in 2013.

However, agency officials told CASAC earlier this week that EPA is aiming for September 2014 for issuing a final revised NAAQS -- though one CASAC member doubts the agency will meet that target, noting the major workload involved in the ongoing scientific assessments and other work for the NAAQS review.

While CASAC members on the call urged EPA to consider the wider ranges for the primary standard, panelists were careful to note that the final NAAQS may not reflect the lower end of the range. While there is evidence that a limit as low as 55 ppb could be appropriate, the science is not as strong as it is for a standard in the 60-70 ppb range, one unidentified panel member said during the meeting. Given the limited data for a 55 ppb standard, “it’s extremely unlikely to be able to shed enough light that that would be a value that we would finally recommend.”

Environmentalists would welcome a stricter ozone standard, as they are pursuing litigation in the U.S. Court of Appeals for the District of Columbia Circuit claiming the Bush-era limit is too weak because it is at odds with CASAC’s advice. Industry also has a pending suit over the standard, arguing that it is unnecessarily strict.

The American Petroleum Institute, the American Forest & Paper Association and other industry groups have already questioned the agency's latest review of the science on ozone's health impacts that underpins the agency's first draft PA, and industry is likely to strongly oppose the suggestion of a limit as low as 55 ppb.

Industry warns that ever-stricter NAAQS can harm the economy, because a tighter limit will likely put more areas out of attainment with the standard. Those nonattainment areas must then craft plans imposing strict pollution controls on industries within their jurisdiction in order to cut ozone and attain the limit. The threat of those controls can drive businesses away from nonattainment areas, causing economic harm, industry argues.

However, EPA by law cannot consider costs in setting NAAQS and must rely solely on scientific data on health impacts of a criteria pollutant regulated under a NAAQS. The agency must use that data to set a standard requisite to protect public health, which environmentalists argue EPA failed to do in the 75 ppb limit because data suggest a need for a 60-70 ppb limit to adequately protect public health.
42. Diesel Engine Manufacturers Sue EPA Over Navistar Nonconformance Penalty Rule

Four diesel engine manufacturers sued the Environmental Protection Agency after it issued a rule allowing Navistar Inc. to pay nonconformance penalties for truck engines that fail to meet federal nitrogen oxides emissions standards. The lawsuit was filed on October 26th in the U.S. Court of Appeals for the District of Columbia Circuit by Daimler Trucks North America LLC, Detroit Diesel Corp., Mack Trucks Inc., and Volvo North America LLC. At issue is a September 5th final rule that allows Navistar Inc. to produce heavy-duty diesel engines in 2012 that do not meet the nitrogen oxides standards, provided the company pays a penalty of up to $3,775 per engine. Heavy-duty diesel engines were required to meet an emissions standard of 0.20 gram of nitrogen oxides per horsepower-hour by 2010.

Navistar's competitors have met the standard by using selective catalyst reduction (SCR) technology. Navistar has been using an exhaust gas recirculation technology to reduce nitrogen oxides emissions, but its engines cannot attain the 2010 emissions limit. The September 5th rule allowed Navistar to continue to produce its engines, provided it pays the nonconformance penalty.

Navistar has announced it will abandon the exhaust gas recirculation technology and shift to a technology similar to what its competitors use. However, the new technology will not be available until early 2013, and the final rulemaking is necessary for Navistar's current operations. In the meantime, Navistar has announced that it has reached definitive, long-term supply agreements for heavy-duty diesel engines and emission aftertreatment technologies with Cummins. Through these agreements, Navistar will offer the Cummins ISX15 in its International ProStar+, PayStar and 9900 models. In addition, Navistar will utilize a urea-SCR based aftertreatment system supplied by Cummins Emission Solutions for their heavy-duty big bore engines.

Navistar had announced earlier that it will discontinue its MaxxForce 15, non-SCR diesel engine once it runs out of NOx emission credits, while the remaining heavy-duty engine models will transition to SCR-based emission technology.

Navistar will begin its initial pilot builds of the International ProStar+ with the Cummins ISX15 in November 2012 with first customer shipments in December 2012. The International ProStar+ with MaxxForce 13 with the Cummins SCR-based aftertreatment system will enter initial pilot production in March 2013 with regular production to begin in April 2013. The remaining line-up of heavy-duty truck models will transition to SCR-based emission technology in a phased launch throughout 2013 based on volume and customer demand.

During the transition, Navistar will continue to build and ship EPA-compliant trucks in all vehicle classes using a combination of earned emissions credits and/or non-conformance penalties (NCPs), said the company.

43. Hyundai/Kia to Correct Overstated MPG Claims as Result of EPA Investigation

The U.S. Environmental Protection Agency (EPA) has announced that Hyundai Motor America and Kia Motors America will lower their fuel economy (mpg) estimates for the majority of their model year 2012 and 2013 models after EPA testing found discrepancies between agency results and data submitted by the companies.
The auto companies have submitted to the EPA a plan for cars currently on dealer lots to be relabeled with new window stickers reflecting the corrected mileage estimates. The mileage on most vehicle labels will be reduced by one to two mpg, and the largest adjustment will be six mpg highway for the Kia Soul. “Consumers rely on the window sticker to help make informed choices about the cars they buy,” said Gina McCarthy, assistant administrator for EPA’s Office of Air and Radiation. “EPA’s investigation will help protect consumers and ensure a level playing field among automakers.”

At its National Vehicle and Fuel Emission Laboratory (NVFEL) in Ann Arbor, Mich., EPA routinely tests vehicles – 150 to 200 a year, or about 15 percent of the possible vehicle configurations – to ensure that their performance matches the mileage and emissions data required to be submitted to EPA by automakers. This auditing helps to ensure that vehicles on the road meet tailpipe emission standards to protect public health and the environment and that all carmakers follow the same procedures for calculating mileage estimates. EPA conducts both random and targeted audits, based on factors such as consumer complaints.

EPA had received a number of consumer complaints about Hyundai mileage estimates. Through the agency’s ongoing audit program, staff experts at EPA’s NVFEL observed discrepancies between results from EPA testing of a MY2012 Hyundai Elantra and information provided to EPA by Hyundai. The agency expanded its investigation into data for other Hyundai and Kia vehicles, leading to the announcement.

EPA’s audit testing occasionally uncovers individual vehicles whose label values are incorrect and requires that the manufacturer re-label the vehicle. This has happened twice since 2000. This is the first time where a large number of vehicles from the same manufacturer have deviated so significantly.

EPA and DOE are updating their joint fuel economy site, www.fueleconomy.gov, to reflect the Hyundai and Kia corrected numbers.

**44. EPA Asks Full Court to Rehear Air Pollution Case**

The Environmental Protection Agency (EPA) has asked a U.S. appeals court to rehear a case in which a three-judge panel struck down a rule that would reduce harmful emissions from coal-burning power plants. The EPA filed an “en banc” petition in the U.S. Court of Appeals for the D.C. Circuit, which in August ruled 2-1 to suspend the agency’s cross state air pollution rule and ordered it rewritten. The EPA rule targeted sulfur dioxide and nitrogen oxide emissions from power plants, ensuring that emissions in one state do not travel downwind to increase pollution in neighboring states.

Two of the three judges ruling on the case said the EPA had exceeded its “jurisdictional limits” in interpreting the Clean Air Act and imposed “massive emission reduction requirements” on upwind states. In its petition for the hearing by the full circuit, the EPA argued that the three-judge panel’s decision was “inconsistent” with the court’s previous rulings and that it did not exceed its mandate under the Clean Air Act. “The Act assigns specific roles to EPA and the States and creates an orderly process for them, a process the panel's decision completely upends;” the EPA said.

**45. Key Coal Advocate Pitches Stricter Vehicle Rules In Lieu Of CSAPR Revision**
A prominent coal sector advocate is urging EPA to focus on stricter regulation of mobile pollution sources to improve air quality rather than revising its Cross-State Air Pollution Rule (CSAPR) emissions trading program, saying the rule will have minimal impact on air quality given reductions from other utility rules the agency is crafting. Eugene Trisko, a consultant for the American Coalition For Clean Coal Electricity (ACCCE) who has also represented the United Mine Workers, argued in a white paper presented to the Ozone Transport Commission (OTC) in Washington, D.C. on September 13th that the Bush-era Clean Air Interstate Rule (CAIR) that EPA is implementing while it revises CSAPR will achieve similar reductions as the recently vacated rule and that the agency should instead look to the vehicle sector to achieve additional cuts.

Given the similarities between the emissions reductions under CAIR and CSAPR, and the fact CAIR is in place following CSAPR’s vacatur, Trisko said EPA should look elsewhere for emissions cuts. Trisko said that mobile sources such as cars and other nitrogen oxides (NOx) sources outside of the utility sector account for more than 90 percent of the NOx inventory in Eastern states. The apparent strategy by EPA and the OTC member states of trying to gain more NOx reductions from power plants "has about run its course," he said.

EPA air Chief Gina McCarthy, speaking to reporters on the sidelines of a September 20th Clean Air Act Advisory Committee meeting in Crystal City, VA, said the air law “obligates us to do both” rules for mobile sources and utilities. She also said EPA is “looking at our legal opportunities” to address the CSAPR vacatur.

Some states and environmentalists have criticized the U.S. Court of Appeals for the District of Columbia Circuit’s vacatur of CSAPR, which would have created a cap-and-trade program to cut utilities’ emissions of NOx and sulfur dioxide (SO2) in 28 states. NOx contributes to ozone formation, while both NOx and SOx contribute to particulate matter (PM), and EPA has in place federal limits for states to meet for ozone and PM.

Northeast states with higher ozone levels in particular supported CSAPR to help them reduce transported pollution from upwind states that hinders their ability to meet EPA national ambient air quality standards (NAAQS).

In a 2-1 ruling the court found EPA exceeded its authority in how it crafted the rule and its process for imposing pollution caps on CSAPR states. While EPA is still weighing an appeal of the ruling, CAIR, the Bush-era predecessor trading program, "remains in place," according to EPA's website.

EPA is working on air rules that are expected to cut vehicle emissions, including its pending Tier III fuel and vehicle rule that is expected to lower the sulfur content in gasoline. EPA on its “Rulemaking Gateway” website of pending regulations says the Tier III rule will cut ozone, PM, nitrogen dioxide and mobile source air toxics.

46. EIA Says Vital U.S. Energy Data Held Hostage by Budget Fight

The U.S. federal budget fight might prevent a timely study of the country's new energy sources, a senior official said, and stands in the way of data that could help ease volatility that is costly to energy companies and traders alike. New production of shale gas in Pennsylvania and petroleum in the Dakotas is already shaping policy, but the country’s energy study agency is not collecting timely and thorough data from those reserves.
"I think it would be really good for policy makers and the public to know what's going on now," Adam Sieminski, head of the Energy Information Administration said, "Particularly given the swiftness of the changes taking place."

The agency's budget will be slashed 8 percent to $96 million next year if Congress does not dodge broad automatic deficit cuts at the end of the year. Even if a deal is worked out, the agency faces a tough political climate for getting a bigger budget. A half-million dollar boost to the EIA budget would let officials take a monthly pulse of Dakota crude and Pennsylvania shale gas, said Sieminski, who left his post as a top energy economist for Deutsche Bank six months ago and now leads the statistics arm of the Department of Energy.

The agency has struggled to keep track of the shale gas boom, saying in 2010 that it overestimated gas output from states such as Texas and Louisiana. Data on shale gas and petroleum is still lagging and incomplete, Sieminski said. In the case of Texas, home of the Eagle Ford shale and gas reserves, production data can lag 18 months.

Sieminski said the scope of the domestic energy boom came to life for him during a recent flight over his home state of Pennsylvania with his brother-in-law, a recreational pilot, when they witnessed the abundance of shale gas infrastructure. "There's going to be a surge in natural gas production in Pennsylvania," he said, noting that an EIA monthly tally of the state's natural gas output is based only on estimates, not surveys.

Sieminski said one of his missions has been to modernize an eclectic system that still receives data using somewhat outdated technology. "There are some surveys where we are still getting faxes and there's at least one of our surveys that's running on Lotus 1-2-3," he said, referring to spreadsheet software that was popular in the 1980s.

Sieminski hopes to restore the EIA's annual long-term energy outlook, a victim of budget cutbacks, and have it look all the way out to the year 2040.

Sieminski is careful to sidestep policy debates as his agency is chiefly a data engine, but he said the new abundance of fossil fuels will naturally spark a rethink of some existing energy policy such as the Strategic Petroleum Reserve. The SPR, a nearly 730-million barrel cushion against supply shocks, might be retooled if oil imports keep falling and domestic output continues to rise.

Philip Verleger, another prominent energy economist, estimated recently that the U.S. government could sell about 66 million barrels by this time in 2013 and 100 million barrels in 2014. The SPR currently holds 695 million barrels after a sale last year during turmoil in Libya.

Given the long history of oil shocks the United States has seen since the 1960s, including embargoes from Arab oil producers and hurricanes that damaged oil production facilities, "it would probably make sense to have some kind of strategic reserve system even if we were net exporters," Sieminski added.

The shale revolution has also opened the door to serious consideration of easing restrictions on U.S. exports of crude. Exporting U.S. oil had been viewed as politically untenable for decades, especially after the oil embargoes in the 1970s. The river of oil coming out of North Dakota is not well matched with the Gulf coast refining hub, which is more suited to process heavier crudes. "We are going to fairly soon be in a situation where we will have an excess of light sweet crude oil compared to our refinery set up," Sieminski said. That bottleneck could "lead to
either lower prices and less resource development or a rethink about what the economic and national security consideration are around the idea of exports," he added.

47. More US Coal Plants To Retire Due To Low Natural Gas Prices, Green Rules

More U.S. coal-fired power plants could retire due to environmental regulations weaker-than-expected electric demand, and lower natural gas prices economists at consultancy Brattle Group said. In a new study, Brattle's economists forecast 59,000 to 77,000 megawatts (MW) of coal plant capacity would likely retire over the next five years. That was about 25,000 MW more than the firm had estimated in 2010, Brattle said in a release. There is about 317,000 MW of coal-fired capacity now in the United States.

Brattle estimated more coal units would shut than other recent studies, including a report by the power industry's research arm Electric Power Research Institute that forecast 36,000 to 61,000 MW could shut over the next several years. One megawatt can power about 1,000 homes.

The economists estimated the power industry would have to invest $126 billion to $144 billion to retrofit and replace the coal capacity.

Since December 2010, when Brattle released its prior estimates of coal plant retirements, natural gas prices and the projected demand for power have decreased. The economists said these shifts in market conditions had resulted in acceleration in announced coal plant retirements. As of July 2012, generating companies had announced the retirement of some 30,000 MW of coal plants (roughly 10 percent of total U.S. coal capacity) by 2016, Brattle said.

The economists said natural gas prices would play a major factor in determining the number of coal plants to retire. Retirements would drop to between 21,000 and 35,000 MW if natural gas prices increased by just $1 per million British thermal units (mmBtu) relative to April 2012 forward prices. If gas prices fell by $1, the economists projected coal retirements would increase to between 115,000 and 141,000 MW. Natural gas prices in April bottomed at $1.90 per mmBtu. Over the past decade, natural gas has traded in a wide range from less than $2 to more than $15, averaging about $6. The current spot cost is $3.35.

Also the U.S. Environmental Protection Agency still has to finalize some rules related to emissions, cooling water and coal ash. To reflect the remaining environmental uncertainty, Brattle said its economists had developed "strict" and "lenient" scenarios, with about 59,000 MW likely to retire under lenient rules versus 77,000 MW under strict regulations.

48. EPA Issues Revisions to Ambient Nitrogen Dioxide Monitoring Requirements

On October 5, 2012, the U.S. Environmental Protection Agency (EPA) issued a proposed rule to revise the deadlines by which the near-road monitors within the nitrogen dioxide (NO2) monitoring network are to be operational. This monitoring network will collect data that are compared to the National Ambient Air Quality Standards (NAAQS) for NO2.

EPA is proposing to establish a series of deadlines that would require states and local agencies to begin operating the near-road component of the NO2 network in phases between January 1, 2014 and January 1, 2017. This would replace the 2010 rule requirement that all new NO2 monitors are required to begin operating no later than January 1, 2013. A phased deployment of near-road NO2 monitors allows more time for state and local air monitoring agencies to establish the required monitors based on the agencies’ anticipated available resources.
The proposed revisions do not change the number of monitors already required.

The proposal would also give the EPA Regional Administrators the authority to approve states’ annual NO2 monitoring network plans. Currently, the EPA Administrator approves the plans. This change would make the NO2 network approval authority consistent with other criteria pollutant approval authorities.

On January 22, 2010, EPA strengthened the health-based NAAQS for NO2. A new 1-hour NO2 standard was set at the level of 100 parts per billion (ppb), a level which defines the maximum allowable concentration anywhere in an area. EPA also retained, with no change, the annual average NO2 standard of 53 ppb.

To determine compliance with the 2010 standard, EPA at that time also established new ambient air monitoring and reporting requirements for NO2. These included:

- monitors near major roads in urban areas as well as in other locations where maximum concentrations are expected;
- additional monitors in large urban areas to measure the highest concentrations of NO2 that occur more broadly across communities, and
- EPA, working with the states, will site a subset of monitors in locations to help protect communities that are susceptible and vulnerable to NO2-related health effects.

49. EPA Awards $30 Million for Clean Diesel Projects

The U.S. Environmental Protection Agency (EPA) is awarding $30 million for clean diesel projects as part of its ongoing campaign to reduce harmful diesel exhaust that can lead to asthma attacks and premature deaths. The Diesel Emission Reduction Program, also known as DERA, is designed to replace, retrofit or repower older diesel-powered engines like marine vessels, locomotives, trucks and buses.

Older diesel engines that predate newer, cleaner standards emit large amounts of air pollutants, such as nitrogen oxides (NOx) and particulate matter (PM). These pollutants are linked to health problems, including asthma, lung and heart disease and premature death. The clean diesel projects funded through these grants will work to address the more than 11 million older diesel engines that continue to emit higher levels of pollution.

In this year’s competition, winners were selected based on a proposal’s potential for maximizing health and environmental benefits by targeting areas that have significant air quality issues. Reduced air pollution from diesel engines in these areas can have a direct and significant impact on community health.

The 2012 awards include 23 projects with EPA funding ranging from $282,000 to $1,390,000. Eight of these projects are retrofits or projects that include retrofit components. The retrofits include diesel oxidation catalysts, crankcase filters and particulate filters for school buses, drayage and long haul trucks and construction equipment. The remaining projects include repowering and/or replacement of older equipment.

New this year is an increased funding availability per award that will allow EPA to target larger engines used in marine vessels and locomotives, which will result in significant emissions reduced per engine.
DERA was enacted in 2005 and since it was first funded in FY 2008, EPA has awarded over 500 grants nationwide. These projects have reduced hundreds of thousands of tons of air pollution and saved millions of gallons of fuel.

50. California to Use OBD Data for Smog Check Testing

The Air Resources Board has reviewed plans for implementing a new Smog Check program that eliminates tailpipe testing for 2000 model-year and newer vehicles and improves the quality of inspections for older vehicles. Authorized by AB 2289, the new test takes advantage of the advanced monitoring On-Board Diagnostic (OBD) systems that are standard equipment on all newer vehicles.

Instead of measuring tailpipe emissions while simulating driving conditions in a shop, the new test will review OBD data collected during actual operation to identify vehicles with high emissions.

“By utilizing the On-Board Diagnostic system already built into all newer cars, owners can be assured that they are getting the most accurate measure of their vehicles condition at the lowest possible cost,” said ARB Chairman Mary Nichols. “The move away from tailpipe testing and the expensive equipment required by shops will benefit consumers, service providers and the environment.”

Older vehicles will continue to be inspected using tailpipe emissions but stations will be subject to new performance and evaluation standards. Only stations meeting the tough new standards will be rated as “STAR Certified” and permitted to inspect 1999 and older vehicles.

The changeover to the new testing requirements will take place over the next year:

Starting January 1, 2013:
• All 1999 model-year and older vehicles (the model years most likely to have high emissions) will be directed to new STAR inspection stations.

September 1, 2013:
• All 2000 model-year and newer vehicles will be inspected using the OBD-based test.

As part of the report on the new Smog Check program, the Board also reviewed the effectiveness of the state’s voluntary vehicle retirement programs. These programs, administered by the Bureau of Automotive Repairs and local air pollution control districts, provide financial incentives to scrap older vehicles and vehicles that require costly repairs. Over the past two fiscal years, these programs have resulted in the retirement of over 82,000 high emitting vehicles. Retiring older vehicles is an important tool in California’s air quality efforts as vehicles that are over 20 years old account for only 6% of all miles traveled but are responsible for over 40% of daily smog forming emissions. Board staff found that the significant air quality benefits can be achieved by increased retirements and program improvements.

51. Romney Vow to Revoke EPA Vehicle GHG Regulation Faces Major Hurdles

GOP presidential candidate Mitt Romney's vow to scrap EPA’s vehicle greenhouse gas (GHG) rule for model year 2017-2025 vehicles if he wins the November election faces major hurdles, including difficulty undoing the "strong" record justifying the rule, a divided Congress unlikely to overturn it and broad support for the rule.
Even if Romney were to succeed in repealing the rule, or persuade Congress to pass legislation undoing it, it remains unclear what would happen to a parallel Department of Transportation (DOT) rule issued alongside EPA's climate regulation. The DOT rule set a corporate average fuel economy (CAFE) rate that achieves the same result as the GHG regulation of 54.5 miles per gallon (mpg) fleet wide average in 2025.

EPA and DOT issued the joint rules on August 28th, though they have yet to publish them in the Register. According to EPA's “Rulemaking Gateway” of pending rules, the rules are slated for publication this month, giving them final effect and setting their effective date. Publication will also trigger a 60-day window to sue, which biofuels groups are weighing due to fears the rules act as a disincentive for biofuel use.

Romney told Fox News last December, "I would get the EPA out of its effort to manage carbon dioxide from automobiles and trucks." In an energy section of his campaign platform, "Believe in America," Romney vows to "amend the Clean Air Act to exclude carbon dioxide from its purview," calling the "Obama administration's war on carbon dioxide . . . the highest-profile regulatory effort," similar to ongoing attacks on EPA Romney has made on the campaign trail.

Romney also told the Detroit Economic Club in February, "In my view, the [auto] industry got in trouble because . . . the government CAFE standards hurt domestic automakers and provided a benefit to some of the foreign automakers." However, most automakers offered public support for EPA's climate rules.

Domestic automakers' support was critical to EPA's development of landmark GHG rules for model year 2012-2016 vehicles, which the D.C. Circuit recently upheld against a challenge by opponents of GHG regulation. EPA similarly sought automakers' backing for the model year 2017-2025 rules. All domestic automakers signed onto the agreements with the Obama administration, while two foreign automakers opposed the rule, Volkswagen and Daimler, on the grounds that it unfairly penalized diesel-fueled cars. However, both companies now say they will not challenge the final rule and intend to meet it.

52. California on Track to Link CO2 Scheme with Quebec In 2013

California is on track to link its forthcoming emissions trading scheme to Quebec's in 2013, pushing the state one step closer to its goal of connecting to a wider carbon market, the state's chief air regulator said recently. Mary Nichols, chairperson of the California Air Resources Board (ARB), said that California Governor Jerry Brown will sign off on rules that would enable linkages for the state's CO2 market after review by the attorney general.

The governor must within 45 days find that the other jurisdiction has adopted a greenhouse gas reduction program that is equivalent or stricter than California's program and that any linking failure will not impose significant liability on the state.

She added that linkage to and joint auctions with Quebec's market would take place next year. The two jurisdictions, both members of the Western Climate Initiative - a regional cap-and-trade system, had planned to link their markets before their 2013 launch dates but delayed the links to await approval by California's governor.

Quebec's GHG reduction target is 20 percent below 1990 levels by 2020, which is more ambitious than California's goal of 1990 levels by 2020.
The addition of Quebec would increase the size of the overall market by 20 percent, increasing liquidity and giving California businesses more opportunities to reduce emissions.

Meanwhile, Australia’s climate change secretary, Mark Dreyfus, said on Sunday that Australia and California would set up a forum to share experiences on climate policy, including how best to build carbon markets. Nichols will travel to Australia to further the talks and speak at a carbon markets conference on October 24.

She said California is also in talks about potential links with the Northeast’s cap-and-trade scheme called the Regional Greenhouse Gas Initiative (RGGI) and with the more than half dozen Chinese provinces that plan to implement emissions trading systems.

53. EPA Reviewing Air Pollution Rules to Minimize Impact on Small Businesses

The Environmental Protection Agency is reviewing its air pollution rules to determine whether changes are warranted to minimize their economic impact on small businesses, according to a recent Federal Register notice. Among the rules under review are emissions standards for heavy-duty vehicle engines and accompanying fuel sulfur restrictions, issued in 2001.

EPA said it provided small fuel refiners with flexibility when it promulgated the heavy-duty engine and diesel sulfur requirements, but it will accept comment on the rule’s continuing impact.

As required by Section 610 of the Regulatory Flexibility Act, EPA will accept comments on the continued need for the rule, complaints about the rule, the complexity of the rule, the extent to which the rule overlaps or conflicts with federal, state, or local regulations, and whether technology, economic conditions, or other factors have changed since the rules’ promulgation.

Section 610 of the Regulatory Flexibility Act requires that agencies review, 10 years after promulgation, rules that have a significant economic impact on a substantial number of small entities.

After considering public comments, EPA said it will keep the rules, amend them, or withdraw them.

In a Jan. 18, 2001, final rule, EPA set emissions standards for heavy-duty engines and vehicles, and it reduced the level of sulfur permitted in diesel fuel. EPA said the rule provided flexibility by allowing small refiners with simultaneous gasoline sulfur requirements to sequence sulfur-reduction technology upgrades in the most advantageous way.

54. CARB Calls Its Diesel Rules Awareness Month A Success

CARB spent the month of September inspecting trucks and monitoring compliance of the state’s diesel emissions rules as part of its “Gear Up for Clean Truck Month” campaign. After inspecting 4,053 trucks at 40 different locations, CARB says about 80 percent of trucks meet the state’s multiple diesel regulations – a score that prompted the air quality agency to call the effort a success.

For CARB’s Truck and Bus Rule – which requires the retrofit of diesel particulate filters for trucks with 1996 through 1998 model year engines – trucks inspected had a 90 percent compliance rate. “We’re pleased to see such a high level of compliance,” CARB Executive
Officer James Goldstene said, according to a CARB news release. “While CARB will continue to dedicate significant resources to assist fleets in complying with California’s clean truck requirements, owners and operators should understand that our enforcement efforts will continue throughout the year, and that our goal is to make every month a ‘clean truck month.’”

CARB wrote 817 citations during the inspection blitz, including 212 for violations of the Transport Refrigeration Unit rule, 191 tied to the Bus and Truck rule, 187 idling infractions and 174 for violations of the state’s Emissions Certification Labels rule.

CARB says it distributed more than 4,600 information packets in English and Spanish.

55. EPA sets Bio-based Diesel Volumes for 2013

The U.S. Environmental Protection Agency (EPA) has taken action to establish the amount of bio-diesel products required to be included in diesel fuel markets in 2013. Bio-based diesel products are advanced bio-fuels that are derived from sources that include vegetable oils and wastes oils from renewable sources.

“This action, which meets goals designated by Congress, is another step that strengthens America’s energy security by reducing dependence on foreign oil,” said EPA Administrator Lisa P. Jackson.

EPA’s action sets the 2013 volume at 1.28 billion gallons under the Energy Independence and Security Act of 2007 (EISA) which established the second phase of the Renewable Fuel Standards program. EISA specifies a one billion gallon minimum volume requirement for the biomass-based diesel category for 2012 and beyond.

The law also calls on EPA to increase the volume requirements after consideration of environmental, market, and energy-related factors. The final action follows careful review of the many comments and additional information received since EPA proposed the volume in 2011.

56. Engine Maker's Appeal Aims To Avoid Fines in Landmark Air Settlement

Volvo Powertrain is appealing a federal district court ruling in order to avoid millions of dollars in fines for violating one of several landmark consent decrees between EPA and engine makers agreed in the 1990s to settle charges that manufacturers intentionally violated federal air rules. In an August 1st appeal to the U.S. Court of Appeals for the District of Columbia Circuit, Volvo Powertrain seeks to overturn an April 13 ruling from the U.S. District Court for the District of Columbia, in which the lower court held Volvo Powertrain liable for a series of violations and levied fines totaling over $70 million.

The damages are payable to the federal government and California Air Resources Board (CARB), which is a signatory to a substantially identical consent decree with the company and an intervener in the case.

The fines punish violation of a consent decree entered by a predecessor company, Volvo Truck Corporation, forbidding the manufacture of engines that exceed federal emissions limits. In a series of deals signed in 1999 with several truck engine makers, manufacturers settled claims by EPA that they had sold engines which complied with nitrogen oxides (NOx) emissions limits during testing, but emitted far more pollution in real-world use.
The consent decrees, initially intended to cover truck engines, were expanded to cover non-road engines, including those made by Volvo Truck Corporation for Volvo Construction Equipment, which marketed them.

In 2001, as part of a corporate reorganization, Volvo Powertrain acquired Volvo Truck Corporation's manufacturing facility in Sweden, and at the facility made non-road engines for corporate sibling Volvo Penta, which then submitted the engines for certification in the United States. Volvo Powertrain took over Volvo Truck Corporation's obligation under the consent decree to pay the fines under the terms of the years-old settlement.

EPA says, and the district court agrees, that a series of non-road engines subject to the decree made at Volvo Powertrain's facility, but submitted for certification in the United States by Volvo Penta, violated the decree because Penta erroneously submitted them for certification under model year 2005, rather than the more-stringent emissions limits applicable to model year 2006. EPA certified the engines for model year 2005, and then conceded it had made a mistake and reversed its position after a rival engine manufacturer complained.

In an August 29 statement of issues to be raised at appeal in the case, *USA v. Volvo Powertrain Corporation*, Volvo Powertrain says it intends to question the district court's interpretation that engines submitted for certification by a nonparty to the consent decree -- Volvo Penta -- should be subject to settlement. It will also question "Whether the district court impermissibly enforced ambiguous provisions of the decree against Volvo Powertrain," and "Whether the district court mistakenly held that the consent decree covers stationary engines and engines that were never imported into the United States," according to the filing.

57. Oil Industry Raising Concerns Regarding RFS Waiver

Oil industry officials are raising concerns that a potential EPA waiver of renewable fuel standard (RFS) requirements could hinder the sector's plans for investing in new production and complying with agency rules. The industry says the potential for a waiver creates major uncertainty about how much renewable fuel the industry will have to produce.

The oil industry's concerns could complicate the livestock industry's push for the RFS waiver, even though the sectors have teamed up on other challenges to EPA's renewable fuel policies. These include unsuccessful litigation the groups filed alongside engine makers over the agency's decision to allow sales of higher ethanol blends.

Representatives of the oil sector are meeting with EPA officials and others in the Obama administration to outline their concerns, according to an industry source. The oil industry also plans to urge EPA to carefully weigh the RFS waiver petitions in written comments to the agency in response to a request for input on the RFS waiver petitions.

EPA is taking comment through September 26th on requests by the livestock industry, several states, lawmakers and others to waive the RFS' ethanol mandates due to rising corn prices that are the result of both the recent drought causing a fall in corn supplies and increased demand for corn for ethanol production to meet the RFS.

58. EPA, Auto Industry Eye Tier III Innovation to Cut PM Boost from GHG Rule

EPA and auto industry officials are looking to the agency's pending Tier III fuel and vehicle rule to spur innovation in next generation biofuels and vehicle emission controls to cut particulate
matter (PM) to offset an expected PM boost associated with the technologies that automakers will use to comply with EPA's vehicle greenhouse gas (GHG) rule. Specifics on how the Tier III rule will encourage technological innovation are only in the formative stages although EPA's "Rulemaking Gateway" of pending rules says the agency will release a proposal this month. EPA Deputy Administrator Bob Perciasepe recently told reporters that he is "not sure" when the Tier III rule will come out, and that the agency is still at the "high level" framing stage in developing the proposal.

The rule is expected to tighten gasoline sulfur limits beyond those in the existing Tier II fuel rule in order to cut criteria pollutants such as PM from the transportation sector. Auto industry sources are hopeful EPA's rule will harmonize with California's low emission vehicle (LEV) standards, which include specific limits on PM emissions from engines.

EPA on its website says the Tier III rule will cut ozone, PM, nitrogen dioxide and mobile source air toxics, but it is unclear how the agency will regulate PM emissions in the pending proposal.

Automakers will have to comply not only with Tier III, but also the agency's recently finalized vehicle GHG and fuel economy rule for model year 2017-2025 vehicles. Industry has long cautioned that while the rule will help to cut GHGs, it poses a challenge for automakers because it could have the side effect of boosting PM because the direct fuel injection engine technology companies will likely use to comply creates more PM than conventional gasoline fueled engines. An EPA spokesman told the press that the agency is aware of the issues the automakers are raising about PM increases under the vehicle GHG rule, but it is too early to discuss how EPA will address those concerns.

Rich Kassel -- formerly of the Natural Resources Defense Council and now with consulting firm Gladstein, Neandross & Associates -- told reporters that innovation in gasoline and diesel engines is expected to be the "main strategy" for meeting GHG reductions and other goals in coming years. But he said, "There could be an unanticipated consequence of higher particulates from these engines which may need to be addressed in upcoming rulemakings."

EPA officials acknowledge they are looking to the Tier III rule to spur innovation in the auto industry, which could help lead to new technologies to curb PM and other pollutants and resolve the industry's concerns. For example, EPA's Perciasepe told reporters that the Tier III rule will spur industry to develop new fuels and technologies to cut emissions. Perciasepe, speaking on the sidelines of a vehicle conference in Baltimore, MD, said two innovations he expects to see are improved catalyst technologies, next generation catalytic converters, and advancements in liquid fuels including biofuels and cellulosic ethanol.

Perciasepe says he is encouraged by Department of Energy (DOE) programs to bring down the price of cellulosic ethanol with a 25 million gallon demonstration project expected to begin production of $2 per gallon cellulosic ethanol in 2014. He says he is optimistic that cellulosic ethanol will become part of the fuel mix and help achieve the low sulfur requirements that will be set forth in the pending rule. Nevertheless, Perciasepe was hesitant to say exactly how the regulation will address innovation in advanced biofuels to achieving the goals of Tier III.

In a speech to the Fifth Annual Environmentally Friendly Vehicle Conference in Baltimore, Perciasepe said EPA believes "innovation" is the "sweet spot" in bridging economic and environmental policy goals.
At the event, Kathleen Hogan, DOE's deputy assistant secretary for energy efficiency in the Office of Energy Efficiency and Renewable Energy, said the department plans to validate $2 per gallon cellulosic ethanol in a demonstration project the agency is funding to advance commercialization of the fuel by 2014. She also said the department expects other advanced biofuels, such as "drop-in fuels" that are direct equivalents for gasoline and diesel fuel, to also be made commercial at prices competitive or lower than fossil fuels.

DOE is also finalizing a project with automaker Ford on the development of next generation catalyst technologies. The effort is expected to produce final results on the development of new catalyst for use in gasoline and diesel engines by the end of the month. Experts say improved catalysts in vehicles have synergies in perfecting advanced vehicle power-trains such as hydrogen fuel cells, which can help reduce a variety of air toxics and PM.

The National Academies in recent years has recommended DOE spend more on basic science research to improve catalyst technologies to advance alternative energy resources and the country's national energy goals. A 2009 study by the National Academies' Board on Chemical Sciences and Technology concludes that research on catalysts can overlap with other research benefiting the commercialization of hydrogen fuel cell cars. Some of the catalysts outlined in the study for advancement have been incorporated into the current DOE-Ford project.

Perciasepe's comments echo remarks EPA air chief Gina McCarthy made at the August 27th annual Environmental Council of the States meeting in Colorado Springs, CO, when she said the agency is examining ways to include "co-benefits" in Tier III regulations to reduce air toxics not directly addressed by the pending rule. Tier III will contain some "real co-benefits" for reduction of air toxics, and will "open up" the conversation about using innovative technology to achieve co-benefits on the toxics side, McCarthy said.

One auto industry source agrees with the EPA officials' comments that Tier III will drive innovation in new fuel and vehicle technologies to cut PM and other emissions expected to increase under the vehicle GHG rule, and notes that these concerns are part of discussions with California regulators over the state's LEV standards.

Kassel gave a presentation to the Baltimore vehicle conference in which he said that gasoline direct injection (GDI) engines -- one technology automakers are pursuing to lower GHGs -- can have high emissions of ultrafine particles. The presentation cites prior analysis from a former EPA official, derived from German environmental agency data, showing emissions from uncontrolled GDI engines can approach those of a conventional diesel without emissions controls. In addition, the slide cites analysis from Hyundai showing that uncontrolled GDI engines could exceed vehicle emissions standards for PM that the European Union is in the process of developing.

EPA has historically imposed mass based PM controls on gasoline and diesel vehicle engines. European Union regulators, however, are weighing a different approach for light duty vehicles that would target the number of particles -- in addition to their mass -- as a way to reduce emissions of ultrafine particles.

The industry source told the press that it is unclear exactly what technology automakers might adopt, noting that the technology must not place any additional burden on the consumer. For example, including PM traps on a light-duty gasoline vehicle is something the industry would like to avoid.
59. CBO Says Electric Car Subsidies Must Double To Be Cost-Competitive

The Congressional Budget Office (CBO) released a report titled: “Effects of Federal Tax Credits for the Purchase of Electric Vehicles,” in which it concluded “the lifetime costs to consumers of an electric vehicle are generally higher than that of a conventional vehicle or traditional hybrid vehicle of similar size and performance, even with tax credits, which can be as much as $7,500 per vehicle.”

Using current vehicle and energy prices, the CBO concluded the average plug-in hybrid vehicle with a battery capacity of 16 kilowatt-hours would require a subsidy of more than $12,000 to have roughly the same lifetime costs as a comparable conventional or traditional hybrid vehicle. And, assuming everything else is equal, the larger an electric vehicle’s battery capacity, the greater its cost disadvantage and requirement for a larger tax credit to make it cost-competitive.

Automakers introduced a new generation of electric vehicles in late 2010 but since that time, only 40,000 electric vehicles have been sold despite federal tax credits ranging from $2,500 to $7,500 as incentives. The tax credit begins at $2,500 for an electric vehicle with a 4 kWh battery and increases by $417 for every additional kWh of capacity, up to a maximum of $7,500.

Although the tax credit is subtracted from the amount of federal income tax the buyer owes, it is not a refundable credit, whereas the buyer will not receive the difference as a refund if the tax credit exceeds their tax liability. So, people with little income tax liability may only receive a fraction of the credit.

The current tax credit applies to the first 200,000 electric vehicles sold by each manufacturer for use in the United States, after which time the credit will be phased out. According to the CBO, providing federal aid to manufacturers of electric vehicles could lower the price of the vehicles, but not as much as the tax credits.

So far, most other programs supporting electric vehicles appear to have had little to no effect on the demand for such vehicles.

The CBO report acknowledges, “For electric vehicles to achieve the aims that supporters have for them—such as decreasing gasoline consumption, reducing emissions of greenhouse gases, and strengthening the U.S. automobile industry—consumers must buy those vehicles.” The report makes it clear that a larger tax credit would be required to make electric vehicles cost-competitive with higher-fuel-economy conventional vehicles unless the cost of electricity goes down or gas prices go up. And, of the two, the CBO states “gasoline prices have more potential to narrow the cost gap,” stating, “With gasoline prices of $6 a gallon, for example, the lifetime costs of many types of electric vehicles would be less than or equal to the costs of conventional vehicles, given the current tax credits … But even if electricity were free, the tax credits would still need to be about twice as high as the current ones, in many cases, before electric vehicles would be cost-competitive.”

Under the current tax credit scheme, the CBO points out it would require a gasoline price of no more than $6 per gallon to equalize the cost of a conventional light-duty truck and an equivalent electric vehicle, while it would require a gas price as high as $10 per gallon to equalize the cost of a conventional compact car and an equivalent electric vehicle.

CBO’s analysis, while noting gasoline powered vehicles contribute to “35 percent of nation’s carbon dioxide emissions attributed to human activity” came to the following two conclusions
about “the effectiveness of the tax credits for electric vehicles in advancing those energy and environmental goals:”

- In the short term, the tax credits are likely to have little or no impact on total gasoline consumption and greenhouse gas emissions.

- In the long term, the credits might decrease gasoline use and emissions, but how cost-effectively they would do so is unknown.

When discussing the cost of reducing emissions, the report indicates the cost will be far lower if the electric power is produced from low-carbon sources, such as nuclear and hydroelectric.

The report asserts there is much uncertainty as to whether tax credits and other federal subsidies will have any lasting effects because the possibility exists electric vehicles may never achieve significant consumer acceptance, and states, “Federal incentives will clearly not have achieved the goal of helping to bring about the widespread use of electric vehicles if those vehicles never attain a significant share of the U.S. automobile market.”

While traditional hybrids have been available for about 10 years and have been eligible for federal tax credits during much of that time, they account for less than 3 percent of new vehicle sales.

The CBO report states unless consumers embrace electric vehicles in the years ahead, sales of electric vehicles will probably be no greater than sales of traditional hybrids because of their high purchase price and lengthy recharging times.

The report then recommends raising taxes on gasoline, which currently average $.49 per gallon (including federal, state and local taxes) as an option, which it says would have an immediate effect on fuel use and greenhouse gas emissions, claiming consumers would drive less in vehicles they already own.

In the alternative, it said the government could introduce policies that apply to multiple sectors of the economy rather than focusing only on transportation for the purpose of reducing emissions and proposed, as another option, a cap-and-trade program to minimize the total cost of achieving a given reduction in emissions.

The CBO report also recognizes price isn’t the only factor considered when consumers are faced with whether or not to purchase an electric vehicle, pointing out the benefit of owning one is dependent upon how many are on the road, as continued low sales provides little incentive to spur development of commercial-grade, high-speed recharging infrastructure. Consumers may also be uncomfortable with the mileage limitations imposed, hampering their ability to drive longer distances, which is further compounded by lengthy recharging times.

60. Environmentalists Warn EPA Guide May Ease States' Vehicle Controls

Environmentalists say new EPA guidance on adopting transportation control measures to reduce ozone levels appears to help states avoid stricter emission rules for vehicles, which they say would be at odds with an appellate court decision that outlines when states must adopt transportation controls -- such as new vehicle emissions standards or the use of reformulated gasoline -- to offset ozone-forming emission increases associated with vehicle travel.
The guidance, which the agency says does not impose legally binding requirements, aims to address the fallout from the U.S. Court of Appeals for the 9th Circuit's ruling last year in Association of Irritated Residents v. EPA, in which the court rejected the agency's claim that Clean Air Act deference meant it could exclude some key vehicle emission data from having to be included in a plan by California's South Coast air district for attaining EPA's ozone limit.

EPA approved the area's state implementation plan (SIP), which activists challenged in court for several reasons, including the agency's reliance on its longstanding interpretation that states can conclude that no further transportation control measures (TCMs) to cut emissions are necessary to include in a SIP if aggregate motor vehicle emissions are projected to decline each year from the base year of the plan until the projected year of attainment.

But EPA in the guidance notes the court ruled against the agency in early 2011, saying in part that EPA should have required TCMs in the SIP to offset emissions increases from a growth in vehicle miles traveled (VMT). Environmentalists welcomed the ruling, saying it could change how state regulators clean up emissions tied to vehicles by forcing them to redesign their transportation plans to curb emissions from VMT.

EPA's guidance -- released on August 30th -- provides guidance to areas in “severe” and “extreme” nonattainment with the agency's ozone national ambient air quality standard on how to use TCMs to offset emissions increases due to growth in VMT. Only the South Coast and San Joaquin Valley in California, and Houston, TX, are in extreme or severe nonattainment.

EPA says control strategies could include -- but are not limited to -- measures such as: using reformulated gasoline, tighter new vehicle emissions standards and motor vehicle inspection and maintenance programs.

Although environmentalists say that the 9th Circuit's ruling requires SIPs to include TCMs whenever there is a projected increase in VMTs, EPA says the court acknowledged that "clean car technology" advances could result in there being no increase in emissions even with VMT growth. That would allow VMT to increase without triggering the requirement to adopt transportation measures, according to the guidance. EPA cites the court's ruling that "we cannot ignore the possibility that with advances in clean car technology, one day VMT could increase without a corresponding increase in emissions. If that happens, under the statute, EPA would not need to impose TCMs even though VMT increased." The court "seems to sensibly recognize and imply that improvements in vehicle technology, motor vehicle fuels and other control strategies that are transportation-related might reasonably be counted as offsetting" VMT emissions, the agency says.

61. California Mobile Source Air Controls Could Serve As Model for EPA Rules

EPA is weighing whether to approve California's strict new emission rules for cars and some non-road engines that other states could then adopt -- and that are seen as a model for federal vehicle rules -- holding two days of hearings on the rules where groups clashed over whether the rules would impose significant costs on state industries.

EPA is taking comment through October 19th on the California Air Resources Board's (CARB) Advanced Clean Car program which includes a package of emissions rules including greenhouse gas (GHG) limits for passenger cars, light-duty trucks and medium-duty passenger vehicles, and revisions to its low emission vehicle (LEV) program to set stricter emission limits on vehicles -- including precedent-setting controls on vehicle particulate matter (PM).
Separately, the agency is taking comment through October 22nd on CARB's amendments to emission standards for non-road diesel engines of 25 horsepower or greater, which will impose tighter air limits on the engines.

Under the Clean Air Act, EPA must give final approval known as a “waiver” to California to allow the state to adopt mobile source emissions rules more stringent than the federal government’s policies. If California wins a waiver, other states that are largely preempted from regulating mobile sources can then adopt California's rules.

EPA's recently finalized GHG and fuel economy rules for model years 2017-2025 vehicles largely mirror the GHG controls in the state's rules. EPA is also expected to adopt much of the state's LEV rule for its upcoming Tier III fuel and vehicle rule, though it remains unclear whether the agency will adopt a federal PM limit for vehicles.

EPA held a September 19th hearing in Washington, D.C., on the vehicle rules and a separate September 20th hearing on the non-road rules. The vehicle rules received support from states, regional air regulators and air emission technology developers to approve a waiver for California, while auto dealers warned the rules will increase the cost of cars.

At the hearing, California regulators urged EPA to approve the waiver request before January in order to give automakers and equipment manufacturers enough lead time to build vehicles that comply with the rules.

Nancy Kruger, deputy director of the National Association of Clean Air Agencies (NACAA) representing many state and local air officials, testified in support of EPA approving the waiver, saying there is no basis for EPA to deny the California program, citing previous EPA decisions to grant waivers for CARB vehicle rules. “This program clearly meets the statutory tests upon which EPA must base its determination and, further, will yield important public health, environmental and economic benefits,” Kruger said.

Matt Solomon, transportation director for the Northeast States for Coordinated Air Use Management, representing Northeast state air officials, said the California rules would help cut air pollution in the Golden State, which he said is attributable in part to high levels of emissions from mobile sources. Reducing emissions in western states is a top priority for Northeast regulators looking to reduce transported air pollution from upwind areas.

The standards will also help drive the commercialization goals for advanced technology vehicles in the Northeast, Solomon said, including New York City's goal to make 16 percent of all vehicles driven in the city hybrid electric vehicles by 2015. The CARB rules will drive similar technology advancements in other section 177 states, which adopt the more stringent California standards.

Maryland environmental policy officials also gave their support for swift approval by EPA of the CARB rules, saying the state intends to adopt them as a key strategy to help cut pollution and meet EPA air standards.

Environmental and public health groups including the Environmental Defense Fund, Sierra Club, Environment America, the American Lung Association, Consumers Federal of America and some state chapters of the national groups also backed the rules, saying reducing vehicle emissions will benefit public health.
Vehicle emission technology manufacturers and environmentalists used the hearing to urge EPA to also release its pending Tier III rules for sulfur in gasoline simultaneously with approval of the CARB waiver, calling the new regulations a boon for advanced technologies and the economy. Ann Mesnikoff of Sierra Club pushed EPA to approve the waiver, saying if the agency did not do so it would be “arbitrary and capricious.” She said Sierra Club also urges EPA to move ahead issue its long-awaited Tier III vehicle and fuel rules for sulfur in gasoline.

Chris Hessler, representing advanced engine control system manufacturers, also urged EPA to propose the Tier III rules and downplayed concerns raised by critics on the potential cost of the regulations.

The National Automotive Dealers Association (NADA) -- which unsuccessfully sued EPA over the agency's model year 2012-2016 GHG and fuel economy rules -- said at the hearing that it opposes a waiver for California's vehicle rules. NADA attorney Doug Greenhouse said California auto dealers will be limited in the type of vehicles they can sell because they will only be able to sell cars that comply with the rules. That could make in-state dealers vulnerable to economic losses from reduced sales if customers travel out of state to buy cars, he said, because vehicles made in states not subject to the strict California regulations could be less expensive, Greenhouse said.

If California residents travel out of state to buy cars that emit more than the state's rules allow, but then bring those cars back into California, it would undermine CARB's efforts, Greenhouse added.

However, EPA transportation Chief Margo Oge criticized NADA for assuming that customers would not want to purchase more fuel-efficient vehicles. She claimed recent data showed that most people desire greater fuel efficiency from vehicles. Oge added that a senior Ford executive was quoted in a recent interview the week of September 17th saying that consumers want more fuel efficient vehicles and are seeking out those vehicles. Greenhouse agreed that consumers care about fuel economy, “however, they have to be affordable,” and “for certain vehicles that is not the case. . . . Unless it can be paid off in four years it ain't going to make it.”

Oge said “if NADA has data” to justify its claims “I would invite NADA to provide that data for the record.” Greenhouse said NADA would be submitting detailed comments outlining the group's concerns, but did not say if the comments would include data on consumer preference. During closing remarks at the hearing, CARB Chief Deputy Executive Officer Tom Cackette said NADA is following the latest trend in the “political playbook, if you say something enough times it becomes true.” NADA's claims are “not supported or true,” and “things that aren't true should be stricken from the record,” he said.

EPA also held a second hearing on September 20th on CARB's non-road vehicle standards that would tighten emissions limits for mobile sources such as large earth-movers and trucks used in mining and agriculture that do not require driving long distances on public roads -- rules California argues are essential to help it cut air pollution.

American Road & Transportation Builders Association Assistant General Counsel and Director of Regulatory Affairs Nick Goldstein requested EPA hold hearings in California to hear directly from business owners and state-based companies -- who could not travel to Washington, D.C. - - before making a decision on the waiver request. He said the costs of implementing the rules would be between $13 billion and $30 billion over the standards' lifetime.
The California Construction Trucking Association (CCTA) at the hearing called for EPA to reject CARB's rules as "arbitrary and capricious," and warned about the economic costs the rules could impose. The trade group argued that the recession has made a lot of non-road capacity irrelevant because most of the sources CARB is seeking to regulate remain idle due to a lack of activity in the sectors for which the vehicles are used. The rule will hurt smaller trucking firms who cannot absorb the cost of compliance, CCTA claims.

62. Senate Votes to Shield U.S. Airlines from EU's Carbon Scheme

The Senate has unanimously passed a bill that would shield U.S. airlines from paying for their carbon emissions on European flights, pressuring the European Union to back down from applying its emissions law to foreign carriers. The European Commission has been enforcing its law since January to make all airlines take part in its Emissions Trading Scheme to combat global warming, prompting threats of a trade fight.

The Senate approved the bill as it scrambled to complete business to recess ahead of the November 6 congressional and presidential elections. Republican Senator John Thune, a sponsor of the measure, said it sent a "strong message" to the EU that it cannot impose taxes on the United States. "The Senate's action today will help ensure that U.S. air carriers and passengers will not be paying down European debt through this illegal tax and can instead be investing in creating jobs and stimulating our own economy," Thune said in a statement.

Democratic Senator Claire McCaskill, the measure's other chief sponsor, said, "It's refreshing to see strong, bipartisan support for the commonsense notion that Americans shouldn't be forced to pay a European tax when flying in U.S. airspace."

The House of Representatives has passed a similar measure, and could either work out differences with the Senate's version or accept the Senate bill when Congress returns for a post-election session.

So far, nearly all airlines have complied reluctantly with the EU law, but Chinese and Indian carriers missed an interim deadline to submit information required under it. China earlier this year threatened retaliation - including impounding European aircraft - if the EU punishes Chinese airlines for not complying with its emissions trading scheme.

The dispute between China and the EU froze Airbus purchase deals worth up to $14 billion, though China signed an agreement with Germany for 50 Airbus planes worth over $4 billion during Chancellor Angela Merkel's visit to Beijing last month.

The Senate bill gives the U.S. transportation secretary authority to stop U.S. airlines from complying with the EU law. But a new amendment agreed to during negotiations among lawmakers said the secretary could reconsider the prohibition if the EU trading scheme is amended, an international alternative is agreed to, or the United States implements its own program to address aviation emissions."

The bill increases pressure on the U.N. International Civil Aviation Organization (ICAO) to devise a global alternative to the EU law.

Connie Hedegaard, the European Climate Commissioner, said in response that while the bill encourages the United States to work within the U.N. organization for a global deal on aviation
emissions, she is skeptical that Washington will accept such a deal. "It's not enough to say you want it, you have to work hard to get it done," she told reporters. "That means that the U.S. needs to change its approach in ICAO and show willingness to actually seal a meaningful global deal that will facilitate action."

Annie Petsonk, a lawyer for the Environmental Defense Fund, said the bill will pile pressure on the U.N. body, which has been working on a global framework for years. "Passage of the Thune bill amps up the pressure on ICAO to move swiftly to reach a global agreement on addressing aviation's global warming pollution," she said.

63. California Regulator Defends CO2 Market Design

California's top air regulator offered a stern defense at a public hearing of the state's forthcoming carbon cap-and-trade system, battling back against complaints from industry that it will cost jobs and drive up consumer prices. Industry and manufacturing groups that have opposed the carbon market said at a meeting held by the state's air regulator in Sacramento that the program was poorly designed, and complained that their input has been ignored.

Mary Nichols, chair of the California Air Resources Board (ARB), said she opposed one of those groups' main requests -- for the state to give oil refineries and manufacturers 100 percent of the tradable emission permits they'll need to surrender to the state in 2014 for free. She said that could give certain companies undeserved windfall profits and send a signal of instability to businesses that have already invested in low-carbon technologies in the state.

"Easing the transition is one thing; leaving the entire industrial sector outside the arena where every other member of society, from forestry to municipal sewage treatment plants is taking aggressive measures to reduce their emissions is just plain unacceptable," Nichols said.

Under current plans, oil refineries and manufacturers would receive for free 90 percent of the allowances they need to cover their emissions at the outset of the program and offer the remaining allowances at quarterly auctions, which will begin in November.

Cathy Reheis-Boyd, president of the Western States Petroleum Association (WSPA), which represents California refineries, said the design of the current program will jeopardize the ability of her members to provide low-cost fuels in the state. She said it was wrong for the state to take allowances from business and sell them to generate state revenue at the auctions, when that allowance value is needed to support investments in reducing emissions at those facilities. "I cannot believe the inference that billions of dollars that we will invest to make those investments and make those reductions are being referred to as windfall profits, free, or characterized as being handout. I really find that appalling," she said in response to Nichols' opening comments.

Reheis-Boyd was accompanied by over a dozen oil industry workers and small business owners wearing red t-shirts that said, "Save our jobs." United Steelworker union members employed by refining and chemical company Phillips 66 said they were concerned the program would give an advantage to out-of-state oil refineries, which do not need to comply with California's carbon caps. They suggested implementing a "border adjustment" fee on those products as they enter the state, a suggestion Nichols said her staff was already looking into.

Environmentalists, including a member of the Union of Concerned Scientists, voiced support for that idea at the hearing.
The ARB was not expected to approve any changes to the cap-and-trade regulation at the meeting, but was expected to sign off on a series of directions for its staff to look into further.

### 64. U.S. West Should Expect Bigger Wildfires More Often: Report

A warming trend has contributed to a sharp rise in the number and size of wildfires on forest lands in the U.S. West, where big burns are likely to become the norm, according to a new report released by a climate research group. The average annual number of fires that cover more than 1,000 acres has nearly quadrupled in Arizona and Idaho and doubled in California, Colorado and six other Western states since 1970, the study by Climate Central showed.

The report, which analyzed 42 years of records about fires on U.S. Forest Service lands in 11 Western states, linked rising spring and summer temperatures in the region to a fire season that begins earlier, ends later and sparks larger, more frequent blazes. Those include so-called megafires, or blazes that raze upward of 10,000 acres. Those fires erupted at a rate seven times greater each year in the past decade in the western United States than in an average year in the 1970s, according to the report.

The 2012 fire season in the West has claimed several lives, torched hundreds of homes and forced the evacuation of thousands of residents. Record blazes have also been recorded in New Mexico and Oregon.

Conditions contributing to the increase often include fire suppression practices that fostered forests packed with fuel, early melting of mountain snows and fire seasons in the West that now last 10 weeks longer than in the 1970s, the report said.

Richard Wiles, director of research for Climate Central - a nonprofit scientific research organization that reports on climate change - said the data showed massive wildfires greater than 100,000 acres do not appear in records before the late 1980s. "It may be a relatively new phenomenon for national forests," he said. Steven Running, professor of ecology at the University of Montana, reviewed the report and told reporters in an interview that Western states should prepare for more of the same.

In addition to lives and property, the fires threaten human health by pumping smoke, containing noxious gases like carbon monoxide and fine particles, into mountain valleys where historic settlements gave way to present-day communities. "What public health people need to understand is these may be multi-week or even multi-month episodes and what is needed is a longer term plan to address health issues," said Running.

The pollution emitted by the burning of trees and plants can irritate eyes and lungs and worsen chronic heart and lung diseases, according to the Centers for Disease Control. Exposure to smoke from landscape fires causes 339,000 deaths a year worldwide, mostly in sub-Saharan Africa and Southeast Asia, according to a study in May in "Environmental Health Perspectives," a peer-reviewed journal published by the National Institute of Environmental Health Sciences. Pollution levels from wildfires this year have triggered numerous air quality warnings in parts of Idaho, Montana and Wyoming.

In Idaho, health and environmental officials said a weeks-long pollution event in Salmon from a 320,000-acre wildfire just north of the east central Idaho community is unprecedented. "This is the only time we've seen this and there does not seem to be an end in sight," said Jim Vannoy,
program manager for environmental health education and assessment with the Idaho Department of Health and Welfare.

65. Suzuki to Pay $885,000 Penalty to Resolve Violations of the Clean Air Act

The U.S. Environmental Protection Agency (EPA) announced a settlement with recreational vehicle manufacturer, American Suzuki Motor Corporation and Suzuki Motor Corporation, to pay an $885,000 penalty for allegedly importing and selling 25,458 uncertified all-terrain vehicles (ATVs) and off-road motorcycles in the United States. ATVs and motorcycles that are not certified may be operating without proper emissions controls and can emit excess hydrocarbons and nitrogen oxides that can cause respiratory illnesses, aggravate asthma and contribute to the formation of ground level ozone, or smog.

“EPA’s vehicle emission standards are vital safeguards that protect our nation’s air quality,” said Cynthia Giles, assistant administrator for EPA’s Office of Enforcement and Compliance Assurance. “By taking action to deter the importation and sale of non-compliant engines, EPA is not only protecting people’s health, but is also ensuring a level playing field for manufacturers that play by the rules.”

The Suzuki ATVs and off-road motorcycles were uncertified because they were manufactured with an undisclosed electronic emission control configuration that would allow the vehicles to be modified for increased horsepower through the installation of an aftermarket part. This type of modification could lead to increased emissions of hydrocarbons and nitrogen oxides. Design features that may affect emissions must be disclosed in certificate applications. Vehicles that do not conform to the design specifications in their certificate applications are not covered by a certificate. The violations were identified and self-disclosed by Suzuki.

The Clean Air Act (CAA) prohibits any vehicle or engine from being imported into or sold in the United States unless it is covered by a valid, EPA-issued certificate of conformity indicating that the vehicle or engine meets applicable federal emission standards. The certificate of conformity is the primary way EPA ensures that vehicles and engines meet emission standards. This enforcement action is part of an ongoing effort by EPA to ensure that all imported vehicles and engines comply with the CAA’s requirements.

The settlement requires Suzuki to implement three emission mitigation projects to reduce hydrocarbon emissions by 210 tons or more. The projects include replacing older unregulated gas cans with gas cans that meet current evaporative emission requirements, discontinuing the sale of high-permeability fuel line hoses, and installing evaporative emission control devices on certain models of highway motorcycles sold throughout the United States.

Suzuki also will modify its warranty policy and owner’s manual for ATVs and off-road motorcycles to increase awareness of modifications to emissions control systems, environmental regulations, prohibited modifications, and acts that could result in loss of warranty coverage.

66. Beijing Olympics Study Shows Healthy Adults Also Benefit From Lower Air Pollution

ASIA-PACIFIC
A sudden reduction of air pollution might improve adverse cardiovascular effects in healthy adults, according to a study that tracked pollutants and compared levels to blood markers before, during and after Beijing’s 2008 Olympic games. This is the first major study to examine the biological link between short-term air pollution reductions and cardiovascular diseases in young adults who have no health problems. The study suggests that even healthy people can benefit from a temporary decline in air pollution.

To improve air quality for the Olympic Games, vehicle use was restricted and numerous industrial factories in Beijing and nearby provinces were closed. The changes led to a 60 percent drop in air pollution emissions. At the same time, the levels of two heart markers linked with cardiovascular disease improved in young, healthy adults, the study shows. When factory work and traffic returned to normal after the games, air pollution emissions rose rapidly and the levels of the heart health markers returned to previous levels.

A few human studies have examined the impacts of reduced air pollution on cardiovascular diseases. This study went further by trying to identify underlying mechanisms. In addition, the researchers looked at young, healthy adults while most of the previous studies focused on either the elderly or children.

For the 5-month study from June to November, the researchers recruited 125 resident doctors with an average age of 24 from a centrally located hospital. Half were male, and all were healthy with no history of diabetes or cardiovascular disease. The researchers measured heart rate, blood pressure and six markers of cardiovascular diseases in blood samples before, during and after the games. The markers included C-reactive protein (CRP), fibrinogen, von Willebrand factor, soluble CD40 ligand, soluble P-selectin concentrations and white blood cell count (WBC).

Two markers associated with blood clotting significantly decreased from pre-Olympic to the during-Olympic period: P-selectin levels dropped by 34 percent and von Willebrand factor levels were reduced by 13 percent. After the games, when the pollution control measures were removed, most markers rose back to pregame levels. But two markers – P-selectin and systolic blood pressure – worsened and showed a significant increase compared to the levels during the games.

Air pollution emissions were also measured at similar times. Levels of most air pollutants during the games decreased up to 60 percent compared to their pregame levels, depending on the type of pollutants. For example PM2.5 dropped 27 percent, nitrogen dioxide 43 percent and sulfur dioxide 60 percent. After the games when pollution controls were removed, emissions rose to higher levels than were measured before the games started.

This study suggests that even young healthy people can benefit from short-term air pollution reduction and supports efforts to quantify and understand the benefits and costs of air pollution control measures.

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67. Smoky Old Diesels En Route to Ban in Hong Kong

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Older diesel vehicles will be banned from Hong Kong roads under a "carrot and stick" plan, environment minister Wong Kam-sing said recently. Wong's comments came a day after Chief Executive Leung Chun-ying said the government would consider "tighter control over and the eventual phasing out of old buses and commercial vehicles."

It also came as the roadside air pollution index topped 130 in Central, prompting health warnings for a ninth day running.

Wong noted that the mainland has set a deadline for discontinuing licenses for commercial diesel vehicles that are 15 years old.

"We can have a carrot and stick to guarantee that we would achieve the air quality by a certain time, say we are setting a target for 2015, so that we have to have an effective measure to phase out those old diesel commercial vehicles," he said.

Wong said 80 percent of roadside air pollution comes from diesel commercial vehicles.

Undersecretary for the Environment Christine Loh Kung-wai said the government is thinking of "specific formulas" for franchised buses, non-franchised buses, school buses, tourist buses and trucks that use diesel. The proposals could be ready next month, she said, adding that setting age limits for such vehicles will be legislated.

Government figures show there are about 140,000 commercial diesel vehicles, which account for 20 percent of road traffic. There are more than 30,000 trucks aged 15 years old, comprising about 30 percent of existing trucks.

68. Hong Kong Meets Regional Targets to Reduce Levels of Four Air Pollutants

Hong Kong has met targets, set jointly with Guangdong province, for cutting levels of four air pollutants by 2010, Hong Kong's Environmental Protection Department announced on October 10th. The two governments set goals in 2002 for reducing emissions of sulfur dioxide, nitrogen oxides, large respirable suspended particles (PM-10), and volatile organic compounds by 40 percent, 20 percent, 55 percent, and 55 percent, respectively, by 2010 compared to 1997 levels. Between 1997 and 2010, sulfur dioxide fell 57 percent, nitrogen oxides 30 percent, PM-10 59 percent, and volatile organic compounds 59 percent, the Hong Kong department said.

Guangdong is still compiling emissions data for the Pearl River Delta Economic Zone and plans to announce the findings by the end of the year, the Hong Kong department said in a statement.

Hong Kong and Guangdong are in the final stage of crafting new emission reduction targets for a second phase, which are expected to be announced by the end of 2012.

The Hong Kong watchdog group Clean Air Network said air pollution from the shipping sector continues to be the main source of nitrogen oxides and PM-10 and the second biggest source of sulfur dioxide and called for more engagement with Guangdong on remedies.

Clean Air Network also said that Hong Kong Special Administrative Region air quality data for 2011, not figured into this report, showed increasing levels of nitrogen oxides and sulfur dioxide compared to 2010.
To achieve the 2010 emission targets, the HKSAR Government has introduced a series of emission reduction control measures:

- Since 2005, it has been imposing statutory emission caps that are progressively tightened as far as practicable on power plants. To meet the emissions caps in 2010, power plants have implemented measures to reduce the emissions of SO$_2$, NOx and RSP by increasing the use of natural gas in electricity generation, retrofitting coal-fired generation units with flue gas desulphurization units, low NOx burners and selective catalytic convertors.

- To reduce emissions from vehicles, the emission standards for newly registered vehicles were tightened to Euro IV in October 2006. It was further tightened to Euro V in June 2012. Euro V diesel was introduced to Hong Kong in December 2007 to further reduce vehicular SO$_2$ emissions. Since 2007, the Government launched various one-off grants encouraging owners to early phase-out their pre-Euro, Euro I and Euro II diesel commercial vehicles or to use environment-friendly vehicles.

- The Government introduced the Air Pollution Control (Volatile Organic Compounds) Regulation in 2007 to limit the VOC contents of selected consumer products, paints and printing inks in phases, as well as controlling the emissions from certain printing machines. The Regulation was amended in October 2009 to expand the scope of control to cover adhesives and sealants, vehicle refinishing paints and marine vessel paints in phases.

- In 1999, the Government introduced the Air Pollution Control (Petrol Filling Stations)(Vapor Recovery) Regulation requiring petrol filling stations to install a system to recover petrol vapor emitted during the unloading of petrol from petrol tankers into underground storage tanks. From 31 March 2005, petrol filling stations have also been required to recover petrol vapor emitted during vehicle refueling.

- In October 2008, the Government amended the Air Pollution Control (Fuel Restriction) Regulations to mandate the use of ultra-low sulfur diesel in industrial and commercial sectors to further reduce SO$_2$ emissions.

69. Beijing, Shenzhen Said To Be Considering Implementing Vehicle Pollution Fees

The Chinese state-level municipality of Beijing and the city of Shenzhen could soon begin charging vehicle pollution fees, a top official at the State Council’s Development Research Center (DRC) has said, according to reports from the state-run Xinhua news agency. Li Zuojun, vice director of the DRC’s Resource and Environmental Policy Institute, initially said on his personal blog in early October that a pilot program of pollution fees in four population centers—Beijing, Shanghai, Guangzhou, and Shenzhen—would be announced after the 18th National Congress of the Communist Party ends in mid-November. News coverage of his remarks led to a heated public debate over the fees, and Li took down his posting.

On October 15th, Xinhua reported that Li clarified his remarks and said Beijing and Shenzhen are the only two cities close to implementing a vehicle pollution fee system. The report said Beijing has been looking at a vehicle pollution fee system since 2009 and would likely implement it based on engine size and that Shenzhen would implement the program as part of a
series of efforts to promote the use of “new-energy” vehicles such as plug-in hybrid electric and all-electric vehicles.

On Oct. 16, Xinhua reported that Shenzhen is considering three levels of annual charges depending on engine size and tailpipe emission standards for various models: 300 Yuan ($48), 500 Yuan ($80), and 1,000 Yuan ($160). Xinhua quoted an unnamed official at the Shenzhen Development and Reform Commission as saying the fee system was still being studied but would likely be finalized by the end of the year. The official also said that if the fee system is adopted, it would first be piloted in certain areas of Shenzhen before being adopted across the whole municipality.

70. Caps for Key Pollutants Could Impact Large Projects, Chinese Ministry Says

Planned caps on four pollutants could affect whether large projects in certain provinces have their environmental impact assessments approved, according to a top official at China’s Ministry of Environmental Protection. In its 12th Five-Year Plan (2011-2015), China is focusing on four “key” pollutants: emissions of sulfur dioxide and nitrogen oxides in air and levels of chemical oxygen demand and ammonia nitrogen in wastewater.

In a statement posted on the ministry website, Vice Minister Zhang Lijun said on September 26th that a phased-in, binding emissions quota allocation system could impact assessment approvals by the end of the 12th Five-Year Plan period. Henan province in central China, where Zhang delivered his statement, will be the first to implement caps on pollutants, although no timetable was given. Other pilot projects will follow.

Zhang said that under the Henan pilot program, potential emissions from new projects should be determined in advance during the environmental impact assessment process to find out whether they would exceed allowable emissions under the caps or under the “incremental calculation.”

“What is new is these provinces will have to control the incremental amount,” Zhang said. “For new projects to be started in 2013 [in Henan] they would have to figure out how much of an increase in emissions there would be, and compare that with how much they are projected to reduce across the province in order to meet the target.”

The provinces of Jiangsu, Zhejiang, Hunan, Hubei, Shanxi, Hebei, Shaanxi, the autonomous region of Inner Mongolia, and the municipalities of Chongqing and Tianjin will start piloting the systems in January 2014 and they will be fully implemented across all provinces during the forthcoming 13th Five-Year Plan (2016-2020) period.

71. NDRC: China’s Natural Gas Consumption Seen At 230 Bcm In 2015

Natural gas consumption in China, the world’s top energy user, is expected to be 230 billion cubic meters (bcm) in 2015, while the supply of gas, including imported liquefied natural gas (LNG) and unconventional gas, is expected to exceed 260 bcm, the National Development and Reform Commission said recently.

The International Energy Agency (IEA) said in June that China’s natural gas demand reached 130 billion cubic meters in 2011, almost 5 percent of the country’s total energy demand. IEA forecasts China’s demand will climb to 273 bcm by 2017-- an increase of 13 percent per year.
That would rank China as the world's third-largest gas user behind the United States and Russia.

72. South Korea Requires Greater Reductions in Greenhouse Gas Emissions in 2013

Large emitters of greenhouse gases will have to cut those emissions by 3.02 percent next year under the country's one-year-old cap-without-trade program, a stepped-up pace from this year's 1.4 percent target, the Ministry of Environment said on October 16th. Under a plan approved by the government's ministries, 480 companies will be required to trim their total emissions by 18 million metric tons from the estimated 590 million metric tons that would otherwise be emitted.

The Ministry of Environment estimates that the planned 2013 reduction and accompanying savings in energy consumption will translate into economic benefits worth trillions of won. For instance, these combined benefits will eliminate the need to build four 1,000-megawatt power plants or import 40 million metric tons of crude oil, according to the ministry.

"As industry-wide reduction efforts go into full swing, national greenhouse gas emissions will begin to decline in 2015 for the first time ever," the ministry said in a statement. The envisioned emission reduction progress is consistent with South Korea's 2009 goal of achieving a 30 percent reduction by 2020 from business-as-usual levels.

The 480 participating companies—including 32 electric utilities and 40 steelmakers—were selected because their annual carbon dioxide emissions exceed 125,000 metric tons. That threshold will be lowered to 87,500 metric tons in 2013 and to 50,000 metric tons in 2014, making more companies subject to the reduction targets.

The government is promising more financing support and capital spending tax deductions to companies introducing energy-efficient equipment and emissions abatement facilities.

Korean lawmakers approved the national emissions trading scheme in May to start January 2015, which will tackle growing greenhouse gas pollution, overcoming strong industry opposition and joining some nations to put a price on carbon.

Those emitters which fail to meet their reduction targets next year will pay a maximum of 10 million Korean won ($9,000) in 2014, a relatively small amount which makes emitters prefer this method to cap-and-trade, and strongly oppose the switch.

73. U.S. Officials to Visit Indonesia for Palm Oil Emissions Talks

The U.S. Environmental Protection Agency will visit Indonesia in what may prove a crucial step in the battle to meet green standards and open up a potentially huge market for the world's top palm oil producer. Indonesia is seen as a key player in the fight against climate change and is under intense international pressure to curb its rapid deforestation rate and destruction of carbon-rich peat lands.

A recent blow to the Southeast Asian palm oil industry, which supplies more than 90 percent of world supplies of the edible oil, came in late January when it failed to meet greenhouse gas saving standards to qualify for the U.S. renewable fuels program. The U.S. EPA said palm oil converted into biofuels in Indonesia and Malaysia cut up to 17 percent of climate warming emissions, falling short of a 20 percent requirement to enter the world's largest energy market.
The EPA delegation will visit a palm oil plantation in Riau province, opposite Singapore on Sumatra Island, and then meet the Indonesian agriculture minister in Jakarta, Gamal Nasir, director general of plantation at the ministry told reporters.

In the last few years, Indonesia has seen rapid growth in production of palm oil, with output this year expected to be between 23 million and 25 million tons, with around 18 million tons exported. In 2012, palm oil estates will sprawl across 8.2 million hectares of Indonesian land, and is expected to rise about 200,000 hectares each year for the next decade.

Plantation expansion is projected to pump more than 558 million metric tons of carbon dioxide into the atmosphere in 2020, an amount greater than all of Canada's current fossil fuel emissions, a study by Yale and Stanford University researchers said last month. Plantation expansion in Kalimantan alone is projected to contribute 18-22 percent of Indonesia's 2020 CO2-equivalent emissions, the study added.

**74. White Paper Says China to Encourage Private Investment in Energy**

China will seek to encourage more private investment in its state-dominated energy sector, according to a new industry white paper published recently by official news agency Xinhua. China is preparing for a once-in-a-decade leadership transition in November, and its new leaders are widely expected to push for the sort of market-oriented reforms that will break up monopolies in sectors such as energy.

The new policy document said China planned to "give full play to the fundamental role of the market in allocating resources" and would draw up new regulations designed to reform the energy sector.

Included in the list of possible private investment targets were the exploration and development of energy resources, coal processing, oil refining, renewables, the construction of oil and natural gas pipelines and the electricity sector. "All projects listed in the national energy program, except those forbidden by laws or regulations, are open to private capital," the document said. Policy makers have struggled to bring market forces to bear on the energy industry, with dominant state-owned enterprises like the State Grid Corp. proving resistant to change.

The white paper said China would also seek to improve legislation on, and regulation of, the industry, with plans to adopt a comprehensive new energy law and new provisions dealing with oil reserves, natural gas and nuclear reactor management.

While China is committed to raising the share of renewables in its overall energy mix to 15 percent by 2020, it said it would also promote the clean development of fossil fuels and improve power generation efficiency.

**75. China May Pilot Carbon Tax in Shipping Industry**

The Ministry of Transport is considering piloting carbon trading or a carbon tax in the domestic shipping business, the Economic Information Daily has reported. The ministry has researched different market measures to cut carbon emission in China's shipping business, and either carbon trading or a carbon tax may be adopted. The final plan has yet to be drawn up, but the measures are likely to include slowing down the speed of ships.
According to the newspaper, Zhang Shouguo, deputy president of China Shipowners’ Association, warned that if a carbon tax is levied, some weak shipping companies will die as the price of shipping in China had already dropped below the cost.


China is working on policies, including subsidies and easier access to the grid, to help its ailing solar power producers expand in the domestic market, the China Daily reported recently, citing industry officials and government sources.

The State Grid Corp, China’s largest state-owned utility, is considering giving its subsidiaries at city level the authority to approve solar power plants with less than 10,000 kilowatts of installed capacity to be connected to the grid, said deputy director Meng Xiangan. At a meeting earlier this week, the State Grid also agreed in principle to waive charges associated with connecting to the grid, which usually costs millions of Yuan, Meng said, adding that a plan to develop the country’s solar industry has been handed to the central government and is awaiting approval.

“The obstacles companies face in order to be connected to the national grid are the biggest problem for the solar power industry,” Meng was quoted as saying.

The National Energy Administration is also working on a plan to offer subsidies ranging from about 0.40 Yuan ($0.06) to 0.60 Yuan for each kilowatt-hour of distributed solar power. The amount includes subsidies from both the central and local governments, the China Daily said, citing a senior official from the administration.

China’s export-focused solar panel industry has been hit hard by excess manufacturing capacity and waning foreign demand as European nations cut back subsidies for green power. Companies have slashed prices 30 percent this year as stockpiles grow, virtually erasing the industry’s profits.

Chinese producers, including Suntech Power Holdings and Trina Solar, are increasingly turning to their home market, which has become one of the worlds biggest, for solar energy development.

Overseas, they battle not only a weak market environment but also anti-dumping tariffs in the United States. Europe also could impose import duties.

77. Singapore Tightens Emissions Standards

The National Environment Agency (NEA) will be implementing a suite of measures to achieve higher national air quality standards by 2020. Following the acceptance of the recommendations by the Advisory Committee on Ambient Air Quality, the Ministry of the Environment and Water Resources (MEWR) will be adopting the World Health Organization (WHO) Air Quality Guidelines (AQG) for particulate matter 10 (PM10), Nitrogen Dioxide, Carbon Monoxide and Ozone, and the WHO AQG’s Interim Targets for PM2.5 and Sulfur Dioxide, as Singapore’s air quality targets for 2020. These targets will enable Singapore to achieve a high standard of public health and economic competitiveness.

As announced at this year’s Budget Debate, NEA will also increase the reporting frequency of the Pollutant Standards Index (PSI) which measures five key pollutants namely particulate matter PM10, Ozone, Nitrogen Dioxide, Carbon Monoxide and Sulfur Dioxide in the ambient air from once a day to three times daily. The daily reports will include PM2.5 as well.
Air Quality Roadmap

Singapore today enjoys an air quality better than many cities in Asia and comparable with US and European cities. We have also been faring well with the PSI in the ‘Good’ range 96% of the time in 2011.

Like many other major cities, air emissions from the industries and motor vehicles are the two key sources of air pollution domestically. Transboundary smoke haze from the land and forest fires in the region is also a problem which affects Singapore’s air quality intermittently during the South West Monsoon period from August to October.

Integrated urban and industrial planning, as well as development control have enabled the government to put in place preventive air pollution control measures during the planning stage. In addition, legislation, a strict enforcement program and air quality monitoring have helped to ensure that air quality remains good despite our dense urban development and large industrial base.

To work towards attaining even higher air quality targets by 2020, NEA has put together a roadmap with a set of abatement measures to achieve sustainable growth and development while maintaining public health and economic competitiveness.

Some of the key measures are as follows:

- Emission standards for off-road diesel engines based on US Tier 2 / Japan Tier I / EU Stage II by 1 July 2012;
- Euro V emission standards for new diesel vehicles by 1 January 2014;
- Euro IV emission standards for new petrol vehicles by 1 April 2014;
- Mandatory supply of near sulfur-free diesel with less than 0.001% sulfur by July 2013;
- Motor vehicles to use petrol with sulfur content less than 0.005% by 1 October 2013;
- Reduction of SO2 emissions from oil refineries and power stations through use of natural gas and lower sulfur fuels. Refineries will also improve their processes to reduce emissions by 2020.

The above measures are already in the pipeline for implementation while other measures are being studied in consultation with the relevant industries. NEA will share the details when these other measures are firm up.

The Sustainable Singapore Blueprint (SSB) was launched in 2009 with the target to achieve an annual mean of 15µg/m³ of SO2 and 12µg/m³ of PM2.5 by 2020. The new air quality targets which are pegged to WHO AQGs will be aligned with these SSB targets. The final WHO AQGs for PM2.5 and SO2 will be Singapore’s long-term targets.

Enhanced Air Quality Reporting

NEA also recognizes the need to update the public more frequently on air quality to help them better plan their activities for the day. Starting 24 August 2012, the PSI will be reported on the NEA website three times a day at 8 am, 12 noon and 4 pm. In addition, NEA will be making

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4 Sustainable Singapore Blueprint annual target for PM2.5 of 12µg/m³ will be retained and aligned with WHO Interim Target of 37.5 µg/m³ for a 24-hour mean.
PM2.5 levels available together with the PSI readings at these timings. The PSI is currently reported once a day at 4 pm.

The PSI readings as well as PM2.5 levels will be reported according to the five regions of Singapore – North, South, East, West and Central.

Health advisories will also be issued by region so that the public can be better prepared. During periods of transboundary haze, NEA will continue to provide hourly updates on air quality.

**Background Information on Air Quality Review**

The Advisory Committee on Ambient Air Quality was formed in July 2010. It was tasked to advise on a set of air quality targets for Singapore in view of international air quality benchmarks that were being continuously reviewed to safeguard public health. The Committee also took into consideration Singapore’s unique position with its dense urban development and major fuel burning industries in close proximity in the mainland, as well as industrial developments in the pipeline for the next 10 years.

The committee was chaired by the NEA with representatives from Ministry of Health, Ministry of Trade and Industry, Economic Development Board, Energy Market Authority, Ministry of Manpower, Ministry of Community Development, Youth and Sports, Singapore Environment Council, Singapore Tourism Board, National University of Singapore, Nanyang Technological University, National Health Group and the Singapore Health Services.

The committee completed its work in July 2011 and its recommendations were based on the assessment that the WHO AQGs are internationally recognized and rigorous as they are backed by scientific findings and health studies. The committee also advised that NEA should work towards achieving the WHO AQGs for all air pollutants in the long term.

MEWR, together with NEA, reviewed the recommendations of the Advisory Committee and the SSB commitments and has worked with relevant government agencies and various stakeholders to arrive at a set of revised national air quality targets pegged to the WHO AQGs.

**Summary of Abatement Measures**

**Sulfur Dioxide (SO2)**

From July 2013, NEA will mandate the supply of Near Sulfur-Free Diesel (NSFD) with a sulfur content of 0.001% to pave the way for Euro V emission standards for diesel vehicles and further reduce SO2 emissions from diesel vehicles and industries.

By 1 October 2013, NEA will mandate cleaner petrol for motor vehicles with sulfur content lower than 0.005% to pave the way for the Euro IV emission standards. This will also reduce HC and NOx1 which will give rise to ozone.

NEA, together with EDB, will work with refineries to improve their processes and decrease their SO2 emissions. Power stations are also working towards using cleaner fuels for their energy needs in order to lower their SO2 emissions. As the power stations and industries switch to the use of cleaner fuels to reduce SO2, there will also be a simultaneous reduction in other pollutants including PM2.5. [In progress]
**Particulate Matter (PM2.5 + PM10)**

From July 2013, NSFD with sulfur content less than 0.001% sulfur will be mandatory for motor vehicles and industries.

By 1 January 2014, the Euro IV emissions standards will give way to the stricter Euro V emission standards for all new diesel vehicles registered. The particulate emissions of Euro V diesel passenger cars are significantly lower than that of Euro IV diesel cars.

**Ozone**

From 1 April 2014, new petrol vehicles will have to comply with Euro IV emission standards.

78. Indonesian Government to Issue ‘National Car’ Platform

The Industry Ministry will introduce in the middle of next year a platform for small-engine cars that it is preparing jointly with the Assessment and Application of Technology Agency (BPPT). The Industry Ministry’s director general for high-priority industries, Budi Darmadi, said recently in Jakarta that the platform would serve as a standard for cars using engines of less than 1,000 cc.

The platform could become the embryo for vehicles to be developed by domestic manufacturers under local brands, often dubbed “national cars” or “mobnas”. “After the platform is launched, manufacturers will make their own prototypes. The platform can also be used in other types of cars, such as multi-purpose vehicles and pickups,” he said after opening a transportation vehicle exhibition at his office.

Any local producer, either state-owned enterprise or private firm, could utilize the platform to create prototypes, which would be expected to be ready by the end of next year, BPPT deputy chairman for technology of design and engineering industries Erzi Agson Gani said. Production of the cars based on the developed platform could start by end of 2014, he added.

“The platform will not disrupt existing car models, but instead it will help local manufacturers to take advantage of untapped potential,” Erzi said, adding that the emergence of the small-engine (below 1,000-cc) cars would create a new market.

Although the platform was designed to run on various energy sources, including gasoline, diesel, gas and electricity, BPPT encouraged manufacturers to use those which fulfilled European emissions standards Erzi said.

Amid ballooning consumption of subsidized fuels, the government has recently initiated a low-carbon emission vehicle project expected to begin in 2014 by the latest. The effort is in line with its target to slash greenhouse gas emissions by 26 percent by 2020.

Under the project, the government endorses the development of vehicles with environmentally-friendly technology through tax incentives, which are being drafted by the Finance Ministry.

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5 Ozone is not directly emitted but is formed through complex chemical reactions involving hydrocarbons (HC) and nitric oxide & nitrogen dioxide (NOx) in the presence of sunlight. HC and NOx emitted from motor vehicles, industries, power stations and refineries are the precursors for ozone formation.
The private sector has responded by introducing fuel-efficient cars, claiming such vehicles can run for more than 20 kilometers on a liter of fuel. The government is also fostering the creation of electric cars led by the State-Owned Enterprises Ministry.

79. China's Sinopec Shuts Plants for Environmental Checks

China's Sinopec Group, the parent of Sinopec Corp, has ordered the closure of three plants, including two refineries in the southern province of Guangdong, for environmental checks, the company said in a statement. The two refineries are Sinopec Guangzhou Petrochemical Corp and Sinopec Dongxing refinery, with a combined crude processing capacity of 370,000 barrels per day (bpd).

Sinopec announced the order after Chinese state television reported the plants, which also include a small petrochemical plant, had environmental problems. Sinopec did not specify the problems at the plants or the length of the shutdown.

80. China Reports Progress on Reducing Levels of Three of Four Targeted Pollutants

China made progress on reducing levels of three of four targeted pollutants in 2011, according to the Ministry of Environmental Protection. The ministry reported drops in sulfur dioxide emissions, ammonia nitrogen discharges, and chemical oxygen demand (COD) in wastewater, but a rise in emissions of nitrogen oxides. The four are the major pollutants that the country has targeted for reduction during the current 12th Five-Year Plan (2011-2015).

The ministry said in a September 7th statement on its website that COD levels dropped 2.04 percent; ammonia nitrogen discharges dropped 1.52 percent; and sulfur dioxide emissions dropped 2.21 percent in 2011 compared with the year before, while nitrogen oxides emissions rose 5.74 percent.

Ministry spokesman Tao Detian said the biggest reductions in pollutants were in the municipalities of Beijing and Shanghai and the provinces of Zhejiang and Henan.

Beijing recorded reductions of 3.53 percent for COD, 2.98 percent for ammonia nitrogen, 6.22 percent for sulfur dioxide, and 4.75 percent for nitrogen oxides. Shanghai's reductions were 6.26 percent, 3.4 percent, 5.9 percent, and 1.66 percent, respectively.

Emissions of all four pollutants rose in the Xinjiang-Uygur autonomous region in China's far northwest. The area has experienced a large increase in industrial development, particularly in petrochemical and chemical production, over the past few years due to China's Western Development program. Xinjiang recorded increases of 0.92 percent for COD, 2.56 percent for ammonia nitrogen, 4.24 percent for sulfur dioxide, and 11.5 percent for nitrogen oxides.

The northeastern province of Heilongjiang also saw increases in three of the four key pollutants, with ammonia nitrogen rising 2.03 percent, sulfur dioxide up 1.65 percent, and nitrogen oxides up 4.1 percent.

The ministry report also included pollution data for eight state-owned enterprises. Fuel consumption statistics also were offered for the China National Petroleum Corp. (CNPC) and China Petroleum & Chemical Corp. (Sinopec), and installed capacity rates for desulfurization and denitrification technology were included for six major power producers, including State Grid, the main power supplier. CNPC's ammonia nitrogen discharges rose 1.31 percent and its
nitrogen oxides emissions rose 4.86 percent. Sinopec's COD levels rose 0.33 percent and nitrogen oxides emissions rose 1.22 percent.

While all of the power producers reported drops in sulfur dioxide emissions, ranging from 3 percent to 7 percent, all of them reported increases in nitrogen oxides emissions ranging from 4 percent to 9.5 percent compared to the year before.

In August, the Ministry of Environmental Protection said it had submitted a proposal to the State Council for an environmental tax on sulfur dioxide emissions and levels of chemical oxygen demand to replace the current system of discharge fees.

**81. India Eases Price Pressure on State Refiners**

India’s government has taken the politically difficult step of raising the controlled price of diesel by 5 rupees/l. (about 9¢/l.). In New Delhi, the new price will be about 47 rupees/l.

State-owned “oil marketing companies”—Indian Oil Corp. Ltd., Bharat Petroleum Corp. Ltd., and Hindustan Petroleum Corp. Ltd.—have sustained heavy losses from the need to buy crude oil at market prices and to sell diesel, kerosene, and LPG at prices held below market levels. They are supposed to be compensated for the consequent “under-recovery” by payments from state-owned producers and the government. But the government has been accruing its share of the under-recovery liability. It projects that, without a price adjustment, under-recovery during the current fiscal will total the rupee equivalent of about $34 billion.

Of the increase in diesel price, 3.5 rupees/l. will compensate under-recovery, and the rest will be excise duty.

The Cabinet Committee on Political Affairs also agreed to restrict the amount of subsidized LPG delivered to Indian consumers but took no action on publicly distributed kerosene.

Gasoline isn’t strictly subject to price controls, although the OMCs are restricted in timing of price increases and currently sustain under-recovery of about 6 rupees/l. To compensate, the government will cut the excise duty on gasoline by 5.3 rupees/l.

The price and supply actions will face stiff political opposition and won’t fully solve the OMCs’ problems. After the new actions, the OMCs’ under-recovery during the current fiscal year still will be an estimated $30 billion, which is higher than the prior year’s level.

**82. India Approves $4.1 Billion Green Vehicle Push Over Eight Years**

India’s government has approved a 230 billion rupee ($4.13 billion) plan to spur electric and hybrid vehicle production over the next eight years, setting itself an ambitious target of 6 million vehicles by 2020. India has a nascent electric and hybrid vehicle industry, with most manufacturers focusing instead on low-emission cars, citing the prohibitively high costs of new technologies and an almost non-existent support infrastructure.

"The question is the viability ... The cost of the car and how much the consumer can pay, there is a gap," said Pawan Goenka, chairman of Mahindra Reva, India’s only electric-focused carmaker.
India's target to produce 6 million green vehicles by 2020, of which 4 to 5 million are expected to be two-wheelers, comes as China aims to have 500,000 electric and hybrid cars on its roads by 2015. Reva, controlled by Mahindra & Mahindra, aims for sales of 30,000 of its battery-run cars a year by 2016.

S. Sundareshan, secretary of India's Heavy Industries ministry, said that New Delhi would provide around 130 to 140 billion rupees of the total investment in the plan, with companies providing the remainder. "We will put in some specific schemes with regard to subsidy element, R&D, demand creation and infrastructure," Sundareshan told reporters. "More individual schemes will come out at a later date."

India's slowly growing market for electric vehicles crashed to a halt in April after the government withdrew subsidies worth up to 100,000 rupees per vehicle.

83. South Korea's Regulation to Target Fine Particles Starting in 2015

South Korea will expand air pollution surveillance to fine particles 2.5 microns in diameter or smaller (PM$_{2.5}$) starting Jan. 1, 2015, in an attempt to reduce threats to public health, according to the Ministry of Environment. Statutory limits for airborne PM-2.5 have been added to the list of air pollution standards for nationwide enforcement starting January 2015, the ministry said in an August 29th statement.

The average yearly and 24-hour standards have been set at 25 micrograms and 50 micrograms per cubic meter ($\mu$g/m$^3$), respectively. For comparison, the U.S. ceilings are 15 and 35 $\mu$g/m$^3$. Thirty-six sampling points will be set up across the country to collect PM-2.5 data.

The ministry also announced results of PM-2.5 measurements conducted at four locations throughout 2011, which averaged 23.9, 29.3, 30.9, and 32.4 micrograms each. "The nationwide average of 28.1 micrograms is more than twice as high as the 14-microgram average in six major U.S. cities," the ministry said, citing U.S. Environmental Protection Agency air quality statistics.

According to the ministry's findings, secondary sulfate and nitrate aerosol formation as a result of atmospheric reactions of coarse and fine particles was the biggest contributor to PM-2.5 pollution at all of the four locations. Power plant coal combustion, automotive exhaust, biomass burning and incinerator emissions, and soil dust added to such air pollution in varying degrees.

South Korea began regulating particulate matter in 1995 by instituting annual and 24-hour standards for PM-10, or coarse particles up to 10 microns in diameter. That regulation led to strenuous emission controls for diesel automobiles targeted as a major source of particle pollution.

“We will need a broader policy focus as particle pollution abatement efforts shift to PM-2.5,” said Hwang Suk-tae, director of the Climate and Air Quality Management Division at the ministry. A highly systematic approach will be needed to address the extensive range of man-made activities that generate small dust particles, Hwang and other ministry officials said. Accordingly, future PM-2.5 abatement programs will be geared toward major population centers rather than specific industries, they said.

PM-2.5 is considered particularly dangerous to human health because the particles are so small that they penetrate deep into the lung.
**SOUTH AMERICA**

84. Brazil to Reduce Tax for Fuel-Efficient, Innovative Automobiles Starting in January

Brazilian and certain foreign automakers will be eligible to receive tax breaks for new, fuel-efficient models sold in Brazil under a presidential decree issued on October 3rd. The decree (No. 7,819) reduces the value-added industrial product tax (IPI) by up to 30 percentage points for new cars based on their fuel efficiency, safety, technological innovations, and whether they or their components were made in the Mercosul, the Southern Cone common market made up of Brazil, Argentina, and Uruguay. An annual quota of 4,800 cars per carmaker imported into Brazil from outside the Mercosul region can also qualify for the tax break.

Automakers will be able to sign annual, renewable agreements, beginning in January 2013 and expiring in December 2017, with the Ministry of Development, Industry, and Foreign Trade (MDIC), to qualify.

Both domestic and foreign automakers would have to agree that their new models will consume 12.08 percent less fuel per kilometer by 2016 than comparable new models do now. Domestic manufacturers will also have to conduct six of 12 production activities—from soldering and stamping to chassis assembly—in Brazil in 2013, rising to seven stages in 2014 and eight stages in 2016.

The automakers would also have to meet two of three other requirements—to invest at least a certain percentage of gross sales in research and development to increase fuel efficiency or safety, to invest in engineering upgrades, or to put window stickers with a standardized, single-letter rating from A (best) to E for air pollutant emissions and fuel consumption on a growing percentage of new models. The National Institute of Metrology, Standards, and Industrial Quality (INMETRO) will set the optimum emissions and fuel consumption levels for each model.

Foreign carmakers setting up shop in Brazil will have time to adjust to the new system to get IPI tax reductions. For example, those that set up shop in 2015 will have to comply with IPI tax-reduction requirements for 2013 new models and in 2016 will have to abide by requirements for 2014 new models.

**MIDDLE EAST**

85. Israeli Ministry Proposes Tax Reforms to Encourage Sales of Cleaner Vehicles

Israel's Finance Ministry is proposing two tax changes designed to encourage sales of less-polluting vehicles. The new measures, unveiled on September 9th, would base purchase tax reductions on a revised system of “green ratings” for hybrid and internal combustion vehicles. They also would reduce “usage value” taxes on battery-powered company cars to encourage their corporate use.

Both reforms will be open for public comment until the end of September, after which the finance minister is expected to sign them into effect, possibly with modifications.

Critics, including automobile industry representatives, say the changes would penalize Israelis driving smaller cars while rewarding company fleets and drivers of sport-utility vehicles and luxury vehicles. The Tax Authority disagreed. “Some cars, including some compacts, won't be
affected at all” by the new emission standards on which the green ratings would be based, Tax
Authority economist Natalia Mironychev told reporters. “Others will need to be replaced with
alternate models that can take advantage of the new incentives.”

The proposed emission standards, formulated in coordination with the Environmental Protection
Ministry, would end a decade of reliance on European models in favor of standards more
applicable to the Israeli environment, Mironychev said.

“Europe is more concerned with greenhouse gases, so they look mainly at carbon dioxide
emissions. Israel also has to consider greater risks to the public health,” she explained. She
said the new scoring system stresses exhaust components such as nitrogen oxides, carbon
monoxide, and particulate matter.

The new framework would replace a flat purchase tax break for eligible vehicles with a sliding
scale ranging from 30 percent for hybrids to 83 percent on combustion engines that still rated a
tax break. Electric vehicles are covered by separate legislation.

Importers said the change would raise prices of Israel's most popular family cars by up to
$1,000 and prices of diesel-powered vehicles even more. Meanwhile, large luxury cars with big
engines, such as SUVs, sedans, and limousines, would lose nothing, because they are not
eligible for green tax breaks in any case.

The treasury also proposed to change the way “usage value” ratios are calculated on all-electric
and plug-in hybrid company cars. Israeli workers pay a salary tax on the benefit of driving a
company car that is based on the vehicle's value. The cost of the electric battery makes electric
and plug-in vehicles much more expensive, so the employee's payment also rises under current
tax law.

“Traditional cars are less expensive to buy and in some ways more comfortable to use than
electric cars,” Mironychev explained. “So if the employee also had to pay more tax to have an
electric car, the company just wouldn't use them.” The change would remove the cost of a car’s
battery from calculations of its value for tax purposes.

The changes are scheduled to take effect January 1st and would be updated annually according
to the consumer price index.

AFRICA

86. ‘GFEI Africa’ Launched in Kenya

Recently the Global Fuel Economy Initiative (GFEI) was launched in Africa. Africa is
experiencing unprecedented vehicle growth mainly due to rapid urbanization. Unfortunately,
most African countries do not have vehicle policies to promote the import of cleaner and more
fuel efficient vehicles. To address this situation, an Africa-wide regional workshop was held on
15-16 October 2012 at the UNEP Headquarters in Nairobi, Kenya to launch the GFEI. The
workshop was opened by Ms. Alice Kaudia, the Kenyan Environment Secretary, on behalf of the
Minister for Environment and Mineral Resources.

Close to fifty participants from twenty African countries attended the regional launch. The
countries were drawn from north, west, east and southern Africa. At the workshop, the results
from two African GFEI pilot countries – Kenya and Ethiopia – were presented. The workshop
also discussed cleaner vehicle strategies currently being implemented in Chile, South Africa, Egypt and Mauritius. The results from the two pilot countries show that African countries are not taking advantage of the on-going improvements in vehicle fuel economy. For example, Ethiopia’s average fuel efficiency remained stagnant in the 2005 and 2008 period – at 8.70L/100km compared to the global average improvement from 8.07L/100km to 7.67L/100km during the same period.

The workshop identified several key challenges to implementing the GFEI in Africa. These include:

- The difficulty of baseline calculation due to poor collection of vehicle data;
- The lack of awareness by the public and policy makers on the benefits of improved fuel economy, and of the support which GFEI can offer;
- Poor analysis of the impacts of inefficient vehicles which means there is a weak basis for policy development;
- Poor fuel quality and
- A lack of legal and institutional framework to support GFEI.

The workshop concluded by recommending that a sub-regional approach should be taken to tackling vehicle fuel efficiency as well as action to increase public awareness of the GFEI’s goals.

87. Emission Test for Vehicles Underway in Lagos

The Lagos State Government is to begin a compulsory emission test on all vehicles in Lagos, Southwest Nigeria to ascertain their emission rate in order to curb the high rate of air pollution. A bill has been passed by the House of Assembly to empower the state government to carry out emission test on all vehicles plying Lagos roads.

The General Manager of the Lagos State Environmental Protection Agency, LASEPA, Engr. Rasheed Shabi disclosed this recently, saying that government was determined to check the emission rate of vehicles in the state to ensure that only roadworthy vehicles were allowed to ply roads in the metropolis. According to Shabi, 120 centers had been designated across the old 20 Local Governments where vehicle owners could go to have the emission rate of their vehicles tested compulsorily.

He disclosed that Governor Babatunde Fashola in the next few weeks would sign the bill into law to pave the way for enforcement by the government. Shabi stated that when the bill is signed into law, the government would give some time to enlighten Lagosians who owned vehicles on the need to ensure that the emission rate of their vehicles were reduced to the barest minimum.

He added that vehicles owners would have to produce emission test certificates before being allowed to renew their vehicle documents, saying that vehicles with high emission rates would be allowed to refit the engine of their vehicles.

He lamented that 26 percent of emissions in Lagos was being generated by vehicles, with many having high emission rates.
Shabi said LASEPA was carrying out the emission test on vehicles in conjunction with the Lagos Metropolitan Area Transport Authority, LAMATA, saying that government was sure that air pollution would be reduced in the state with controlled emission rate of vehicles.

GENERAL

88. New Cargo Record Set On Northern Sea Route

Russia has expected cargo transport on the Northern Sea Route to increase to 1.5 million tons in 2012. Cargo transport between Asia and Europe on the Northern Sea Route has reached the one million tons milestone already. So far 35 vessels have taken the Arctic shortcut between the continents.

As BarentsObserver predicted, the amount of cargo transported along the Northern Sea Route (NSR) this summer broke the previous record after a slow start earlier in the season. The total cargo transported on the NSR is already almost 200 000 tons more than in last year’s season. In 2011 34 vessels transported a total of 820 789 tons during the five months the route was open.

The sailing season can still last another month. In 2011 the last vessel reached the Pacific Ocean on November 18, marking the longest sailing season on the Northern Sea Route ever. This year the ice conditions in the Arctic are even more in favor of the shipping companies, with ice levels shrinking to unprecedented low levels.

19 of the vessels sailed from West to East, 16 in the opposite direction. 20 vessels transported liquid cargo, four transported bulk and one transported fish. Five vessels sailed in ballast while five others sailed the in so-called ‘repositioning ballast’. Among these were the Chinese icebreaker “Xuelong”.

Petroleum products constitute the largest cargo group on the NSR in 2012. A total of 590 000 tons of diesel fuel, gas condensate, jet fuel and lubricants were transported on 20 vessels. The largest amount to be sent in one shipment was 66 462 tons of jet fuel, delivered from Yosu in South Korea to Porvoo in Finland on the Norwegian tanker “Marika”.

Iron ore was transported from Murmansk to China four times this summer. The Danish shipping company Nordic Bulk Carriers’ two vessels “Nordic Odyssey” and “Nordic Orion” brought a total of 261 903 tons or iron ore from Murmansk to Huanghua.

Only once has the NSR been used for transportation of fish this summer. That was the reefer Skyfrost that brought 8265 tons of frozen fish from Kamchatka to St. Petersburg.
The sailing season is not yet over. Three vessels are currently on their way from Europe to Asia, while one vessel is sailing in the opposite direction, the data from Rosatomflot reads.

89. Global Marine Fuel Demand Unlikely To Recover Until 2014

Global demand for marine fuel is unlikely to recover from near three-year lows until at least 2014, hit by a combination of high oil prices, a battered shipping industry and a global economic slowdown, industry executives said recently. Marine fuel sales in Singapore, the world's top bunker port, dropped 6 percent in September from the previous month to 3.33 million metric tons. That was the lowest since February, when sales dropped to a two-year low of 3.09 million metric tons.

The shipping industry fears an economic slowdown in China will prolong a four-year downturn and keep demand for bunker fuel weak. Chinese demand for foreign oil, iron ore, coal and grains is a key driver for tanker and dry bulk freight markets, while the container industry depends on exports from the country's manufacturing and retail industries.

"We are looking at 18 to 24 months before larger demand starts coming back," Henrik Zederkof, chief executive of global bunker fuel supplier Dan Bunkering, said at an industry conference. "Right now, (ship operators) are in a position where every day they try their best to see if they can just meet daily costs. I'm quite worried about them because we're partners for many years."

Others were even more pessimistic, with one container shipping executive at the conference predicting a recovery in bunker fuel demand would not take place until 2015 due to the slowdown in China and the lingering debt crisis in Europe. Economic growth in China has slipped for six consecutive quarters compared with a year earlier and new figures expected soon are expected to show the slide continued in July-September.

Bunker demand has also declined due to cost-cutting, energy saving measures taken by the shipping industry, such as reducing speeds, idling vessels and buying more fuel efficient ships. "With shipping lines adopting slow steaming to cut costs and manage the oversupply in capacity, bunker suppliers are finding their bottom lines affected as well," said Lui Tuck Yew, Singapore's minister for transport. Slowing the speed of ships to 18 knots from 22 knots, for instance, can cut bunker fuel consumption by 35 percent, said Kwa Chong Seng, chairman of Singapore's Neptune Orient Lines, the world's seventh-largest container shipping firm. Further savings of 20 to 30 percent could come through use of more fuel-efficient technology.

High bunker fuel prices have helped force the restructuring of many shipping firms across the globe, from Norway-listed Frontline and Italy's Deiulemar Shipping to Indonesia's Berlian Laju Tanker and Sanko Steamship in Japan. Average earnings per day on the benchmark supertanker Middle East Gulf to Japan route have stayed below operating costs for all but one day in the last three months.

Ex-wharf marine fuel prices in Singapore averaged around $675.50 a metric ton in September versus around $667.00 a metric ton in August, the highest since April, the country's port authority said. Marine fuel prices trade closely in line with crude, which has stayed above $100 a barrel since mid-July. "With the heightened volatility in crude oil as well as supply shortages and civil unrest in the Middle East, we can expect bunker costs to be the greatest burden for the shipping industry for the foreseeable future," Cleartrade Exchange, an electronic marketplace for over-the-counter freight and commodity derivatives, said in a statement.
90. Cities Can Get Greener by 2030 as New Urban Areas Built -UN

The world's urban areas will more than double in size by 2030, presenting an opportunity to build greener and healthier cities, according to a U.N. study. Simple planning measures such as more parks, trees or roof gardens could make cities less polluted and help protect plants and animals, especially in emerging nations led by China and India where city growth will be fastest, it said.

"Rich biodiversity can exist in cities and is extremely critical to people's health and well-being," wrote Thomas Elmqvist of the Stockholm Resilience Centre, scientific editor of the Cities and Biodiversity Outlook.

The world's urban population is expected to surge from just over 3.5 billion now to 4.9 billion by 2030, according to the assessment by the U.N. Convention on Biological Diversity. At the same time, the area to be covered by cities will expand by 150 percent. "Most of this growth is expected to happen in small and medium-sized cities, not in megacities," according to the report, issued to coincide with a U.N. meeting on biodiversity in Hyderabad, India.

More green spaces in cities can filter dust and pollution and soak up heat-trapping carbon dioxide. Some studies have shown that the presence of trees can help reduce asthma and allergies for children living nearby, it said.

More than 65 percent of Poland's bird species are found in Warsaw. In South Africa, Table Mountain national park, rich in wildlife, is surrounded by the Cape Town municipality. In the United States, Saguaro national park is just outside Tucson.

"Sustainable urban development that supports valuable ecosystems presents a major opportunity for improving lives and livelihoods," said Achim Steiner, head of the U.N. Environment Program.

More tree cover in cities can help cool them in summers, meaning less need for air conditioning, according to the report.

"Recent studies highlight the importance of even small urban gardens in providing habitat for native pollinators such as bees, which have declined alarmingly in recent years," the study added.

And it pointed to real estate arguments for a greener city. In the United States "city parks increase the value of nearby residential properties by an average of 5 percent; excellent parks can provide a 15 percent increase," it said.

Expansion of cities would often displace farms nearby, meaning that agriculture would have to shift elsewhere. That in turn would require care that new farmland did not, for instance, lead to damaging deforestation. "For the next 40 years urban growth will consume land approximately three times the size of France ... this is often the most prime agricultural land," Elmqvist said.

Many existing cities are trying to get greener. In Bogota, Colombia, residents exercised more after city authorities introduced measures such as closing some roads on weekends and improving bus transport. In Mexico City, a "Green Roof Program" aims to create 10,000 square meters (107,000 sq. ft.) of new roof gardens every year.
91. Greenhouse Gases Rise with GDP, Slower To Fall in Recession

Greenhouse gas emissions rise when economies expand but don't fall as quickly when recession strikes, perhaps because people stick with a higher-emitting lifestyle from the boom times, according to a new study. The report in the latest issue of the journal Nature Climate Change dents many governments' hopes that recession can at least bring the consolation of a sharp contraction in greenhouse gas emissions.

Emissions of carbon dioxide, the main greenhouse gas, rose by an average of 0.73 percent for every 1 percent growth in gross domestic product (GDP) per capita, Richard York of the University of Oregon wrote in his report. But emissions fell just 0.43 percent for every percent decline in GDP per capita, he added, based on a review of World Bank statistics of more than 150 nations from 1960 to 2008.

He said the difference might be because new infrastructure added during times of economic growth - new homes, roads or factories - is still used during recession. "When economies decline, factories don't shut down immediately, people don't stop driving (although they may defer buying a new car)," and many new buildings still needed heating or air-conditioning.

Even since 1990, when many developed nations started trying to curb their greenhouse gases under a U.N. treaty, emissions had also fallen less in recession than they rose when the economy grew, he said.

92. U.N. Climate Chief Urges Greater Ambition in Doha

The U.N. climate chief said recently that countries have not backed off what they had agreed in climate talks in Durban last year but said current actions and pledges are not enough to avert a dangerous rise in global temperatures. Speaking at the Carbon Forum North America in Washington, UNFCCC Executive Secretary Christiana Figueres said although both developing and developed countries are making "good progress in the right direction" toward a legal agreement, current global efforts are insufficient.

"We are increasing the scope and coverage of emissions and also increasing the legal nature of those reductions because we are going from voluntary pledges to a legally based agreement," Figueres told a press conference on the sidelines of the conference. "However, even if that goes into effect, the fact is that all of those efforts actually represent 60 percent of the global effort that needs to be made if we are to keep to a 2 degree (global temperature) rise," she added, referring to the threshold scientists have said would stave off dangerous climate change.

Last year, negotiators in Durban agreed to formalize a new legally binding emission reduction agreement by 2015, which would go into force by 2020 in which both rich and poorer countries would participate. Figueres said that despite some reports after Durban that some major emerging economies, such as China and India, have backtracked on accepting a legally binding agreement, she does not "see any moving-away from where Durban left us."

The climate chief said that the Durban Platform, like other internationally negotiated texts, was left "creatively ambiguous" to serve as a starting point for the next round of negotiating.

She said that one principle that will play a role in the new agreement would be the concept of "common but differentiated responsibilities (CBRD)," a line between developing and developed
countries drawn in 1992 that enabled countries such as Brazil and China to escape mandatory carbon cuts. Brazil’s climate change negotiator told reporters recently that his country and fellow emerging economies China, India and South Africa, believe that a new climate agreement must contain the principle, which the U.S. has said created an unwelcome “firewall” between developed and developing countries.

"What is important... is while recognizing the (rich countries') clear responsibility we also need to move forward,” Figueres said, adding that CBRD will remain a principle but will also be joined with a new concept of ensuring that all countries have equitable access to sustainable development.

She said the U.S., the world’s second biggest greenhouse gas emitter after China, needs to increase its current target to cut emissions 17 percent below 2005 levels by 2020, and risks falling behind developing countries that are making greater advances in cleaner energy.

“This is an enormous lost opportunity to the United States, and particularly to the United States manufacturing industries, if they do not take advantage of the opportunities that are given to them with the explosion in green technologies that could be one very important way for the United States to move out of its fiscal cliff," Figueres said.

93. IMO Delays Debate on Greenhouse Gas Emissions; Mulls Management Issues

A committee of the International Maritime Organization made some progress on proposals related to measurements of ship emissions, energy efficiency, ship recycling, and ballast water management but postponed detailed debate on market-based measures to reduce greenhouse gas emissions until next year, citing “time constraints,” the U.N. agency said in a briefing released on October 9th. Delegates to the Oct. 1-5 meeting of IMO’s Marine Environmental Protection Committee (MEPC) also agreed to designate the Saba Bank, off the Netherlands Antilles in the Caribbean, as a “particularly sensitive sea area.” IMO defines this as a territory that needs special protection because of its ecological, socioeconomic, or scientific significance and which may be vulnerable to damage by international maritime activities. The Saba Bank is the 13th such area to be designated by IMO.

In preparation for its next annual meeting, the committee at its 64th session plans to launch a study to assess potential direct and indirect impacts on consumers and industries from possible market-based measures, which include a levy on all carbon dioxide emissions from international shipping or an emission cap-and-trade system.

Earlier this year, MEPC failed to make headway on market-based measures because developing nations insisted that the concept of common but differentiated responsibilities that applies under the Kyoto Protocol be applied to the shipping sector. Along with energy efficiency measures approved in 2011, market-based measures are considered the main ways that the shipping sector can reduce its 2.7 percent share of the world's total carbon dioxide emissions.

MEPC also agreed to convene a workshop of experts in 2013 to consider the methodology for a badly needed update of the carbon dioxide emissions from ships larger than 100 gross metric tons. The current estimate of emissions “does not take account of the economic downturn experienced globally since 2008,” the committee said. The most recent statistics, issued in 2009 but based on 2007 figures, said international shipping excluding military and fishing vessels accounted for 870 million metric tons annually of carbon dioxide, about 2.7% of total global
emissions. The study estimated that by midcentury, ship emissions could grow 150 percent to 250 percent because of the growth of the sector.

MEPC made progress on a draft resolution outlining requirements for wealthy nations to transfer technical knowledge about energy-efficient measures to developing nations. The committee said it expects to adopt a resolution by May 2013. Countries are required to provide other nations—especially developing countries—with technical assistance on energy efficiency under an annex of the International Convention for the Prevention of Pollution from Ships (MARPOL).

Requirements related to the new Energy Efficiency Design Index for new ships and the Ship Energy Efficiency Management Plan for all ships go into effect on January 1st.

MEPC said it was reviewing whether to defer a requirement to reduce the sulfur content in ships’ fuel oil by January 1, 2020, for five years.

94. **Global Group of Mayors Launches Initiative to Reduce Energy Use in Municipalities**

A global association of mayors has launched an initiative aimed at cutting energy use and reducing greenhouse gas emissions in cities and local governments worldwide. The initiative calls for cities to reduce energy use in government operations by 2020 compared to 2010 levels and report on their energy and emissions reductions.

Park Won Soon, mayor of Seoul, South Korea's capital, announced the initiative, called the 2012 Seoul Declaration of Local Governments on Energy and Climate Mitigation, on October 22nd at the World Mayors Dialogue, a meeting of more than 30 global mayors. Park chairs the World Mayors Council on Climate Change.

As part of the declaration, the ICLEI Global Executive Committee and the World Mayors Council on Climate Change agreed to encourage their members and other local governments to meet certain energy reduction and climate mitigation goals. The declaration encourages cities to set a goal to reduce the use of fossil and nuclear energy in government operations significantly by 2020 compared to 2010 levels. The city of Seoul has set a goal to reduce the use of fossil and nuclear energy in government operations by at least 30 percent by 2020 compared to 2010 levels.

The ICLEI Global Executive Committee oversees the operations of ICLEI-Local Governments for Sustainability, which is a partnership of more than 1,000 cities and local governments worldwide dedicated to sustainable development. The World Mayors Council on Climate Change is a group of local government leaders involved in global efforts to address climate change.

95. **World Bank President Calls Global Warming Data ‘Frightening’; Commits to Mitigation**

On October 11th, World Bank President Jim Yong Kim said climate change is real and has had alarming impacts, including natural disasters and food price fluctuations. Kim told reporters on the sidelines of the annual International Monetary Fund/World Bank meeting here: “I have looked deeply into the data on climate change. And I have to say that I was surprised. ... The data on climate change has become ever more frightening.” He said impacts, such as natural disasters, that had been expected to occur only when temperatures rose even higher “are
happening now." "As a scientist, I feel that it is my moral responsibility to be very clear in communicating the dangers of climate change," he said. Kim, a physician and anthropologist, was formerly president of Dartmouth University.

He endorsed scientists' statements that the severe drought in many parts of the world this past summer was caused by climate change and contributed to rising food prices and that climate change is "man-made."

Kim said the bank's task is to find ways to help countries mitigate and adapt to climate change and that it will prioritize mitigation through innovative technologies.

96. Air Pollution Study Clears the Air on Diesel versus Gas Emissions

Are gasoline-fueled cars or large diesel trucks the bigger source of secondary organic aerosol (SOA), a major component of smog? UC Berkeley researchers have stepped into this debate with a new study that says diesel exhaust contributes 15 times more than gas emissions per liter of fuel burned.

The study, published recently in the Proceedings of the National Academy of Sciences, elucidates the contributions to air pollution from the two types of fuel emissions. The authors estimate that diesel exhaust is responsible for 65-90 percent of a region’s vehicular-derived SOA, depending upon the relative amounts of gasoline and diesel used in the area.

For example, the researchers noted that in the San Francisco Bay Area, about 10 times more gas is used compared with diesel.

SOA contributes to respiratory problems and poor air quality, so pinpointing the major sources of the pollutant is important in evaluating current and future policies to reduce smog in the state.

The new findings contradict previous research that put the blame on gasoline-fueled vehicles as the predominant source of precursors that form secondary organic aerosol. "We can now say that, while both motor vehicle sources are important for these ‘secondary’ particles, diesel is responsible for a larger portion, especially in regions such as the San Joaquin Valley with a lot of diesel use," said study principal investigator and professor Allen Goldstein, who has joint appointments in the Department of Environmental Science, Policy and Management and the Department of Civil and Environmental Engineering.
For this study, Goldstein, who also is a faculty chemist at the Lawrence Berkeley National Laboratory, teamed up with Robert Harley, professor of civil and environmental engineering, and an expert on vehicle emissions and air quality.

The findings stand out because the researchers were able to tease out the chemical composition of fuel emissions. “The data from our study contains the most comprehensive chemical detail to date on diesel and gasoline emissions,” said study lead author Drew Gentner, a recent UC Berkeley Ph.D. graduate in civil and environmental engineering. “This presents many opportunities to assess the chemistry of these compounds in the atmosphere and the impacts of these sources. We expect that these findings will help policymakers improve air pollution control measures in the state, and also other parts of the world.”

97. IEA Predicts Changes to Global Map of Oil Refining and Trade

Profound shifts in the regional distribution of oil demand and supply growth will redefine the refining industry and transform global oil trade over the next five years, the International Energy Agency (IEA) says in its just released annual Medium-Term Oil Market Report (MTOMR). The IEA expects the global oil market to become somewhat less tight over the medium term than it has been through most of the last decade, as a combination of demand and supply factors will cause OPEC spare capacity to return to more comfortable levels. But it also highlights elevated supply and demand risks.

“The oil market is at a crossroads,” said IEA Executive Director Maria van der Hoeven. “On each and every front – technology, geopolitics, and the economy – potentially game-changing developments are taking place. This report is an attempt to bring it all together and sketch out what it might all mean for the next five years. It is thought-provoking and while it cannot possibly anticipate everything the next five years have in store, we hope it will help the reader think through the issues and gain a more refined understanding of the broader context in which tomorrow’s surprises will play out.”

The report’s projection of a return to higher OPEC spare production capacity will be welcome news amid rising supply and demand risks, she added.

Today’s weak economic environment has reduced expectations of oil demand growth for the medium term, yet the reallocation of demand by region and key product, which has been underway for the last 15 to 20 years, is expected to continue. Demand from non-OECD economies is forecast to overtake that in the OECD as early as 2014. The “East of Suez” region will account for most of the growth, led by Asia, the Former Soviet Union and the Middle East. Distillate demand is also expected to growth much faster than that for other products, so that gasoil and diesel by the end of the forecast period will account for the largest share by far of the demand barrel – a challenge for refiners and end-users alike.

On the supply side, most of the growth will come from the Americas, buoyed by the transformative power of advanced extractive technologies applied to light, tight oil deposits in the US and the Canadian oil sands that has exceeded earlier expectations. Among OPEC producers, Iraq stands out as its production capacity is expected to enter a new growth phase, which may continue even beyond the forecast period. These new supply sources are expected to more than offset decline rates and outages elsewhere as well as the continued impact of international sanctions of Iran.
The report also notes a continued rebalancing of refining capacity, with expansions in Asia and the Middle East more than offsetting continued attrition in the OECD. Internationally traded crude volumes are expected to decline sharply, as rising domestic production reduces North America’s import needs and more Middle East oil is kept at home to satisfy growing regional demand rather than exported. Product trade may grow in both volume and scope, however.


The 2012 edition of the International Transport Forum’s annual statistics update gathers data from the Forum’s 54 member countries for the period 1970-2010. Data cover all modes of transport as well as road safety. Some preliminary data for 2011 are also included. The data highlight major trends in the transport sector:

- The fall in world trade following the 2008 crisis impacted strongly on the transport sector. Changes in transport volumes were larger than both changes in GDP and trade.
- Following recovery in some transport modes in 2010, performance has again weakened.
- Statistics through 2010 and some preliminary data for 2011 show sea and air freight transport volumes rebounding strongly in 2010 to reach a new record high 2% above the pre-crisis peak.
- Rail and road freight have seen slower recovery due to domestic economic performance. Rail freight volumes remain below pre-crisis levels and indicate stagnation in 2011, while road freight recovery remains slow. The crisis impacted on rail passenger transport later than other modes with regional data showing stagnation or a decrease in 2010.
- Maritime freight data, showing continued growth in 2011, highlight the discrepancy between growth levels in developed and developing countries, the latter faring better.
- Air freight transport in 2010 grew over 20% on the previous year, signaling inventory rebuilding following the downturn and rising consumer demand. Preliminary data show worldwide air cargo volumes, a lead indicator for economic performance, stalling at 0% growth in 2011.
- Air passenger transport reached a new record high at 4 684 billion revenue passenger-kilometers (RPK) in 2010. European countries marking 9% growth despite the 2010 volcanic ash crisis.
- 2011 data show continued growth in air travel.

The publication includes first indications on road safety for 2011 from the Forum’s quarterly database and the IRTAD database.

99. IEA: Transportation Must Reduce Its Dependence on Oil

As oil currently powers 92% of the world’s transportation and with growth in transportation demand rising in developing countries, the International Energy Agency released two reports to show how the right policies and technologies could improve the fuel efficiency of road vehicles. Unless action is taken now, the agency said, oil demand in transportation will reach unsustainable levels because conventional combustion engine vehicles are set to be around for a long time.

6 "Technology Roadmap: Fuel Economy for Road Vehicles” and “Policy Pathway: Improving the Fuel Economy of Road Vehicles,”
While fuel economy standards are in place in most Organization for Economic Cooperation and Development member countries and China, IEA sees these reports to be used as guides for other countries seeking to improve fuel economy. Most major economies should aim to implement fuel economy standards as part of a comprehensive fuel economy policy package by 2015, with strong fuel economy improvement targets for 2020 and even out to 2030, IEA said. Complementary policies include fuel economy labeling, fuel economy or carbon dioxide-adjusted vehicle tax systems (such as “feebates”), and fuel taxes.

Fuel consumption in new vehicles could be slashed by half in the next 20 years, helping the world curb its dependency on oil, provided governments set up bold policies to boost the use of available technologies, according to IEA. The transport sector, which consumes around one fifth of global primary energy, will account for nearly all the future growth in oil use, said the Paris-based agency, which advises industrial nations on energy policy.

The necessary technologies are already cost-effective, the IEA said, in that fuel savings outweigh the additional costs over vehicle life, but those are not deployed widely enough. “Strong policies are needed to ensure that the full potential of these technologies is achieved over the next 10 to 20 years,” the IEA said adding that “Current technologies for conventional gasoline and diesel vehicles can reduce fuel consumption by half over the next 20 years.”

Policies included fuel economy standards, fiscal measures and education programs, which would play a key role in boosting fuel economy improvements, the agency said.

A shift towards bigger, more powerful vehicles also had a negative impact in some countries.

"A reduction on transport energy consumption can, therefore, provide significant benefits for energy security, economic development and climate change as well as reducing individual user fuel costs," the IEA said.

Fuel savings improvements in vehicles will be a key to constraining a maximum temperature rise to 2 degrees Celsius by 2050 even with a rapid rise in sales of electric and hybrid vehicles, the IEA said. Conventional vehicles will continue to dominate the market until 2030, the body added.

100. Report Says 100 Million Will Die By 2030 If World Fails to Act on Climate

More than 100 million people will die and global economic growth will be cut by 3.2 percent of gross domestic product (GDP) by 2030 if the world fails to tackle climate change, according to a new report commissioned by 20 governments. As global average temperatures rise due to greenhouse gas emissions, the effects on the planet, such as melting ice caps, extreme weather, drought and rising sea levels, will threaten populations and livelihoods, said the report conducted by humanitarian organization DARA.

It calculated that five million deaths occur each year from air pollution, hunger and disease as a result of climate change and carbon-intensive economies, and that toll would likely rise to six million a year by 2030 if current patterns of fossil fuel use continue.

More than 90 percent of those deaths will occur in developing countries, said the report that calculated the human and economic impact of climate change on 184 countries in 2010 and 2030. It was commissioned by the Climate Vulnerable Forum, a partnership of 20 developing countries threatened by climate change.
"A combined climate-carbon crisis is estimated to claim 100 million lives between now and the end of the next decade," the report said.

It said the effects of climate change had lowered global output by 1.6 percent of world GDP, or by about $1.2 trillion a year, and losses could double to 3.2 percent of global GDP by 2030 if global temperatures are allowed to rise, surpassing 10 percent before 2100.

It estimated the cost of moving the world to a low-carbon economy at about 0.5 percent of GDP this decade.

British economist Nicholas Stern told reporters earlier this year that investment equivalent to 2 percent of global GDP was needed to limit, prevent and adapt to climate change. His report on the economics of climate change in 2006 said an average global temperature rise of 2-3 degrees Celsius in the next 50 years could reduce global consumption per head by up to 20 percent.

Temperatures have already risen by about 0.8 degrees Celsius above pre-industrial times. Almost 200 nations agreed in 2010 to limit the global average temperature rise to below 2C (3.6 Fahrenheit) to avoid dangerous impacts from climate change. But climate scientists have warned that the chance of limiting the rise to below 2C is getting smaller as global greenhouse gas emissions rise due to burning fossil fuels.

The world's poorest nations are the most vulnerable as they face increased risk of drought, water shortages, crop failure, poverty and disease. On average, they could see an 11 percent loss in GDP by 2030 due to climate change, DARA said.

"One degree Celsius rise in temperature is associated with 10 percent productivity loss in farming. For us, it means losing about 4 million metric tons of food grain, amounting to about $2.5 billion. That is about 2 percent of our GDP," Bangladesh's Prime Minister Sheikh Hasina said in response to the report. "Adding up the damages to property and other losses, we are faced with a total loss of about 3-4 percent of GDP."

Even the biggest and most rapidly developing economies will not escape unscathed. The United States and China could see a 2.1 percent reduction in their respective GDPs by 2030, while India could experience a more than 5 percent loss.
Arctic sea ice, a key indicator of climate change, melted to its lowest level on record this year before beginning its autumnal freeze, researchers at the U.S. National Snow and Ice Data Center (NSIDC) said recently. The extent of ice probably hit its low point on September 16th, when it covered 1.32 million square miles (3.42 million square km) of the Arctic Ocean, the smallest amount since satellite records began 33 years ago. Changing weather conditions could further shrink the extent, the center said. A final analysis is expected next month.

The record was broken on August 26th, when the ice shrank below the record set in 2007. After that, it kept melting for three more weeks, bringing the ice extent - defined by NSIDC as the area covered by at least 15 percent ice - to nearly half of the 1979-2000 average.

"We are now in uncharted territory," Mark Serreze, the center's director, said in a statement. "While we've long known that as the planet warms up, changes would be seen first and be most pronounced in the Arctic, few of us were prepared for how rapidly the changes would actually occur."

The summer ice isn't just dwindling. It is also thin, relatively fragile seasonal ice instead of the harder multi-year ice that can better withstand bright sunlight. "The strong late-season decline is indicative of how thin the ice cover is," said NSIDC's Walt Meier. "Ice has to be quite thin to continue melting away as the sun goes down and fall approaches."

The Arctic is a potent weather-maker for the temperate zone, and is sometimes dubbed Earth's air conditioner for its cooling effects. However, as ice wanes and temperatures rise in the far north, the Arctic could add more heat and moisture to the climate system.

"What happens in the Arctic doesn't stay in the Arctic," said Dan Lashof, a climate scientist at the nonprofit Natural Resources Defense Council. "This has a real impact on Americans where they live and work."

Melting Arctic ice changes the shape and position of the jetstream, allowing tropical air to penetrate further north and Arctic air to penetrate further south, Lashof told reporters, leading to more extreme weather.

"That is a truly staggering rate of melting, far beyond what scientists thought would happen a few years ago," Bob Ward of the London School of Economics and Political Science said in a statement. "Policy-makers need to wake up to the scale and pace of the impacts from climate change."

Recent climate models suggest the Arctic could be free of ice before 2050. But the observed rate of melting is faster than what is shown in many of the models, according to NSIDC scientist Julienne Stroeve.

102. Antarctic Ozone Hole Smaller Than In 2011

The hole in the ozone layer, the earth's protective shield against ultraviolet rays, is expected to be smaller this year over the Antarctic than last, showing how a ban on harmful substances has stopped its depletion, the United Nations said recently. But the hole is probably larger than in 2010 and a complete recovery is still a long way off.
The signing of the Montreal Protocol 25 years ago to phase out chemicals that deplete the ozone layer has helped prevent millions of cases of skin cancer and eye cataracts as well as harmful effects on the environment, the U.N. weather agency said.

"The temperature conditions and the extent of polar stratospheric clouds so far this year indicate that the degree of ozone loss will be smaller than in 2011 but probably somewhat larger than in 2010," the World Meteorological Organization (WMO) said in a statement.

The Antarctic ozone hole, which currently measures 19 million square kilometers, most likely would be smaller this year than in the record year of 2006, it said. The annual occurrence typically reaches its maximum surface area during late September and maximum depth in early October.

But the banned chlorofluorocarbons (CFCs), once used in refrigerators and spray cans, have a long lifetime in the atmosphere and it will take several decades before their concentrations are back to pre-1980 levels, the WMO said.

The Montreal protocol has been a "great success", U.N. weather agency expert Geir Braathen told a news briefing. "This has prevented a major environmental disaster and globally ozone depletion has leveled off. We haven't really seen any kind of unequivocal ozone recovery yet."

In the Arctic stratosphere, there was record ozone loss in spring of 2011, but it has returned to more normal conditions this year, he said.

103. Honda to Launch New Hydrogen Fuel Cell Vehicle In 2015

Hydrogen fuel cells were once touted as the path to zero-emission motoring, but advances in battery technology made hybrids and battery-powered electric vehicles more practical. Still Honda, which has built two fuel cell vehicles in the past, isn’t giving up on the universe’s most abundant element. It will launch a new fuel cell car in 2015.

“This new fuel cell vehicle will showcase further technological advancement and significant cost reduction that Honda has accomplished,” Honda CEO and President Takanobu Ito said at his mid-year speech in Japan. Ito said the new fuel cell vehicle will be sold in the United States, Europe, and Japan. Development at North American Honda’s Research & Development Center in Liberty, Ohio is ongoing.

Honda has already put two fuel cell vehicles, the FCX and FCX Clarity into limited production. These cars constituted a “pilot program,” similar to what Honda and other companies such as BMW and Audi are using to develop battery-powered electric vehicles. The data gleaned from the FCX models will help Honda’s engineers design a mass-market fuel cell vehicle.

While the first FCX was more of a science project than a practical car, Honda says the FCX Clarity has everything the average buyer could want. Launched in 2009, it is about the same size as the outgoing Accord sedan, and its 134 horsepower electric motor offers similar performance to a midsize sedan with a four-cylinder gasoline engine.

Ito did not reveal any technical specifications, but the new Honda will most likely be powered by an electric motor, with the fuel cell in place of a conventional EV’s battery.
In fuel cell cars, hydrogen is stored under high pressure, then run through the fuel cell to generate electricity. The system emits nothing but water.

The fuel cell car will be built as either a four-door sedan or a five-door hatchback like the FCX Clarity.

Honda may have perfected fuel cell technology, but that doesn’t mean everyone will be filling their cars with hydrogen by 2015. Fuel cells come with the same range and availability issues as batteries. Honda claimed a 270-mile range for the FCX Clarity, about the same as the most powerful Tesla Model S. However, there are virtually no hydrogen filling stations, while EV charging stations are slowly springing up across the country.

Making battery-powered cars more practical is just a matter of building more stations, and hooking them up to an existing electrical infrastructure. Things get more complicated with hydrogen. Hydrogen may be the most abundant element in the universe, but it usually comes bonded to something else. An environmentally responsible way of refining industrial quantities of hydrogen has not been devised.

Still, fuel cells offer the possibility of eliminating emissions without heavy batteries and long charging times. It may be a gamble for Honda, but it will offer consumers yet another alternative to fossil fuels.

104. Minimizing Cyclists’ Exposure to Urban Traffic-Related Air Pollution

It starts with a simple piece of clear rubber tubing connected to a small and nondescript—though expensive—oblong brown box, both attached to a bicycle frame. The tube is used to capture the surrounding air, as cyclists travel around various routes in the city at different times of the day. The box is a condensation particle counter. Each one costs about $10,000 and serves to measure ultrafine particles (UFPs) or particles of ambient air pollution. Together with the bicycles and the students who are pedaling them, these form the tools for a novel research project designed to gather information about the exposure of cyclists and pedestrians to traffic-related pollution.

The information will eventually translate into a set of policies and guidelines for the planning and design of urban microenvironments that will minimize the exposure of cyclists and pedestrians to air pollution. The project, led by Prof. Marianne Hatzopoulou of McGill's Department of Civil Engineering, which includes an interdisciplinary team of engineers and health scientists, will receive over $450,000 over the next three years under a grant from the Collaborative Health Research Projects (CHRP) program. This research aims at reconciling the divide between urban policies that promote active transportation and health objectives which call for minimizing the exposure of Canadians to air pollution.

Prof. Hatzopoulou is among the 37 grant recipients of the 2012 CHRP program announced by the Honorable Gary Goodyear, Minister of State (Science and Technology) at an event held recently at McGill University. The CHRP program is jointly funded by the Natural Sciences and Engineering Research Council of Canada (NSERC) and the Canadian Institutes of Health Research (CIHR).

"Even though the health benefits of cycling clearly outweigh the risks to cyclists' health, recent studies have found associations between air pollution exposure and health effects even at the low levels that characterize most Canadian cities," says Hatzopoulou. "Our focus is on the
development of modeling systems and tools which can help policy-makers evaluate the effects of transportation policies on air pollution and health as well as assist the public at large in reducing their exposure." Based on the data they collect, Hatzopoulou and her team are developing state-of-the-art models that capture the effects of changes in traffic patterns on the generation of air pollutants along with people's exposure to them. They are also working on user-friendly applications for cell phones and computers that will assist urban cyclists in selecting routes that minimize their exposure. Although Hatzopoulou and her students are gathering data only in Montreal, the modeling techniques they are using will offer urban planners in cities around the globe the tools needed to make informed decisions about the location and layout of bicycle paths in order to reduce air pollution exposure for cyclists. Ultimately, this research should lead to a reduction in the health risks potentially associated with urban cycling.

105. ICCT Announces Board Chair Transition

The International Council on Clean Transportation has announced an important transition. Michael Walsh, ICCT's Founding Chair, is stepping down after seven years and passing the leadership of the ICCT to Dan Greenbaum, President of Health Effects Institute and ICCT board member since 2007.

Dan Greenbaum has over three decades of governmental and non-governmental experience in environmental health. Just prior to coming to HEI, he served as Commissioner of the Massachusetts Department of Environmental Protection from 1988 to 1994, where he was responsible for the Commonwealth's response to the Clean Air Act, including being the first state outside of California to adopt California Low Emission Vehicle standards.

"We have been extremely fortunate to have Michael Walsh as our board chair for the past seven years," Greenbaum commented. "The ICCT was, in many ways, built on Michael's life work and global web of relationships and I am honored, if a bit daunted, to take over the reins from him. The Board will continue to honor him as our Founding Chair and we are very fortunate that he has agreed to continue to assist ICCT as Special Advisor to the Board on global strategy. "