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EUROPE

1. The Netherlands Subsidizes Euro VI Trucks and Buses

The government of The Netherlands has introduced a subsidy for trucks and buses whose emissions meet Euro VI standards, this year and next, up to 4500 euros (approx. USD 6000) per vehicle. The subsidy is to help offset the incremental cost of Euro VI vehicles over Euro V models. The State Secretary (Infrastructure and Environment) says, 'The gain this new generation of engines has made toward air quality is very large. I also hope that the urban distribution transport and bus companies move quickly to invest in Euro VI engines; they can make a huge difference in inner city environments. "

The subsidy for Euro VI truck engines was announced last year, as part of the National Air Quality Cooperation. However, introduction earlier this year was postponed because there was still doubt regarding the expected return. The first trucks available with Euro VI engines are in fact particularly suitable for international transport, making their benefits greatest for the air quality outside the cities and some even outside the country. Moreover, the reduction of nitrous oxide (NOx) in the Euro VI standard is greatest at speeds up to 50 kilometers per hour.

The grant is aimed at the higher price of a Euro VI truck compared to a Euro V-type (the current standard) to compensate to a maximum of 4500 euros each. Commissioned by the Ministry of Infrastructure and Environment TNO has conducted field tests with the first Euro VI engines available on the Dutch market. The data shows that the new engines - depending on the speed driven – emit more than 90 percent less NOx than those of Euro V engines. In comparison with earlier trucks the difference is even greater.

2. EU Reaches Agreement to Update Gothenburg Protocol

On 7 May 2012, the EU reached an international agreement to update the Gothenburg Protocol, setting more ambitious targets to reduce trans-boundary air pollution. The revised objectives of the Protocol will see a reduction in EU emissions of around 60% for sulfur, 40% for nitrogen oxides (NOx), 30% for volatile organic compounds (VOCs), 6% for ammonia and 20% for particulate matter compared to 2005 levels. There's also agreement to act on Black Carbon, a pollutant with short-lived climate forcing characteristics.

Black carbon is composed of fine particles produced from the incomplete combustion of diesel fuel, wood, and crop waste and other biomass, oil, refuse, and in some cases coal. Evidence indicates that black carbon contributes to climate change by warming the atmosphere and by darkening the surface of snow and ice, speeding melting. However, parties **did not** commit to specific reductions of black carbon.

National inventories must first be developed based on guidelines to be set by the Executive Body. Countries will have significant flexibility in compiling the inventories. "Each party should to the extent it considers appropriate develop and maintain inventories and projections for emissions of black carbon using guidelines adopted by the Executive Body," the new text of the protocol reads. The text also says parties “should give priority” to black carbon when implementing measures to control particulate matter.

The EU Environment Commissioner and the Danish Minister for Environment made the following remarks:

> “This is a significant step forward in protecting citizens’ health and the environment. For the first time, we have an international agreement that acknowledges the link between air pollution and climate change. By agreeing to regulate one of the contributors to climate change, 'Black Carbon', we will see positive impacts at both local and international level", said Janez Potočnik, European Commissioner for the Environment.
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> “This is indeed an important step to reduce air pollution in Europe,” said Danish Minister for the Environment Ida Auken. “We have managed to agree to further reduce emissions within the EU and in North America, and we have paved the way for further reduction of emissions from our eastern neighboring countries. New multilateral environmental agreements are now quite rare, so we have good reason to be satisfied with the outcome of the negotiations.”

The Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone was initially adopted on 30 November 1999. It sets emission ceilings for four pollutants: sulfur, oxides of nitrogen (NOx), volatile organic compounds (VOCs) and ammonia. These ceilings were negotiated on the basis of scientific assessments of pollution effects and abatement options. Parties whose emissions have a more severe environmental or health impact and whose emissions are relatively cheap to reduce will have to make the biggest cuts.

The Protocol also sets tight limit values for specific emission sources (e.g. combustion plant, electricity production, dry cleaning, cars and trucks) and requires best available techniques to be used to keep emissions down. VOC emissions from such products as paints or aerosols will also have to be cut. Finally, farmers will have to take specific measures to control ammonia emissions.

The agreement involves the EU, Norway, Switzerland and the United States of America. The negotiations have also involved other countries covered by the United Nations Economic Commission for Europe (UNECE) region, notably the Russian Federation, Canada, the Ukraine, Georgia, in view of potential ratifications by such countries in the coming years. As well as improving the environment, ratification by these non-Parties would create a more level playing field for industry across the entire UNECE region.

Amendments to the protocol would enter into force when two-thirds of the parties to the protocol—17 out of 26 countries—ratify them, a process that could take a couple years.

The parties agreed to prioritize reconsideration of changes to the ammonia annex while recommitting to reduce the pollutant by already-agreed measures. Ammonia is a key component of reactive nitrogen, which can have major effects on water, soil, and climate, according to recent studies. Negotiations on ammonia had been particularly tense, and the Executive Body appears to have accepted a proposal by the Swiss delegation to revisit the issue as soon as possible.

Another key development in the revision of the Gothenburg Protocol is the introduction of flexibility mechanisms for the Eastern European, Caucasus, and Central Asian countries, which are working to become parties. The countries, including Russia, have been active in shaping revisions to the protocol, and a key demand of theirs has been the introduction of such mechanisms. The measures “took considerable time to negotiate,” according to the Secretariat and as a result, the countries will receive an extended grace period for meeting the emissions limits in the protocol. For new sources, the countries may request an additional year. For existing stationary sources, the countries can request up to 15 years of additional time to implement the emissions limits. For mobile sources, fuels, and volatile organic compounds in products, the countries can request up to five years of additional time.

The Secretariat added that the Russian delegation has indicated it will join the Gothenburg Protocol as soon as possible and that there are no obstacles in the way of ratification by Russia, as it supports the newly adopted amendments.

3. Deal Struck On Sulfur Content of Marine Fuels

Shipping in EU waters will have to conform to tighter International Maritime Organization (IMO) limits on sulfur in fuel under a legislative agreement between the European Union's legislative bodies, the Danish Presidency of the EU Council said on May 23rd. European Parliament and member state negotiators provisionally agreed on the new limits after three rounds of trialogue talks with the European Commission.

Under the agreement, the sulfur content of marine fuels would be limited to 0.5 percent by 2020, compared to the current IMO standard of 3.5 percent, which has been in force since January 1, 2012. In EU waters considered especially sensitive, known as sulfur emission control areas (SECAs), the legislation would limit sulfur in marine fuel to 0.1 percent starting in 2015, compared to the current limit of 1 percent. The tighter limits would be in line with IMO standards. However, the legislation would remove the possibility of an extension to 2025 of the deadline for the introduction of the 0.5 percent non-SECA limit, which is to be considered by the IMO in 2018.

Danish Environment Minister Ida Auken said agreement on the legislation was a “crucial step” because it “addresses pollution that so far has been largely unregulated.” Denmark currently holds the rotating presidency of the EU Council, which represents the governments of EU member states. The European Parliament consists of 754 directly-elected members from across the 27-country bloc.

The deal still needs final approval from the European Commission. Some countries are understood to have opposed the agreement at the meeting. The trialogue talks were also contentious, with member states resisting the commission's proposal to implement stricter sulfur limits for marine fuels than those agreed by the International Maritime Organization (IMO). Environment committee MEPs wanted the EU to go even further.

The shipping industry has warned that there may not be enough low-sulfur fuel available by 2020. However, an aide to Satu Hassi, the European Parliament's lead negotiator, said the agreement should send a strong signal to the market.

The agreement also requires the commission to assess the impact of moving to a 0.1% limit for EU waters at some later date in 2013. The EU executive originally wanted a 0.1% limit for passenger ships from 2020, while the parliament's environment committee suggested it should apply to all ships. Parliament did secure an agreement that the European Commission would consider extending the 0.1 percent limit to all areas within 12 nautical miles of the European Union's coastline when it carries out an air quality policy review in 2013.

The European Commission, the European Union's executive arm, has calculated that air pollution prematurely kills 500,000 Europeans annually, and that shipping emissions can be blamed for 50,000 of these deaths.

Finally, member states will be allowed to subsidize sulfur scrubbing systems as an alternative to low-sulfur fuels under state aid rules.

Member states and MEPs must now endorse the deal before it can enter into force. The European Parliament is likely to vote on the agreement in September.

Ships that fail to meet the new limits will face possible fines from national authorities, which the Commission said must be set high enough to cancel out any savings from not complying with the rules.

Under the agreement, governments may provide investment support to shipping firms to avoid damage to the sector's competitiveness, provided any support complies with EU state aid rules.

4. Russia Mulls Rules on Volatile Organic Compounds at Major Ports

Proposed legislation published on May 5th by the Russian government would require regulation of volatile organic compounds from fuel in four major ports. The measure is designed to comply with Annex VI of the International Maritime Organization's Convention on the Prevention of Pollution from Ships (MARPOL), which Russia ratified in 2011. The legislation, submitted to the Parliament, designates four ports where the Ministry of Transport has determined VOCs should be controlled—Vysotsk and Kaliningrad on the Baltic Sea, Vostochny on the Pacific coast, and Taganrog on the Black Sea. Under MARPOL rules, the government must assess and limit emissions of volatile organic compounds from bunker fuel containers, ship engines, incinerators, and equipment.

5. Renault –Nissan and Russian Technologies to Create Avtovaz Joint Venture

The Renault-Nissan Alliance and state corporation Russian Technologies have agreed to create a joint venture and give the Renault-Nissan Alliance an indirect majority stake in AVTOVAZ, according to a memorandum of understanding. The Renault-Nissan Alliance, AVTOVAZ, Russian Technologies and Troika Dialog signed the non-binding agreement in Paris. According to the memorandum, the Renault-Nissan Alliance and Russian Technologies will contribute their respective stakes in AVTOVAZ to a joint venture that will control AVTOVAZ, Russia’s largest car company and maker of the Lada brand.

Renault-Nissan plans to invest about US$750 million, which will give the French-Japanese car group 67.13% of the joint venture in mid 2014. The joint venture will then hold 74.5% of AVTOVAZ. The transaction is expected to be complete by 2014.

Renault, which purchased 25% of AVTOVAZ in 2008 and then helped AVTOVAZ pilot an aggressive turnaround, will invest about US$300 million in the joint venture. Nissan, which does not currently own a stake in AVTOVAZ, will invest about US$450 million. Renault and Nissan will make periodic payments through 2014.

Russian Technologies has agreed to restructure its outstanding loans with AVTOVAZ with approximately RUB7 billion (US$238 million) proceeds from the anticipated sale of AVTOVAZ’s non-core assets being used to repay part of Russian Technologies' loans. The remainder of circa RUB46 billion (US$1.56 billion) of interest-free debt is being extended well beyond its current maturity date. This reportedly gives AVTOVAZ a strong balance sheet with no liquidity constraints.

The joint venture will acquire Russian investment company Troika Dialog's entire stake in AVTOVAZ by 2014.

The memorandum comes a month after Russian Prime Minister Vladimir Putin inaugurated a US$525 million assembly complex in AVTOVAZ's Togliatti factory, adding capacity of up to 350,000 cars per year. With the new facilities, the factory has a capacity of almost 1 million cars per year.

Renault, Nissan and Lada are launching a product offensive that will update all core Lada models and launch new cars across the three brands – including five models from the newly inaugurated facility. In addition to Togliatti, the three brands operate plants in Moscow, St. Petersburg and Izhevsk.

Russia is the fastest growing economy in Europe and should remain in the forefront for several decades, thanks to the surge in upper- and middle-class consumers. More than 10 million Russian households already earn more than US$50,000 per year. Total industry volume in Russia last year was 2.65 million vehicles, including light commercial vehicles. Volume in 2012 is expected to be 2.9 million units.

The Alliance sold 878,990 cars in Russia last year – including 578,387 Ladas. With a market share of nearly 33 percent, Russia is the Alliance's third largest market after China and the United States.

6. Barroso Calls for 'Balanced' ILUC Proposal

European Commission president José Manuel Barroso has told EU energy and climate commissioners to reassess a compromise on the indirect land-use change effects of biofuels, according to the minutes of a meeting issued recently. Initial reports from the 2 May meeting of EU commissioners only showed that no agreement had been reached, but the minutes are more revealing.

The energy and climate directorates had long been at odds over how to incorporate ILUC into the EU's fuel quality and renewable energy directives. They agreed before the meeting to include crop-specific ILUC factors into the former, but not the latter. However, the minutes and EU sources indicate that other commissioners were concerned that the compromise position would not be balanced.

Two other options – to raise the threshold for direct emissions or to integrate ILUC into both directives – were also rejected. A paper prepared for the May meeting says the second option would be more effective at minimizing emissions. The commissioners debated the options' impact on world food prices and the need to provide regulatory stability for producers, the minutes show. They also examined whether options were "climatically sustainable and ethically defensible".

Mr Barroso said the proposals should be based on the precautionary principle and told the meeting more work was needed before a formal decision could be taken. He said it was important that commissioners with concerns about the plans be closely involved in the further preparatory work so that the 'college' can claim "full collective ownership", which would help speed up adoption by the commission. A final decision is still expected before the start of the summer recess.

7. EU Carbon Emissions Rise, End Multi-Year Decline

Greenhouse gases from the European Union rose more than 2 percent in 2010 when a cold winter and a rebound in many economies drove up energy use, breaking a multi-year pattern of emissions declines. The year-on-year rise in the official EU data was slowed by emissions declines in struggling Greece, Ireland, Portugal and Spain. Higher use of renewable energy and natural gas, which is lower in carbon than other fossil fuels, also limited the increase, but a collapsed carbon price has taken away the incentive for low-carbon investment and spurred carbon-intensive coal.

International Energy Agency Chief Economist Fatih Birol said it would be a surprise to him if emissions did not continue to grow, chiefly because of the impact of a collapsed carbon price. The IEA has already said global emissions hit a record in 2011.

To stimulate low carbon energy, the IEA has said a price of $50 a metric ton (1.1023 tons) is needed. That compares with current prices of less than 7 euros ($8.78) a metric ton on the EU Emissions Trading Scheme (ETS). Although gas use rose in 2010 because of lower prices, Birol said that in 2011 cheap carbon pushed up coal use in Europe by 6 percent, while natural gas declined by more than 10 percent.

From 2009-2010, EU emissions increased by 2.4 percent, or 111 million metric tons of carbon, a faster increase than gross domestic product, which grew by 2 percent. The uptick followed consecutive years of reductions starting in 2004 and was explained in part by the sharpness of the earlier fall - 7.3 percent (or a drop of 365 million metric tons) - between 2008 and 2009.

While a cold winter drove up 2010 final energy demand by 3.7 percent, extra emissions were curbed by a 12.7 percent increase in renewable energy use and a 7.4 percent rise in gas use.

Overall, the bloc is easily meeting its Kyoto targets, according to the data which has been submitted to the United Nations Framework Convention on Climate Change. For the 15 EU states that were members of the bloc when the 1997 Kyoto Protocol was agreed, their greenhouse emissions in 2010 were 11 percent lower than in 1990, compared with the 8 percent fall required by their Kyoto commitment. For all 27 nations, emissions were 15.4 percent below 1990 levels.

Among the greenhouse gases reported to the United Nations, carbon dioxide accounted for 82.4 percent of emissions. Industry emissions of hydrofluorocarbons (1.9 percent), which are extremely potent greenhouse gases, continued a rising trend identified since 1990, as air conditioning and refrigeration demand grew.

8. EU ETS Emissions Down In 2011, Permit Glut Grows

Carbon emissions in the European Union's Emissions Trading System (ETS) fell by more than 2 percent in 2011 but an oversupply of permits key to driving greener energy use worsened, European Commission data showed recently.

The EU's emissions trading scheme (EU ETS) limits the carbon dioxide emissions of the 27-nation bloc's factories and power plants and covers nearly half of EU emissions. Preliminary data in April showed a fall of 2.4 percent in carbon emissions in 2011, suggesting the bloc is on track to achieve its 2020 climate target to cut emissions 20 percent below 1990 levels.

However, the data also points to a growing oversupply of carbon units, thanks to a record use of international carbon credits in the EU carbon scheme at a time of stagnant EU economic growth and flagging industrial output. "Last year's record use of international credits has increased the buffer of unused allowances by some 450 million. This means more than 900 million more allowances have been put into circulation than were surrendered for compliance use over the period 2008-2011," the Commission said.

Carbon permits are handed out to installations in each reporting year. Each company must surrender enough allowances to cover its emissions by the end of April in the following year, otherwise fines can be imposed. Polluting plants in the ETS can also use a certain number of U.N.-backed carbon credits for compliance, most of which are certified emission reductions (CERS) - credits issued to qualifying emissions-reduction projects in developing countries. Cumulatively, the EU ETS has been responsible for the use of 456 million CERs, of which over half came from projects located in China and 17 percent from India.

European carbon prices have shed around 60 percent of their value over the past year due to market worries about the growing supply glut and weak demand. The benchmark carbon price hit a low of 5.99 euros a ton in April, well below the level needed to spur green investment. To prop up low prices, the Commission said last month it would review its auctioning rules for the ETS, a proposal which would have to be approved by member states. This could involve changing the timing of auctions, or delaying them, to limit supply in the short term, a process referred to as "backloading".

Before the Commission breaks for summer in August, it will outline more ways to boost prices and reform the ETS, with a legal decision expected by the end of the year, EU Climate Commissioner Connie Hedegaard told reporters recently in Brussels. Structural reform options could include discussion on a lower emissions cut target and/or setting aside carbon permits from the third trading phase of the scheme which runs from 2013 to 2020.

EU officials, member states and lawmakers have been debating if and how to intervene in the market for some time, including a one-off move to withhold a certain number of carbon permits for the 2013-2020 period. Many in the market are expecting a decision on that this year or next.

9. Report: Firm EU Efficiency Standards Will Slash Motor Costs

Ambitious fuel savings targets such as those proposed by the EU can cut motorists expenses by enormous sums, according to research conducted for Greenpeace by the former chief of the Climate Change unit at the UK’s Environment Agency, Malcolm Fergusson. His study predicts that car owners' annual average fuel costs – currently ranging between €1,235 per motorist in Luxembourg to €2,143 in Sweden – would plummet with tighter CO2 targets.

If an expected EU target of 95 grams of CO2 emissions per km (g/km) for new cars is confirmed in July, the average fuel cost per motorist would drop to between €962 and €1,665 annually by 2020, the report said (this figure also assumes a 147g/km target for vans). And if the cars target was tightened to 60g/km by 2025, fuel costs would plunge further to between €494 and €863 annually by 2030, the study added.

“The lesson from these figures is clear,” said Franziska Achterberg of Greenpeace. “A weakened law will pile hundreds of euros extra on drivers' fuel bills, while a strong one will do a lot to shield them from rocketing fuel prices.”

Petrol prices are currently at record levels across much of the EU. In the UK, the situation is dire with a liter of petrol currently costing €1.71 and the motorists’ body the AA predicting it to rise by another three cents by the summer.

In his research, Fergusson, who has previously provided CO2 and cars models for the EU, sets out five regulatory scenarios for the UK (and other member states), ranging from a legislative cap after 2015 to a 60g/km target by 2025.

The results of Fergusson’s number crunching for an average British driver were that:

- By 2015, s/he would be saving €208 a year.
- With a 95g/km target for 2020 that figure would rise to €475 by 2020, and €848 by 2030.
- A 70g/km target for 2025 would deliver €1,134 annual savings for motorists by 2030
- An 80g/km goal for 2020 and 70g/km for 2025 would result in savings rising from €523 in 2020 to €1,182 in 2030
- Most ambitiously, an 80g/km target for 2020 coupled with a 60g/km goal in 2025 would cut 2030 fuel costs by €1,255.

For new cars, the savings figure would soar from €722 a year under the 95g/km target in 2020 to an annual €1,512 under the ‘80g/km for 2020 and 60g/km for 2025’ scenario, in 2030.

When a 20% ‘rebound’ effect – the spending of saved money on more fuel – is factored in, the savings are more modestly estimated at between €578 under the 95g/km in 2020 picture, rising to €1,210 in 2030 under the 80g/60g hypothesis.

When a high oil price scenario is considered, as per the International Energy Agency’s 2009 World Energy Outlook, those numbers increase from €816 a year in the ‘95g/km by 2020’ scenario to €1,928 in the ‘80g and 60g’ projection.

Road transport currently accounts for 22% of the UK’s total carbon dioxide emissions, and an estimated 85% of that figure has been sourced to fuel use and servicing operations.

Preliminary data collected by the International Council on Clean Transportation reportedly indicates that EU car manufacturers are on track to meet a 2015 target of 130g CO2 per km (g/km) ahead of time. They found the average CO2 emissions level of new passenger cars in the EU to be around 135g/km last year, a 3.7% drop on 2010.

In July the European Commission is expected to announce the fuel efficiency target for 2020 of 95 grams of CO2 emissions per km for cars.

10. Chinese and Indian Airlines Miss ETS Deadline

Eight Chinese and two Indian airlines missed a March deadline for submitting 2011 emissions data under the EU emissions trading scheme (ETS). Member states may apply penalties if the firms fail to meet an extended mid-June deadline. Both India and China have told their airlines not to comply with the ETS. They are part of a group of countries that believes the inclusion of non-EU airlines in the European scheme breaches international rules on national sovereignty.

However, climate commissioner Connie Hedegaard said there had generally been "a very, very high level of compliance". She said more than 1,200 airlines had reported emissions figures, including every airline based in the EU and several other anti-ETS nations such as the US, Canada and Russia. The airlines that did not submit emissions data accounted for less than 3% of emissions in 2010, according to information released by the EU executive. The European Commission did not disclose the names of the airlines, which all reported their 2010 emissions last year, but they are understood to include Air China, Air India, Hainan Airlines, Jet Airlines, China Cargo Airline and China Eastern.

The member states responsible for regulating the non-compliant airlines agreed to send letters extending the final deadline for data submission to 15 June. They plan to discuss further steps together if this deadline is missed.

Airlines flying into and out of EU airports officially joined the ETS at the start of this year, but they have already been required to submit data for several years. At this stage, non-compliance is an administrative matter and subject to national fines. If the airlines do not surrender enough ETS carbon allowances next year they may also face EU penalties specified in the 2008 directive on aviation. If foreign airlines consistently fail to pay ETS-related fines, the aviation directive theoretically allows member states to seek operating bans from the commission.

The main hope for a resolution to the row is via an international agreement on aviation emissions under the International Civil Aviation Organization (ICAO), which is currently looking at four options for market-based measures. Commissioner Hedegaard said the EU would be particularly interested in the results of this analysis when the ICAO council next meets in June.

Alternatively, non-EU countries can still remove some of their airlines' flights from the scheme by adopting equivalent measures. China has announced plans to link its air passenger duty to emissions. Brussels is examining these to see if they would qualify.

Penalties for breaking the EU law start at 100 euros ($130) per metric ton (1.1023 tons) of carbon airlines fail to pay for, while the cost of compliance is estimated at about 2 euros per passenger for a flight from Shanghai to Frankfurt.

11. EU Airline Carbon Cash Should Help Fill Climate Fund

EU nations should pledge that funds from paying for airline emissions will help poor countries deal with global warming, the bloc's climate chief said recently, after finance ministers stopped short of a firm commitment. A crisis in Greece and the euro-zone topped the agenda at the ministers' talks in Brussels, but they also agreed to text on climate funding, which only promised hard cash until the end of the year.

A solution for the longer term would be to "give this modest revenue back into climate financing," Climate Commissioner Connie Hedegaard said at Reuters' Global Energy and Environment Summit, referring to cash from the airlines' contribution to the Emissions Trading Scheme (ETS).

It could also deflect vehement international criticism of the EU's law, she said. "Some thought we were just taking this money and saying it was a tax," Hedegaard said. "Financial ministers have started this discussion by saying it could go into this (climate funding), but through national budgets."

The European Union re-committed to providing 7.2 billion euros ($9.4 billion) for a pot of climate money referred to as "fast-track financing", covering the period 2010-12. After that, a Green Climate Fund will be seeking to channel funds of up to $100 billion per year by 2020. The fund's design was agreed at U.N. talks in Durban, South Africa, last year, but EU economic and finance ministers recently could only agree to "work in a constructive manner towards the identification of a path for scaling up climate finance from 2013 to 2020".

The EU finance ministers' text mentioned a variety of sources, both public and private, as well auctions of aviation allowances in the EU ETS. It added it was up to each member state to determine "the use of public revenues in accordance with national budgetary rules". Within the EU, so far only Germany has come up with legislation to earmark ETS cash - which derives from utilities and heavy industry, as well as airlines - for environmental purposes.

The funds associated with the law requiring all flights in and out of EU airports to participate in the EU ETS are so far relatively modest as carbon allowances have sunk to record lows and initially, many are being handed out for free.

12. EU Executive Releases Guidance on Vignettes for Cars

The European Commission has adopted a Communication on road infrastructure charges levied on light passenger vehicles. The Communication provides general guidance for a vignette system to be non-discriminatory and proportionate. Vignette systems are part of the broader strategy on road charging outlined in the 2011 White Paper on transport.

The general objective of the European Union's Transport Policy presented in the White Paper on Transport is "to help establish a system that underpins European economic progress, enhances competitiveness and offers high-quality mobility services while using resources more efficiently". A modern road pricing system contributes to the achievement of the White Paper goals by:

- Contributing to fair competition between modes of transport.
- Preventing any direct or indirect discrimination among users depending on their nationality or place of residence.
- Promoting the principles of sustainable development by applying harmonized, transparent mechanisms for charging external costs like emissions, noise, congestion, accidents, etc.
- Contributing to finance high quality infrastructure.

While there is EU legislation concerning road charges for heavy goods vehicles EU Council Directive 96/53/EC of 25 July 1996 laying down for certain road vehicles circulating within the Community the maximum authorized dimensions in national and international traffic and the maximum authorized weights in international traffic, the only EU rules concerning the charging of light passenger vehicles - i.e. passenger cars, motorcycles and other motor vehicles below 3.5 tons used predominantly for private purpose - are stemming directly from the Treaty on the

Functioning of the European Union which forbids any direct or indirect discrimination of EU citizens on grounds of nationality.

Vignettes, as a time-based form of charges levied on road users (e.g. per day, per week, per year), are currently applied to passenger vehicles in seven EU Member States: Austria, Bulgaria, Czech Republic, Hungary, Slovakia, Slovenia and Romania. Other Member States (e.g. Belgium) are planning to implement such systems.

In order to assist those Member States wishing to introduce a new vignette system for light passenger vehicles, based on the previously gained experiences and paying special attention to potential discrimination of occasional users, mainly coming from other Member States, the Communication outlines key criteria to see whether a vignette system complies with the general principles of non-discrimination and proportionality of the Treaty.

On the basis of the received complaints and analytical studies, the Commission proposes the present guidance on the following points:

- The availability of proportionately-priced vignettes.
- Proper access to information.
- The collection of fees and their payment.
- An appropriate enforcement practice.

This guidance is not based on any ECJ case-law and constitutes the Commission's reflections on existing queries related to the application of the vignette systems.

The Communication, as a part of the broader strategy on road charging outlined in the White Paper, aims to clarify the Commission's understanding of how the general principles of non-discrimination and proportionality of the Treaty are to be applied to a vignette system for light private vehicles. It also provides guidance on the application of such vignette system.

As public spending on transport infrastructure keeps on falling, new sources of finance must be found. Road charging is an efficient and fair solution for this issue as it ensures financing for future transport investments.

Member States are encouraged to closely co-operate with the Commission in order to converge their national vignette systems as much as possible.

The new guidance on 'vignette' charges for cars says little about accounting for external environmental costs. But a consultancy report suggests this would not be the most effective policy. Currently, no country applies differentiated vignette rates according to cars' environmental performance. The report commissioned by the EU executive suggests that offering that a discount for cleaner vehicles would be likely to cause "considerable administrative complexities". The system would also be difficult to enforce. Subsidies and lower vehicle tax rates would be more effective, it adds.

The commission notes that distance-based tolls are preferable to time-based vignette systems. They are fairer to all drivers by charging intensive users more than occasional users, rather than imposing a flat charge.

The publication of the guidance was prompted by frequent complaints to the commission about the cross-border implications of vignettes.

13. MEPs Vote to Strengthen Climate Reporting Rules

The European Parliament's environment committee has voted to strengthen a draft regulation on monitoring and reporting greenhouse gas emissions. The EU executive's proposal aims to update and improve existing rules. It includes improvements to rules on monitoring emissions from land use, land-use change and forestry (LULUCF), and the aviation and maritime sectors. There is not yet enough information to underpin regulatory action in some of these areas, the European Commission said in its proposal last year.

In a recent vote, the MEPs said member states should report all "climate-relevant" emissions from shipping, **which includes black carbon**. The commission's proposal only mentions CO2 emissions. They added that the EU executive should adopt the new monitoring and reporting requirements by 2013.

The national low-carbon strategies required under international climate agreements and mentioned in the EU's low-carbon roadmap should also set a cost-efficient trajectory towards the 2050 goal of an 80-95% reduction in emissions, said MEPs.

The plenary is scheduled to vote on the rules in September but this could be delayed if negotiations are held with member states.

Meanwhile, general affairs ministers meeting in Brussels recently backed new rules on the monitoring, reporting and verification of emissions in the EU's emissions trading scheme (ETS). The parliament is also scrutinizing the proposal.

14. Germany Puts Deeper Carbon Cut Back On EU Agenda

Germany has asked for discussion on deeper EU carbon emissions cuts to be put on the agenda at a meeting of environment ministers in June. If agreed, a more ambitious target could help to spur the European Union's carbon market, which has sunk to record lows. Previous debate of bigger carbon cuts, however, has been difficult, with coal-reliant Poland objecting that they could damage its economy.

The meeting of ministers is set for June 11 in Luxembourg.

German Chancellor Angela Merkel faces the challenge of coping with a switch from nuclear to green energy. The Emissions Trading Scheme (ETS), set up to be the mainstay of the EU's climate policy, should encourage green power. But its collapse to record lows means that it is having the opposite effect and has been driving investment in coal-fired generation rather than gas, which is the cleanest of the fossil fuels, analysts and utility companies have said.

They have also argued a carbon price of anywhere between 20 euros ($25.17) and 50 euros is needed to support continued investment in renewables, compared with less than seven euros recently.

Increasing EU ambitions on emissions cutting could also have the effect of reducing the surplus.

Poland has been at the forefront of opposition to anything that would boost the carbon price and increase the costs of offsetting its emissions. It vetoed efforts at a meeting of environment ministers in March to agree non-binding goals for deeper carbon cuts outlined in a 2050 road map.

Early this year, the European Commission published analysis showing the cost of moving beyond its existing policy of cutting carbon emissions by 20 percent by 2020 would be cheaper than originally thought. The bill would be bigger for newer EU member states, such as Poland, but such nations also have a greater potential to benefit from improvements in efficiency and the jobs that would be created.

Within the context of the international Kyoto process on tackling climate change, the EU has said it would move up to a 30 percent carbon reduction goal on condition that other major economies carry out their fair share of emissions reduction. The EU as a bloc has been meeting both its Kyoto emissions cutting targets and is on track to reach its 20 percent domestic target.

15. Germany Sets New Solar Power Record, Institute Says

German solar power plants produced a world record 22 gigawatts of electricity per hour - equal to 20 nuclear power stations at full capacity - through the midday hours on a recent Friday and Saturday, the head of a renewable energy think tank said.

The German government decided to abandon nuclear power after the Fukushima nuclear disaster last year, closing eight plants immediately and shutting down the remaining nine by 2022. They will be replaced by renewable energy sources such as wind, solar and bio-mass.

Norbert Allnoch, director of the Institute of the Renewable Energy Industry (IWR) in Muenster, said the 22 gigawatts of solar power per hour fed into the national grid on Saturday met nearly 50 percent of the nation's midday electricity needs. "Never before anywhere has a country produced as much photovoltaic electricity," Allnoch told reporters. "Germany came close to the 20 gigawatt (GW) mark a few times in recent weeks. But this was the first time we made it over." The jump above the 20 GW level was due to increased capacity this year and bright sunshine nationwide. The 22 GW per hour figure is up from about 14 GW per hour a year ago. Germany added 7.5 GW of installed power generation capacity in 2012 and 1.8 GW more in the first quarter for a total of 26 GW capacity.

The record-breaking amount of solar power shows one of the world's leading industrial nations was able to meet a third of its electricity needs on a work day, Friday, and nearly half on Saturday when factories and offices were closed.

Germany has nearly as much installed solar power generation capacity as the rest of the world combined and gets about four percent of its overall annual electricity needs from the sun alone. It aims to cut its greenhouse gas emissions by 40 percent from 1990 levels by 2020.

Government-mandated support for renewables has helped Germany became a world leader in renewable energy and the country gets about 20 percent of its overall annual electricity from those sources. The incentives through the state-mandated "feed-in-tariff" (FIT) are not without controversy, however. The FIT is the lifeblood for the industry until photovoltaic prices fall further to levels similar for conventional power production. Utilities and consumer groups have complained the FIT for solar power adds about 2 cents per kilowatt/hour on top of electricity prices in Germany that are already among the highest in the world with consumers paying about 23 cents per kw/h.

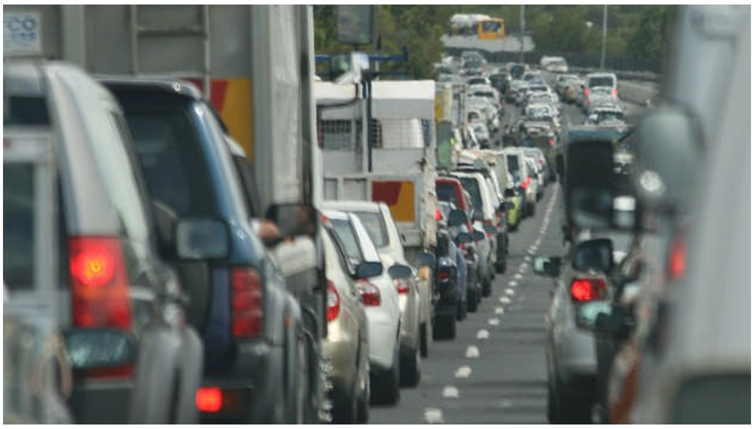
Merkel's center-right government has tried to accelerate cuts in the FIT, which has fallen by between 15 and 30 percent per year, to nearly 40 percent this year to levels below 20 cents per kw/h. But the upper house of parliament, the Bundesrat, has blocked it.

German consumers pay about 4 billion euros ($5 billion) per year on top of their electricity bills for solar power, according to a 2012 report by the Environment Ministry.

Critics also complain growing levels of solar power make the national grid less stable due to fluctuations in output.

16. Nitrogen Oxide Emissions Still a Major Problem in Europe

Air pollution emitted from sources such as traffic, industry and households is still above internationally agreed limits in many European countries, according to data published today. The accompanying report from the European Environment Agency (EEA) confirms an initial assessment published earlier this year, showing 12 EU Member States exceeded limits under the National Emissions Ceilings (NEC) Directive in 2010.



Under the NEC Directive, countries were obliged, by 2010, to meet ‘ceilings’ for four important air pollutants: nitrogen oxides (NO_X), non-methane volatile organic compounds (NMVOC), sulfur dioxide (SO_2) and ammonia (NH_3). These pollutants are harmful to both people and the environment, causing respiratory illnesses, acidifying soil and surface water, and damaging vegetation.

Since 2001, Member States have been working towards meeting these ceilings. The publication of official 2010 data from Member States is the first time that those efforts can be measured against the legally binding targets. The findings, based on official preliminary data for 2010 reported by Member States, confirm EEA’s early analysis made in February 2012. Final emissions data for 2010 will be reported by countries at the end of this year.

“All these pollutants contribute to poor air quality, which damages people’s health and the environment,” EEA Executive Director Jacqueline McGlade said. “We should also note that 2010 was a recession year in much of Europe. As emissions can rebound during periods of economic recovery, countries need to make positive efforts to limit any increase of emissions in the future.”

Key findings

- Nitrogen oxide (NO_x) limits were exceeded most frequently, with 12 Member States failing to keep emissions below agreed ceilings. These were Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Luxembourg, Malta, the Netherlands, Spain and Sweden.
- Road transport contributes approximately 40 % of total NO_x emissions in the EU. Reductions of NO_X from this sector over the last two decades have been lower than originally anticipated, according to the report. This is partly because transport has grown more than expected, and partly because the real-world emissions from diesel vehicles are higher than those estimated when the vehicle emission limit standards were set.
- A lot of progress has been made in reducing sulfur dioxide (SO_2) emissions in recent decades. SO_2 emissions in the EU were more than 40% below the EU's ceiling for this pollutant, and no Member States exceeded their SO_2 ceiling.
- Spain was the only Member State to report exceeding three of its four emission ceilings (NO_X, NMVOC, NH_3), followed by Germany (NO_X, NMVOC) and Finland (NO_X, NH_3) with two exceedances each.
- The EU also has emissions ceilings under the NEC Directive, one being the sum of the individual Member States' ceilings for each pollutant, while the second is a stricter, specific ceiling for the EU as a whole. Of these, the two EU ceilings for NO_x were both exceeded, albeit the first by only a small margin.

During summer 2012, the EEA will publish data presenting long term emission trends of air pollutants within the EU's annual report to the Convention on Long Range Transboundary Air Pollution (LRTAP). Later in the year the EEA will also publish a separate analysis showing to what extent the original objectives in the NEC Directive – protecting human health and environment – have been achieved.

The European Commission is currently reviewing the European Union's air quality policy, and, amongst other initiatives, is expected to propose a revised NEC Directive in 2013 at the latest. A revised directive will build on the findings of the policy review and is likely to set objectives for 2020 and beyond for relevant air pollutants. In the absence of new legislation, however, the NEC Directive remains in force and requires countries to keep emissions below national ceilings in the years beyond 2010.

17. EC Rejects Plea for NO2 Derogations in 12 UK Zones

The European Commission has partly rejected the UK government's plans to delay compliance with EU air quality standards for nitrogen dioxide (NO2). Last year, the UK requested a five-year extension to the 2010 compliance deadline for 24 air quality zones. But, in a recent decision, the EU executive rejected the request for 12 of the zones.

Seven zones including Liverpool were rejected because low emission zones (LEZs) intended to reduce NO2 levels were described as optional in plans submitted to the commission. There is no guarantee the LEZs will be implemented, says the commission.

The large compliance gap, of up to 22 micrograms per cubic meter of NO2, for these seven zones was the other reason for the rejections.

Plans for a further four zones were rejected because of technical discrepancies between projected annual NO2 limits and measured values. Brussels could not decide whether abatement would be effective or postponement necessary because of this. A plan for northeast Scotland was rejected on the basis of a similar discrepancy.

The EU decision means more than two thirds of the UK's air quality zones are unlikely to comply with NO2 limits under the ambient air quality directive by 2015. This is because the government admitted last year that 17 air quality zones are unlikely to comply with NO2 limits by this deadline.

This marks a further unraveling of UK government attempts to meet its legal obligations for NO2. A promise to "work towards full compliance with European air quality standards" was a key pledge in the government's coalition agreement.

It is not clear at this stage whether the commission's decision will lead to infringement action. EU environment spokesman Joe Hennon said it was up to the UK authorities to submit revised plans showing how they intend to meet the NO2 limits.

The government's consultation on its NO2 plans acknowledged that several air quality zones including London would not comply with EU rules until at least 2020. The commission's latest decision does not cover the status of these zones. The government said it was not obliged to apply for a time extension for those air quality zones where NO2 compliance is expected after 2015. It notified the commission separately about the zones affected earlier this year.

It did, however, admit in a British court last year that it was in breach of European law due to its stance on these zones. But a court of appeal decided in June that the legality of its position was an EU matter and not for UK courts to decide.

18. Minister Says France Should Act On Diesel Cancer Link

France should rein in tax policies favoring diesel engines after a World Health Organization review found a clear link between their exhaust emissions and cancer, the country's environment minister said. The French auto market, which was 72 percent diesel last year, should reduce its dependence on the fuel, Nicole Bricq told reporters on the sidelines of a conference in Paris.

"The national vehicle fleet is completely unbalanced," said Bricq, who took office following the election of Socialist President Francois Hollande. Tax policies had encouraged this imbalance and should now be adjusted, Bricq said. "I'm in favor, and the competent ministers will have to be convinced," she said. "This study comes at an opportune moment for us to make changes."

European countries have favored diesel partly because cars using it are more fuel-efficient than similar gasoline-powered vehicles and emit less carbon dioxide.

Bricq was speaking a day after the WHO's cancer research agency said its review of all relevant published science had removed earlier doubts about the carcinogenic effects of diesel exhaust.

France levies a tax of 43 euro cents per liter on diesel and 61 cents on petrol, according to industry data for 2011, leading to a similar difference in prices at the pump. The country's main automakers, PSA Peugeot Citroen and Renault are among the most reliant on diesel sales in their home market and the rest of Europe, analysts say.

"We're convinced that this blanket judgment is completely unjustified for modern diesels," said Eckehart Rotter, a spokesman for Germany's VDA car manufacturing association. Volkswagen, the biggest European automaker by deliveries, and which is currently seeking to increase its

U.S. diesel sales, said the study "does not reflect the diesel technology that has been on the market since 2004".

The WHO cancer agency, which had first classified diesel exhaust as "probably carcinogenic to humans" in 1988, said it had removed the "probably" from that rating on the basis of its review. The rating on petrol exhaust was also reviewed and left unchanged as "possibly carcinogenic", two risk categories below diesel.

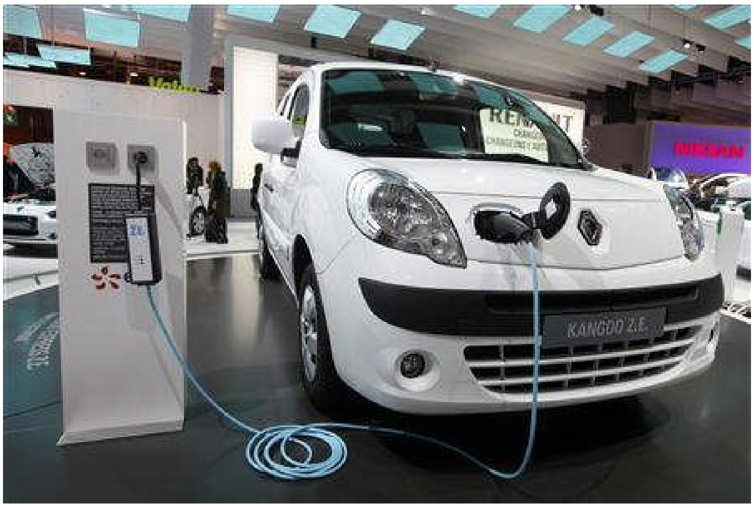
19. Renault Backs Electric Cars with Free Chargers

Automaker Renault, frustrated by the speed at which electric car chargers are being installed across France, is to fund some of the missing infrastructure itself. A century after French tire maker Michelin issued road signs to help early motorists find their way, Renault and Japanese affiliate Nissan are preparing to hand out charging stations for installation in public spaces.

"It is not our job to install chargers, but somebody has to kick start the market," Thierry Koskas, head of Renault's electric vehicle program, told the press. "This cannot be a long-term policy."

The allied carmakers, both headed by chief executive Carlos Ghosn, will give away close to 1,000 fast chargers costing around 5,000 euros ($6,300) each, mostly in France. The freebies will go to car parks, supermarkets and other high-visibility public spaces under private ownership.

Among major European countries, the infrastructure delays are worst in Renault's domestic market - France has spent only 5 percent of a 50 million euro fund earmarked for public charging networks, the company recently disclosed. "France is not really on track to meet the objectives," Renault product planning Chief Philippe Klein said. "So obviously it is up to us to stimulate the rollout."



Among major auto companies and groupings, Renault-Nissan has staked the most on electric cars, investing 4 billion euros in their development and production.

France, a vocal supporter of the technology and Renault's biggest shareholder with a 15 percent stake, aims to build 75,000 charging spots by 2015. Yet many of Europe's 15,000 public chargers are concentrated in Germany and the Netherlands, with fewer than 2,000 installed in France. Concerns are mounting over the country's readiness for the launch of flagship Renault Zoe later this year, a key test of Ghosn's belief that electric car sales will rise steadily to claim 10 percent of the global auto market by 2020.

Unlike Renault's existing Fluence and Kangoo battery cars, adapted from conventional models with government and company fleets in mind, the new subcompact is designed from scratch as an electric car and pitched squarely at individual consumers.

"Initial uptake of electric cars has been slow," said Tim Urquhart, a London-based IHS Automotive analyst who believes their shaky debut partly reflects the limited choice available. "The relatively small numbers are explainable but still not comfortable viewing for Nissan and Renault," Urquhart said. "High prices and low levels of infrastructure pose a big stumbling block."

Electric models, which carry a 5,000 euro subsidy, accounted for 0.24 percent of French registrations in the first quarter. Western Europe recorded 11,000 deliveries last year, less than 0.1 percent of the region's auto market. Nissan, 43.4 percent-owned by Renault, has seen its battery-powered Leaf wilt after less than a year of sales, with volumes dropping sharply after filling advance orders from early adopters.

Renault-Nissan's infrastructure push echoes past efforts by Michelin and other companies forced to venture beyond their core competencies to stimulate demand for innovative products. "Drivers were always getting lost in the early 1900s because maps were not exactly accurate," said Francois Roudier of France's CCFA car industry association. "So Michelin ran this whole campaign for better road signage and directions." In 1910, the company issued 30,000 road signs to local authorities. Earlier in that decade, it introduced maps and guides that spawned the globally venerated restaurant reviews and points system of Michelin stars. "Now the automakers are having to step in because the public sector is moving too slowly," Roudier said. "As people begin to use the chargers they provide, town halls will come under pressure to buy more and provide a proper network."

As part of its initiative, Renault has signed a deal with family-owned retailer E. Leclerc to equip 500 of its French hypermarkets with chargers by 2015.

Other automakers, such as General Motors, PSA Peugeot Citroen and Toyota, are more bullish about plug-in hybrids that combine a combustion engine with an electric powertrain and battery. They too stand to benefit from a broader charging network.

Cars 21, a high-level group of European public officials and industry executives, recently called for action to accelerate the availability of public charging, far more critical for battery cars than for hybrids which can fill up at the pump when the battery runs out. "Most customers will recharge at home or at work almost all the time," Koskas said. "But they still want the reassurance that they are covered when they break with that routine."

20. Poland, Germany Block Plan to Add Carbon Component to EU Energy Tax Laws

Poland and Germany have refused to agree to a proposal to raise taxes on fuels emitting high levels of carbon dioxide in an effort to boost renewable energy technologies and combat climate change. Denmark, which holds the rotating EU presidency until the end of June, attempted June 22 to achieve a breakthrough in the Council of Economic and Finance Ministers on legislation that has been blocked for more than a year. Poland objected, saying the changes would drive up the cost of coal, a key power source for that country. Germany said the plan could hurt its automakers by pushing up taxes on diesel fuel, on which taxes are as much as 20 percent less than on unleaded gasoline.

The proposal to revise the EU energy taxation legislation is designed to:

- ensure consistent tax treatment of energy sources based on both carbon dioxide emissions and energy content,
- reduce the tax burden on renewable energies, and
- provide a framework for the use of carbon taxation to complement the European Union's

Under the proposed directive, energy taxes would consist of two components: a carbon dioxide-related tax and a general energy consumption tax. The proposal would revise the minimum level of taxation to reflect carbon dioxide emissions and energy content while ensuring consistency across various sources of energy. Taxes in some member states such as Germany and Poland currently favor fossil fuels such as coal or diesel.

Following the debate among EU finance ministers, the Danish presidency concluded that EU member states agreed minimum tax levels should be included in the legislation. "This should take as their reference points the energy content and CO2 emissions levels of energy products," said Danish Finance Minister Margaret Vestager. "But member states should retain maximum flexibility to determine the structure of their national energy taxes, and provisions on the principle of proportionality might have to be deleted."

European Taxation Commissioner Algirdas Semeta told the finance ministers that if the carbon dioxide component of the legislation is removed—which would occur if the principle of proportionality is deleted—the revisions would be significantly weakened.

Cyprus, which assumes the EU rotating presidency in July, will take up the proposed energy tax revisions in September.

21. Agreement Reached On EU Energy Efficiency Law

MEPs, member states and the European Commission have hammered out the final details of a deal on the energy efficiency directive. It should put the EU on track to cut energy use by at least 15% below business-as-usual by 2020. The deal is due to be signed off quickly by member state representatives and EU energy ministers and MEPs in July, but this should be a formality.

Wednesday's agreement centers around a compromise reached recently on an obligation on energy suppliers to deliver an annual 1.5% energy saving among end-users. The key was an agreement among member states to cap total use of various "flexibility measures" at 25%. Thanks largely to this compromise, commission sources said that the deal would deliver an energy saving of around 15% - two-thirds of what had originally been envisaged.

European leaders have already committed to a voluntary 20% saving by 2020. The commission believes another 2% of this could be delivered by tougher emission standards for cars and vans, and the remaining 3% through new ecodesign measures, notably for boilers.

European Parliament representatives succeeded in keeping a requirement for national building renovation roadmaps in the final compromise. But member states insisted on restricting a 3% renovation target for public sector buildings to central government and pushed through similar restrictions on public procurement rules.

Energy audits will be mandatory for large companies as the commission and MEPs wanted. They also kept a call for rules on demand response, which allow energy users to adjust their energy use to match supply.

But a chunk of potential savings was lost on a watering down of requirements for mandatory information provision to consumers through smart meter and billing requirements and the dropping of a requirement for combined heat and power (CHP) as the default option for new installations.

As expected, the final draft makes no explicit reference to the EU emission trading scheme (ETS), but the commission has promised to report on options for raising the carbon price shortly.

The deal is a major achievement for the Danish EU presidency, which ends this month and had staked its success on an agreement. MEPs, including the Greens, also welcomed the deal as the best achievable, but environmental NGOs were disappointed. The directive requires the commission to analyze in 2014 whether member states are on track to the 20% target and propose further measures if necessary.

22. EU Figures Show 3 Percent Drop in New Car CO2 Emissions

Carbon dioxide emissions from new cars in the European Union fell an average of 3 percent in 2011, as buyers chose less polluting vehicles, according to EU figures. Data from the European Environmental Agency (EEA), a monitoring arm of the EU, showed a decrease in the average amount of CO2 emitted by new cars registered in 2011 to 135.7 grams per kilometer, from 140.3 in 2010. That followed a drop of nearly 4 percent in 2010 from 2009.

"This is a good sign for the capacity of Europe's car industry to innovate and thus maintain global competitiveness while making their products more efficient," EU Climate Action Commissioner Connie Hedegaard said in a statement.

The European Union is from this year phasing in new emissions targets. Car makers must reduce the average emissions of their new vehicles to 130 grams of CO2 per kilometer by 2015 or face penalties. The European Commission is also expected to make binding a provisional 2020 goal of 95 grams per kilometer. (See below)

Carbon targets are assigned to each manufacturer and those who fail to meet the 2015 requirement will face fines for each additional gram of CO2 their average exceeds the target by.

According to the EEA figures, 12.8 million new cars were registered in the European Union in 2011, with average carbon dioxide emissions of 135.7 g/km (217 g/mile). On average, vehicle engine capacity was 5 percent lower than in 2007, EEA said.

EEA added that 8,700 “pure electric cars” were registered in the European Union in 2011, marking a tenfold increase over 2010, though this “did not significantly influence the EU average emissions.”

EEA Executive Director Jacqueline McGlade said the figures showed that setting limits on car emissions is “a good example of regulation helping industry to make real improvements.”

EEA said that although vehicle carbon dioxide emissions have declined, the emissions from EU road transportation overall increased 23 percent between 1990 and 2010 and now make up about a fifth of the bloc's total carbon dioxide emissions.

23. Europe Appears Set to Tighten CO2 Limit for Cars

The European Commission is set to propose tighter carbon emissions standards for new EU cars, according to a draft proposal. The proposal, expected to be made public in July, would make binding a 2020 goal to lower carbon dioxide (CO_2) emissions to an average of 95 grams per kilometer (g/km).

So far it is only a provisional, non-binding goal and compares with an existing, binding target of 130 g/km.

"This regulation sets a target of 95 g CO_2/km as average emission for the new car fleet," the draft says. Fines for non-compliance would be kept at existing levels of 95 euros for every gram over target per vehicle.

The draft also proposes setting long-term CO_2 standards for new passenger cars for 2025 and 2030 by December 31, 2014 at the latest, if such further targets are then deemed appropriate.

Large manufacturers will continue to be assigned targets based on vehicle mass, rather than their footprint or other parameters. The slope of the curve that will divide the burden of emissions cuts between different car models will remain linear, with a 60% slope based on emissions of manufacturers' 2009 car fleets.

Smaller manufacturers will have to cut their average emissions by 45% by 2020, based on 2007 levels. Their target for 2015 is 25%.

Road transport is one of the few sectors with rapidly rising emissions. Between 1990 and 2008, emissions from the sector increased by 26 percent, according to figures from the Commission. An impact assessment on the proposed new law says a roughly 25 percent reduction in car and van fuel consumption would save an estimated 25 billion euros ($31.2 billion) per year. It also says estimated fuel savings from implementing the 2020 target would more than compensate for the expected cost of compliance. For the average motorist, fuel savings of around 500 euros per year would stem from the 95 gram target in 2020, based on a driving distance of 20,000 km per year and a fuel cost of 1.4 euros per liter.

The Commission proposal, once made public, will have to go through a long EU legislative process before it can take effect.

Some in the car industry have called for more flexibility on environmental standards to help ease costs for a sector struggling with overcapacity, an economic downturn and tough competition from beyond Europe.

CARS 21, a policy group that gathers ministers from EU member states, auto executives, EU commissioners and trade union representatives, met recently and adopted a report on its vision to revive the industry. The report was released following CARS 21's last high-level meeting. The commission will prepare an action plan based on its recommendations. The European car industry wants cash to develop new technologies to help meet longer term carbon targets, says the report. But there should be some flexibility in meeting these, such as allowances for eco-innovation.

The report also recommends harmonizing financial incentives for cleaner vehicles and says alternative fuels infrastructure must keep pace with demand. The commission will propose legislation on standardizing electric charging systems, it notes.

The report also outlines a series of options to cut the carbon footprint of heavy duty vehicles such as trucks. An interim version of the report was issued in December.

Sergio Marchionne, president of the car industry association ACEA and CEO of Fiat said it was essential to implement the findings of the report and particularly to ensure a level playing field in terms of international trade. The industry says that following an EU free trade agreement with South Korea that began to take effect in July 2011, 150,000 more South Korean cars were on European roads. Marchionne said trade negotiations with Japan had been discussed at the CARS 21 meeting. "It's an issue that is first and foremost on our minds," he said. "We need to be very careful before we open ourselves up to any other exposure when the economic underpinning is as weak as it is."

24. Airlines Call On EU to Defuse Carbon Emissions Row

Global airlines have again urged the European Union to defuse an international emissions row as a group of nations led by China, the United States and India kept up their opposition to EU plans to force carriers to join a carbon trading scheme. Europe has angered trading partners with its plan to make airlines cut pollution by levying a fee based on the amount of carbon emissions calculated for whole flights, not just the portion over Europe - a measure its critics regard as interference with their national airspace.

The head of the International Air Transport Association (IATA) said all parties shared the view that a global agreement was needed to head off the threat of a trade war over the EU's Emissions Trading Scheme (ETS). "Europe seems more committed to implementing its ETS unilaterally than to sincerely negotiating a multilateral agreement," IATA director general Tony Tyler told a gathering of 240 airlines in the Chinese capital.

"For Europe's international counterparts it's like being asked to negotiate with a gun to their head," he added in an opening speech to the group's annual meeting. "Sustainability should unite the world with common purpose, not divide it with affronts to sovereignty that risk a trade war, a war that nobody wants and from which no winner can emerge."

China and India have ordered airlines not to cooperate with the scheme, raising the prospect of retaliation by the EU.

"The onus is now on Europe to seize the moment, take a credible action to defuse the situation and get on with finding the global solution that everybody is hoping for," Tyler said.

The EU says its plans are necessary as a way to meet international targets to reduce pollution, and that it was forced to act alone as a result of their having been little progress made towards reaching a global deal.

The airline industry fears being caught up in a trade war which would further dent profits that IATA says could be erased by a worsening of the European debt crisis.

25. Nordic Workshop Presents Action Plans Related To Short Lived Climate Forcers

The Nordic co-operation to fight the negative impacts of the climate changes and air pollution caused by the emission of the so-called Short Lived Climate Forcers (SLCFs) has taken new steps forward. The Nordic Ministers of Environment adopted at their last meeting held on Svalbard in March a Declaration on Short Lived Climate Forcers such as black carbon (soot) and methane. Along with CO2, they are one of the reasons why the ice in the Arctic Ocean is melting.

At the Nordic level the Ministers decided to improve the basis for national and joint Nordic initiatives. As a follow-up a Nordic workshop was held on June 7th-8th, where 35 researchers and policy-makers together discussed the most recent scientific findings, the national experiences with emission inventories, identification of cost-effective measures to cut emissions and the drawing up national action plans as well as the development in the field of international co-operation on SLCF.

At the regional level the Gothenburg Protocol may serve as an instrument to control emissions of black carbon and there is a need for developing European standards. Co-operation with Russia on the SLCFs is important and shall be intensified. On the regional level the Nordic climate financing institution NEFCO can also play a role. Specific issues to deal with could be cook stoves in developing countries and emission abatement measures for ships.

NORTH AMERICA

26. AirCare to End After 2014, New Options Being Explored

Responding to continued concerns about air quality in the Lower Mainland and the Fraser Valley, AirCare will continue to Dec. 31, 2014, and then end for passenger cars and trucks to allow for a full examination of the program's future direction and focus, Environment Minister Terry Lake announced. "Newer makes and models of light-duty vehicles are not the prime source of the blue smoke and pollution experienced on the road today," said Lake. "When you look at most cars now, they run a lot cleaner than the vehicles rolling off the line when AirCare started in 1992."

In full consultation with the Ministry of Transportation and Infrastructure and key stakeholders, the Ministry of Environment will work to identify those sources of particulate emissions currently not managed through air care programs, and come up with reduction options that can help address human health concerns.

This announcement follows a new Metro Vancouver bylaw that came into force this past January to reduce diesel emissions from backhoes, excavators, forklifts and many other diesel-powered non-road machines, which were not covered by the AirCare program. One of the priorities of Metro Vancouver's air quality program is to reduce emissions of diesel particulates – the soot or tiny particles in the exhaust of diesel-powered vehicles, equipment, ships and trains.

Both the Metro Vancouver and Fraser Valley regional district boards have recommended to the Province that it change the focus of the AirCare program to reduce significant sources of diesel particulates. "Addressing major sources of contamination – and diesel particulates is certainly one of them – is key to managing and improving air quality in the airshed we share with our neighbors in the Fraser Valley," said Metro Vancouver chair Greg Moore. "Together, we continue to make great strides in reducing air pollution, and the support of the Province of B.C. through management of heavy-duty vehicle emissions is an excellent next step in that process.”

“It’s time to explore shifting gears when it comes to battling vehicle emissions,” said Lake. “Lower Mainland drivers have done their part by participating in AirCare, so we’ll be reducing fees with a full phase-out of light-duty vehicle testing in 2014.” Currently, AirCare testing costs newer vehicle owners (1992-2006) $46 every two years. Older vehicles are tested every year at $23 per test. Failing an emission test can result in costly repairs. It is expected that the fee to inspect 1992-2006 vehicles will be reduced in 2014 to make it fair for car owners requiring an inspection in the final year of the program.

27. Canadian Air Pollution Monitoring Team Being Cut

The federal government plans to break up a team of Environment Canada smokestack specialists that played a key role working with enforcement officers and industry to crack down on toxic pollution, a news investigation has revealed. Details of the cuts emerged through a series of leaked documents and interviews that revealed members of the Ottawa-based group of scientists were told their current roles would be eliminated over the next year.

Environment Minister Peter Kent recently declined an interview request from reporters about cuts in his department, but a spokesman said the department was shifting toward using outside sources of research to avoid "duplication" on information that "already is obtained from credible sources." One month earlier, his office declined to comment about cuts to the team, explaining that it couldn't answer questions because of "privacy" concerns and "consideration" for the department's employees.

While Kent has acknowledged in a recent report tabled in Parliament that budget cuts were putting his department's scientific expertise and capacity to protect Canadians at risk, Environment Canada has said budget cuts will not have any impact on its core services.

The Union of Environment Workers has described the emissions research and measurement unit as a unique team that provides expertise that is not available from other sources. It consists of seven specialists who travel around Canada, measuring emissions and analyzing data either to help industry, or provide evidence for enforcement officers that want to lay charges. They recently conducted research supporting federal efforts to produce a credible monitoring plan for pollution from Alberta's oil sands sector, contributing to a chapter on air quality.

Environment Canada Deputy Minister Paul Boothe told his department the team's work would end as part of efforts to trim spending by 5% and reduce its workforce by 3% over the next three years. "We will stop research on method development related to measuring industrial emissions . . . ." Boothe wrote in a May 2 e-mail, obtained by the press. "These reductions will not impact the department's ability to conduct science, research, or monitoring. Science is and will continue to be the foundation of Environment Canada's policy and regulatory work."

Thomas Duck, an atmospheric scientist from Dalhousie University in Halifax, suggested the cuts would jeopardize the government's plans to create a credible monitoring plan for the oil sands, which are needed to help boost the industry's environmental reputation on the international stage with scientific evidence about its footprint. "It's vandalism of our scientific capacity," said Duck. "Why announce an oil sands monitoring plan and then undermine your own ability to implement it. So to me it suggests that they never had any intention to follow through on the oil sands plan and that it's for show only."

28. Ontario Says It Cannot Meet Ozone Standard Due to Pollution from U.S.-Based Facilities

Areas of Ontario near the U.S. border cannot meet the province's air quality standard for ozone because of power plant pollution that crosses into Canada, the province told a U.S. federal appeals court (Mississippi v. EPA, D.C. Cir., No. 08-1200, brief filed 5/1/12). Ontario is supporting U.S. states and advocacy groups that are challenging the 2008 national ambient air quality standard for ozone of 0.075 part per million as not protective enough. The province submitted a friend-of-the-court brief May 1 asking the U.S. Court of Appeals for the District of Columbia Circuit to order the Environmental Protection Agency to revise the standard.

Ontario said it is closing all of its coal-fired power plants by 2014. However, it said, even if the province shut down all human-caused sources of ozone, it could not meet its more stringent standard of 0.065 ppm because of U.S. pollution, particularly emissions from power plants in the Midwest and southern United States. Conversely, if that transported pollution were eliminated, Ontario said it could meet the standard without reducing any of its own emissions.

“If addressing the ozone threat were simply a matter of enforcing its own standards, Ontario would not need to be here,” the province told the D.C. Circuit. “But unfortunately, ozone does not observe political boundaries. … Simply put, Ontario cannot meet the ozone challenge without greater efforts to reduce ozone levels in the U.S.”

The D.C. Circuit received opening briefs April 17 in consolidated cases challenging the ozone standards. The American Lung Association, New York, and other states and advocacy groups are challenging the standards as being too weak, while Mississippi and industry groups argue that EPA could not justify setting such stringent standards.

29. US Study Says Regulation Top Risk Seen By Energy Companies

Government regulation is the top risk seen by crude oil and natural gas exploration and production companies, according to a study of annual reports by the top 100 producers done by accounting and consulting firm BDO USA LLP. The study of annual filings with the U.S. Securities and Exchange Commission also found a large jump in concern over the regulation of hydraulic fracturing, which has become a top method for extracting oil and natural gas from shale formations in the United States, according to BDO.

While increased government regulation or new laws limiting energy companies have been an abiding worry for energy producers, increased regulation of fracking, as hydraulic fracturing is called, jumped from a risk seen by just over half of the companies in 2011 to a fear of 74 percent this year. Environmental groups have raised fears about the fluids used under high pressure to break underground rock formations to release supplies of crude oil and natural gas. Fracking has also been blamed for increased numbers of earthquakes in some areas of the United States. This year, 63 percent of companies said they said they saw difficulty in obtaining drilling permits, up from 29 percent in 2011.

Earlier this month, the Obama administration unveiled new rules to regulate hydraulic fracturing on federal lands, including a requirement for prior approval prior to using the technique.

The 2010 explosion on the Deepwater Horizon drilling rig at an offshore well owned by BP Plc. in the Gulf of Mexico also weighs on the minds of oil and gas producers, according to the BDO survey. Nineteen percent of the companies sited the ramifications from the Deepwater Horizon spill as a risk, up from 16 percent a year ago.

30. Canada's Oil Sand Battle with Europe Very Intense

On May 9th, the government of Alberta released a study into the extra carbon emitted by crude produced using oil sands instead of more conventional sources. The study, by a unit of California-based Jacobs Engineering Group, found that emissions from oil-sand crude are just 12 percent higher than from regular crude. The study is the latest weapon in Canada's offensive against the EU's efforts to reduce the carbon emissions from fuels.

As part its efforts to cut carbon emissions, the European Union has proposed classifying crude produced from oil sands, or tar sands as environmentalists and others call them, as much dirtier than other fuels. A 2011 study for the EU by Stanford University academic Adam Brandt found that oil-sand crude was as much as 22 percent more carbon intensive.

Canada, whose oil sands have helped it become an energy power, fears such a ruling could imperil a resource it estimates will add more than C$3 trillion to its economy over the next 25 years. Hence Ottawa has waged a concerted lobbying campaign against Brussels' proposal over the past three years. An examination of hundreds of pages of documents obtained under access to information legislation in both Brussels and Ottawa, some dating back to 2009, as well as press interviews with leading officials in both Canada and Europe show just how extensive that effort has been.

The governments of Canada and Alberta, along with Canadian companies, have wooed dozens of European parliamentarians, offered trips to Alberta and sponsored conferences in an effort that Chris Davies, a British Liberal Member of the European Parliament and a backer of the EU proposal, said "has been stunning in its intensity." Satu Hassi, a Finnish MEP for the Greens and another backer of the EU proposal, said the thing that sets Canada's campaign apart is not its size but its official backing. "There have been massive lobbying campaigns by the car industry, by the chemicals industry, banks, food giants, etc. But so far I have not seen such a lobbying campaign by any state."

Perhaps the most surprising thing about the campaign is that virtually no fuel from Canadian oil sands reaches European refineries. Ottawa's fear is that a European ruling will influence other markets, including the United States, where Canada currently sends virtually all its oil. "We don't want the potential stigmatization and we're quite concerned about that issue," Canada's Natural Resources Minister Joe Oliver told reporters late last year.

Canada's battle with the EU began in 2009 when Europe - the largest economic market in the world - agreed to adopt a measure called the Fuel Quality Directive to reduce the level of greenhouse gases emitted by vehicles. Brussels has still not agreed precisely how that will be achieved, but in 2009 the Commission published findings that tar sands might have a greenhouse gas intensity around one-fifth higher than conventional crude.

Nearly all the massive reserves of oil concentrated in the northern part of Canada's Alberta province - home to the world's third largest proven reserves of crude after Saudi Arabia and Venezuela - are in the form of tar sands. The clay-like sands have to be dug up in open-pit mines with massive shovels, or blasted with steam and pumped to the surface, before oil can be extracted. The process means the oil costs more to produce than regular crude, uses more water and energy, and emits more carbon.

As Canada has developed its sands - the industry in Alberta grew from 603,000 barrels a day in 2000 to 1.6 million in 2011 - environmentalists and non-governmental organizations have stepped up campaigning against the resource. Canada's Conservative government - which touts Canada as a "clean energy superpower" - counters that it needs to defend itself against lies and unwarranted discrimination against the tar sands. Emails from Canadian diplomats and other documents show Canada feared negative publicity could hit tens of billions of dollars of investment in its industry by such European majors as Royal Dutch Shell, BP, France's Total and Norway's Statoil.

"The oil sands are posing a growing reputational problem, with the oil sands defining the Canadian brand," London-based Canadian diplomat Sushma Gera wrote in a confidential e-mail on August 20, 2010, which like many of the documents acquired through Freedom of Information legislation has been redacted. "With (a) recent increase in the NGO campaigns targeting (the European) public, we anticipate increased risk to Canadian interests much beyond the oil sands."

In late 2009, Ottawa set up a body it called the Pan-European Oil Sands Team, which included diplomats from embassies in London, Paris, Berlin, The Hague, Oslo, Brussels and Canada. It also included representatives from the environment and natural resources ministries, the Alberta provincial government, and oil companies including Shell, Statoil and Total. Officials from the London-based Royal Bank of Scotland - a UK state-owned bank - and the Canadian Association of Petroleum Producers (CAPP), an energy industry group, rounded out the roster. "The principal objective of the Oil Sands Team is to reframe the European debate on oil sands in a manner that protects and advances Canadian interests related to the oil sands and broader Canadian interests in Europe," wrote one diplomat in a "Pan-European Oil Sands Advocacy Strategy" document dated May 2011.

A few months after its launch, the team reported "a resurgence of highly critical public campaigns" in Europe which it expected to intensify. "In order to counter these negative campaigns and media coverage we will have to be proactive but strategic and coherent in our approach. This will require significant resources," said one document.

CAPP, whose members are a Who's Who of the Canadian energy sector, provided C$30,000 for a conference on "New Energy Frontiers" in June 2011 in Britain. Ottawa and Alberta each contributed C$20,000. Canada and Alberta also arranged a series of visits to the tar sand fields for European decision-makers, legislators and think-tanks. Much of the campaigning was done in Brussels and European capitals, with officials from Ottawa and Alberta meeting, phoning and writing to MEPS.

Friends of the Earth, an environmental group, used internal EU documents to calculate that between late September 2009 and late May 2011, Canadian officials and diplomats talked to their European counterparts at least 105 times. In August 2010, the Pan-European Oil Sands team reported: "Oslo holds regular meetings with Statoil to update on each other’s activities and coordinate where appropriate. (The) Hague is enhancing its engagement with the private sector and met with Shell recently. Paris has regular meetings with Total ... London is also in regular contact with the private sector including meetings with Shell, BP and Royal Bank of Scotland as well as Canadian oil companies."

Lars Christian Bacher, president of Canadian operations for Statoil, told the press he conducted as many as 50 tours of the company's Leismer oil sands site in 2011, most of them for

European officials and media. Last November, Norway's energy minister, Ola Borten Moe, a one-time critic of the oil sands, visited the site and said he was impressed by industry efforts to improve its environmental record. "People see what it is and what it's all about, and sometimes what it's not all about. Then we can have a more factual-based debate around the dilemmas of oil sands, because we know that there are dilemmas," Bacher said. "But that's nothing different from any other kind of industrial activity."

The oil sands team also noted that Canadian Prime Minister Stephen Harper met Total's chief executive Christophe de Margerie during an official visit to Paris in June 2010. A spokesman for Harper said the two men had participated in a business roundtable but declined to give more details.

"The lobbying from Canada and from Alberta is quite impressive. They have been really active for the last few years, organizing lots of meetings and presentations," one European Union source told the press.

Yet for all the effort, Canada's campaign ran into two problems in late 2011. Firstly, the EU's executive Commission decided in October to ignore Canadian pressure and rule that tar sands crude was much dirtier than regular oil. Soon after, in December, Canada's Environment Minister Peter Kent abruptly announced that the country would pull out of the Kyoto Protocol, which is the first global attempt to slow carbon emissions and is much cherished in many parts of Europe. Canada said it had to withdraw from Kyoto to avoid being hit by penalties for failing to stick to targets for cutting greenhouse gas emissions.

Kent, a former television news anchor who was appointed environment minister in early 2011, immediately pushed the idea that "ethical oil" from Canada is far preferable to crude from OPEC nations with dubious human rights records. A message from Britain's high commission (embassy) in Ottawa on January 7, 2011 summarized Kent's message as: "it may be dirty oil, but at least it's not bloody oil".

That approach ended after Oliver, a sprightly former investment banker who will turn 72 soon, took over the Natural Resources portfolio last May. Oliver has told reporters that promoting the idea of ethical oil "wasn't my approach", and has instead hailed the benefits of oil sands to Canada's economy. He has branded environmentalists who oppose oil sands and pipeline projects "radicals" bent on limiting economic growth, and in April angered green groups by taking final decision-making powers on big projects away from regulators and handing them to his own government.

Last year, he sent a letter to European officials implying that if Europe pressed ahead with tagging tar sands dirtier, Canada would take its case to the World Trade Organization. Many in Brussels were livid. "You can't take Europe to court for treating oil sands correctly," said Sven-Olov Ericson, a senior energy official at Sweden's Ministry of Enterprise, Energy and Communications who has been lobbied by Canadian and industry officials.

Scientific experts from the EU's 27 member states finally gathered to vote on their tar sands proposal in February. But the group was divided: 12 nations voted for, eight against and seven - including heavyweights Germany, Britain and France - abstained. Because of complex voting procedures weighted to reflect population, the outcome was a stalemate. British officials said the desire to help Canada was offset by worries about tensions between members of the country's coalition government.

EU Climate Commissioner Connie Hedegaard, the most prominent champion of classifying oil sands as a heavy polluter, said that Ottawa's lobbying campaign had made her fear the proposal would be defeated altogether.

Canada has now demanded more research into the validity of the proposal. A letter sent by Oliver on March 22 to European ministers said Ottawa remained "firmly opposed" to the Commission's proposal because it made "an unfair distinction between crude from tar sands and other sources of crude".

Brussels says it will study the impacts of its proposal and won't decide anything until next year.

"When the world and these environmental groups are fundamentally opposed to something that is in the Canadian national interest, I believe that the government has an obligation to stand up and say, 'Hey you're wrong,'" TransCanada Chief Executive Russ Girling told the press in late 2011. Minister Oliver agrees. "We hear a lot from environmental groups, and that's fine, and we should hear from oil companies and from others who may be able to bring some facts to the table and who have interests," he said.

31. BP, EPA Reach Deal on Canada Crude at U.S. Refinery

BP Plc. has announced that it will spend $400 million to install pollution controls at its giant Whiting, Indiana refinery, to allow it to process heavy crude oil from Canada, in a deal with U.S. and state regulators. The consent decree reached with the U.S. Justice Department and Environmental Protection Agency also requires London-based BP to pay $8 million to resolve prior alleged clean-air violations at its 405,000-barrels-per-day plant, the sixth-largest U.S. refinery.

The deal, announced by the government and confirmed by BP, ends years of opposition that might have left BP unable to use $4 billion worth of new processing units being installed at Whiting that will allow it to run Canadian tar sands crude as early as 2013. BP has set plans to use Canadian crudes for more than 85 percent of the refinery's daily needs.

To boost profits, U.S. Midwest refiners are looking to retrofit plants to process plentiful supplies of Canadian heavy oil, which is cheaper but also has a higher content of pollutants that cause acid rain, smog and haze.

As part of the settlement, BP will install an estimated $400 million of pollution-control equipment at the refinery while finishing a crude slate expansion project.

The agreement between BP and EPA will set a precedent for refiners seeking to upgrade their refineries to run tar sands crude in the future, environmental groups said. "Generally, pollution control is supposed to be based on the best available technology, so this will be a benchmark," said Eric Schaeffer of the Environmental Integrity Project, a former enforcement official at the EPA.

The EPA has sought to reduce emissions at refineries, particularly from flaring devices that burn off unneeded petroleum supplies. In April the EPA reached a deal with Marathon Petroleum Corp to curtail flaring at its six U.S. refineries.

Essentially the conversion of the Whiting refinery to run Canadian crude is switching the refinery from light, sweet crude to heavy, sour crude, which many Gulf Coast refineries have already done to enable the use of Latin American crude grades.

Canadian tar sands crude has become highly desired as a feedstock for refiners because it is cheaper than other crude oil grades. It is easier to obtain for U.S. Midwest refiners because of its source in Alberta. Iain Conn, global head of BP's refining and marketing, said in March that the company had decided to make the investment in the Whiting refinery and put refineries in California and Texas up for sale because of the appeal of Canadian crude. "We are moving to a Northern Tier refining strategy," Conn said.

BP currently processes between 70,000 and 80,000 barrels per day (bpd) Canadian crude at the Whiting refinery. After the project is complete, the refinery will be able to run up to 350,000 bpd in tar sands crude.

Tar sands crude has drawn opposition from environmental groups because it has high levels of heavy metals, is corrosive and said to produce higher levels of air pollutants. The mining of tar sands crude, which is cut from pits in Alberta, and then refined into a liquid, is also said to produce high levels of greenhouse gases. Opposition to use of tar sands crude has temporarily halted TransCanada's Keystone XL pipeline project to bring the oil to refineries on the U.S. Gulf Coast.

32. 150,000 More US Heat Deaths Projected By 2100

Killer heat fueled by climate change could cause an additional 150,000 premature deaths this century in the biggest U.S. cities if no steps are taken to curb carbon emissions and improve emergency services, according to a new report. The three cities with the highest projected heat death tolls are Louisville, with an estimated 19,000 heat-related fatalities by 2099; Detroit, with 17,900, and Cleveland, with 16,600, the Natural Resources Defense Council found in its analysis of peer-reviewed data, released recently.

Concentrated populations of poor people without access to air conditioning are expected to contribute to the rising death tolls.

Thousands of additional heat deaths were also projected by century's end for Baltimore, Boston, Chicago, Columbus, Denver, Los Angeles, Minneapolis, Pittsburgh, Providence, St. Louis and Washington, D.C., the report said.

June, July and August are expected to see above-normal temperatures over most of the contiguous United States, from inland California to New Jersey, and from as far north as Idaho and Wyoming to Texas, Florida and the desert Southwest, the National Oceanic and Atmospheric Administration said in a May 17 forecast.

The last 12 months, from May 2011 to April 2012, were the warmest in the contiguous United States since modern record-keeping began; last month was the hottest April on record for the Northern Hemisphere.

These figures show climate change is already being powerfully felt, and more dangerously hot summer days are in prospect under a business-as-usual scenario, said Dan Lashof, director of NRDC's climate and clean air program.

NRDC, which with other environmental groups has pushed for curbs on U.S. emissions of heat-trapping carbon dioxide, is backing a plan by the U.S. Environmental Protection Agency to limit carbon emissions from new U.S. power plants. The EPA is holding public hearings on the dangers of carbon pollution from power plants. The EPA's plan is unlikely to go into effect until after this year's election campaign.

The deadliest days are those designated Excessive Heat Events (EHEs), often in urban areas where air conditioning is scarce or unreliable, with sizable poor populations and municipal services unprepared for large numbers of people sickened by the heat, Larry Kalkstein, a University of Miami professor who wrote two studies on the subject. One was published in the American Meteorological Society's journal Weather, Climate and Society; the other in the journal Natural Hazards. Both were peer-reviewed.

There could be five times the number of Excessive Heat Event days by mid-century and eight times that number by the end of the century, Kalkstein said in a telephone briefing. The current average number of EHEs per year is 233; by mid-century it could be 1,342, and by 2100, it could be 1,913.

The most disastrous heat waves, like the one that killed more than 700 people in the Chicago area in 1995, come when high heat lasts beyond two days in urban areas without plans to reach the most vulnerable populations: the elderly, the obese and those on medication. Kalkstein praised Chicago for improving its heat warning system, emergency services and cooling centers since then. He also said Philadelphia and Seattle had put measures in place to lessen the risk from excessive heat days.

The studies considered cities because that is where two-thirds of the U.S. population lives, Lashof said. There is some evidence that heat deaths in rural areas will also rise, but that is harder to document, he said.

33. Sen. Murkowski's Fresh Energy Plan to Look Beyond 2012

Frustrated by the gridlock that has stalled Congress leading into the 2012 presidential elections in November, the top Republican on the Senate Energy Committee is drafting what she hopes is a fresh look at the big-picture energy policy. Details are still under wraps, but Senator Lisa Murkowski plans to unveil this summer a long-term vision with affordable energy at its core, a plan she has been working on with her staff for the past eight months.

"I want to get out front early next year and move on some energy issues. I think we're well overdue for some real energy proposals that can give us some good clear guidance," Murkowski told reporters.

Murkowski, 55, relishes the prospect of setting the agenda on energy policy. She is in line to be chairman of the energy committee if Democrats lose control of the U.S. Senate, where they currently hold 53 of 100 seats.

She said her plan could eventually lead to several legislative initiatives, and will cover everything from increasing oil and gas production to improving energy efficiency to updating the transmission and storage grid. It also aims to reduce the uncertainty in short-term incentives aimed at increasing wind and solar power, she said.

Ultimately, Murkowski believes that energy policy requires a holistic approach and she hopes her plan will act as a guiding document for action next year.

"I think you need to understand it in its totality, so I'd like to be able to present it that way," Murkowski said.

It's no surprise that Murkowski, who represents Alaska, wants to see more oil and gas production. Her state has long been the second-largest oil producer in the nation, so headlines earlier this month that put North Dakota's oil production ahead of Alaska's had Murkowski beside herself. "It drives me crazy," she said, noting the state could produce more were it not for federal blocks to drilling onshore in the Arctic National Wildlife Refuge and offshore in the Arctic. "I wanted to fly back home and say, 'Get on the move everybody! We just lost!'" she said.

An effort that may help Alaska reclaim its old spot in energy production is Royal Dutch Shell's long stymied bid to tap the vast resources off Alaska's coasts. After years of regulatory and legal delays, the oil giant is just a few permits away from beginning exploratory drilling in the Beaufort and Chukchi seas this summer.

"It's clearly a frustration that it's taken years and billions of dollars," Murkowski said. "We're not there yet, but we are on the cusp."

While lamenting the amount of time it has taken to get to this point, Murkowski said the Obama administration does deserve some recognition for its role in bringing Shell closer to the finish line in the Arctic. In particular, Murkowski credited Interior Deputy Secretary David Hayes, who leads the interagency group on Arctic energy development, with helping to bring some order to the patchwork of regulations governing Arctic offshore drilling. "I think he has made a concerted effort to try to provide for as best a process that can come together, when you have an administration that I believe has some real qualms about the commitment in the Arctic," Murkowski said.

Shell hopes to drill up to six wells off the coast of Alaska over the next two summers.

If Republicans do not take control of the Senate, the chamber's energy panel will likely be headed by Senator Ron Wyden of Oregon. Murkowski has been working to build a close relationship with Wyden, traveling to Oregon with him to visit a hydro-plant and opening a dialogue between their staffs. That working relationship could come in handy as Murkowski works to implement her long-term energy strategy. To develop her vision, staff pored over the energy policies espoused by U.S. presidents from Nixon onward.

Opening ANWR to drilling has long been a top goal of Republicans and Alaskan Murkowski will almost certainly include the refuge in her plans, but by tying some of the federal revenue from the drilling to support for renewable energy, the senator hopes to gain more backing.

Facing criticism that it has been too tough on oil and gas producers, the Obama administration has recently been reaching out more to industry and touting its oil and gas credentials. Still, the rapid growth in energy production on private and state lands has not been matched on the federal level, Murkowski said. "I think that to a certain extent the administration is talking the good talk about increased domestic production and valuing that, but we're not seeing that translate on federal lands," Murkowski said.

34. New Production Facilities Spotlight Next-Generation Biofuels

After a decade (or more) of promise, advanced biofuels makers are entering a crucial make-or-break period with the first of a new generation of production facilities about to come on line. The new facilities are designed to take biofuels beyond corn-based ethanol and begin to shift the industry to "advanced" fuels made with a lower carbon footprint derived from products that will not compete with demand for food. Many of the companies are turning to cellulosic plant materials, animal waste and plant oils to churn out millions of gallons of ethanol, diesel, jet fuel or components for gasoline.

Driving the industry are U.S. government targets stretching out a decade that call for fuel suppliers to blend billions of gallons of the new biofuels into the U.S. gasoline and diesel pools, on top of the corn ethanol that already makes up about 10 percent of the gasoline market. The targets have helped biofuel companies develop strategies and lay out expansion plans, but they do not rely on the tax incentives or subsidies that helped the solar and wind industries.

But even with the growth and new investments, investors will likely have to wait for the technology to prove itself over the coming years before receiving big payoffs.

Among the most anticipated of the new production plants is KiOR Inc.'s Columbus, Mississippi, facility. The company expects to begin production in the second half of 2012 and turn wood products into components, or blendstocks that can be used in gasoline and diesel fuel. The KiOR plant will process farmed Southern Yellow Pine trees at the equivalent of about $25 per barrel of oil, or about one-quarter the price U.S. crude oil.

Nearly 400 million gallons of new biofuels production is expected to go on line this year in the United States, according to data compiled by industry publication Biofuels Digest. Another 1.7 billion gallons of additional capacity is forecast to start up from the beginning of 2013 through 2015, bringing total capacity to nearly 2.3 billion gallons.

Among others under construction are Altair's Washington plant, which will produce jet fuel from carmelina, an oily flowering plant; and Diamond Green's facility in Louisiana, which will convert animal fat and used cooking oil into diesel fuel under a joint venture with refiner Valero Energy Corp.

Many of the nascent biofuels companies have been working for years to develop technology that can cheaply turn cellulosic sugars or waste materials into energy and have even attracted investment from the world's top oil companies. Those advances have come in several areas. Researchers have developed new biochemical catalysts to break down tough cellulosic material, used new techniques to turn solid materials into gas and created advanced 'hydroprocessing' refining methods to break heavy hydrocarbons into lighter, more easily burned fuels.

BP Plc., Royal Dutch Shell, Chevron Corp and Total SA have all taken stakes in companies that focus on a wide variety of fuels from traditional sugar cane ethanol to gasoline and diesel. Still other companies, including Gevo Inc and Butamax, a joint venture of BP Plc. and DuPont, are building plants to produce biobutanol from corn starches or other agricultural products to produce 'drop-in' components for gasoline or chemicals with higher energy content than traditional ethanol.

Gevo, which is locked in a patent lawsuit with Butamax, expects to start up a converted ethanol plant next month that will produce butanol using corn cellulose as a feedstock. It expects to shift to materials such as switch grass, waste wood products or agricultural by-products such as corn cobs and stalks and sugarcane bagasse in the future.

Authorized under the 2007 Energy Independence and Security Act, the Environmental Protection Agency's Renewable Fuel Standard 2 calls for 21 billion gallons of advanced biofuels to be delivered annually by 2022, on top of a target of 15 billion gallons of corn-based ethanol. The advanced biofuels target could be reduced if producers fail to bring adequate production on line and oil industry lobby group the American Petroleum Institute has already filed a lawsuit challenging the goal as unrealistically high.

Companies that are required under the EPA rules to buy biofuels to meet the target can instead purchase credits based on actual volumes produced through the Renewable Identification Number system, or RINs. While not a direct subsidy, those RINs can be worth between about $2 to $5 per gallon for biofuel producers, although the RIN market remains in its infancy.

A separate $1.01 gallon subsidy for cellulosic biofuels is set to expire at the end of this year and industry experts do not expect the U.S. Congress to extend that incentive. So far, its impact has been modest because fuels that would qualify for it have only been produced in low volumes.

With a capacity of 62.5 million gallons per year, KiOR's $222 million Columbus plant will be the largest of its kind in the United States and is expected to produce fuel at about $1.10 per gallon, well below the current NYMEX wholesale gasoline price of nearly $3 per gallon. KiOR has already sold the planned output from the plant to Hunt Refining, FedEx Corp and Catchlight Energy, a joint venture between Chevron and forest products company Weyerhaeuser Co.

KiOR and others such as Codexis Inc, Amyris Inc, Solazyme Inc and Renewable Energy Group Inc have all successfully tapped into the public markets, although their shares have all fallen below their launch prices.

Given the diverse slate of fuels, feedstocks and company strategies in the industry, investors may need to be patient to see which companies emerge as the best in the sector.

Canadian-based Enerkem's move to pull its planned $138 million IPO showed that Wall Street may be growing wary of pouring new money into the sector. Investors viewed Enerkem's municipal solid waste-to-biofuels technology as too risky because it has never been shown to work in large quantities and the company forecast its losses would grow as it sought to build production plants.

Enerkem said in its filings that it planned to make bioethanol at $1.50 to $1.70 per gallon, although analysts feared the company's cheap waste feedstocks could grow scarce if competitors emerged.

Still, several other companies have filed with the U.S. Securities and Exchange Commission for public stock offerings, including Genomatica, Myriant, Mascoma Corp, Coskata, Fulcrum Bioenergy, BioAmber and Elevance Renewable Sciences Inc.

Mascoma, which has received financial backing from Valero Energy, Marathon Oil Corp and a General Motors Co investment fund, has said it was targeting operating costs of $1.77 per gallon for ethanol produced from hardwood.

Coskata, backed by France's Total, expects a commercial plant in Alabama to produce fuel-grade cellulosic ethanol from softwood at an unsubsidized operating cost of less than $1.50 per gallon.

Crucial to making the fuels economic is securing an ample, economic stream of feedstocks that can be cheaply turned into fuel. Renewable Energy Group, whose shares debuted in January, produces biodiesel from animal, plant oil and recycled restaurant oils, says feedstocks have typically been between 85 to 90 percent of the cost of producing the fuel. The company has about 210 million gallons of capacity and has more than 100 suppliers for its feedstock.

Even with the growth expected over the next few years, many industry executives are wary of promising an energy revolution that could lead to unrealistic expectations.

35. EPA Questioned on Not Providing For Comment on Diesel Nonconformance Rule

On May 14th, a federal judge pressed the Environmental Protection Agency as to why it did not provide for notice and comment on an interim final rule that allows Navistar Inc. to produce certain heavy-duty diesel engines that exceed nitrogen oxides limits if it pays nonconformance penalties (Mack Trucks Inc. v. EPA, D.C. Cir., No. 12-1077, oral arguments 5/14/12). The agency maintains that it did not have to provide notice and comment, based on the “good cause” exception in the Administrative Procedure Act, Michele Walter, a Justice Department attorney representing EPA, told the U.S. Court of Appeals for the District of Columbia Circuit during oral arguments. The exception applies if notice and comment is impracticable, unnecessary, or contrary to the public interest. EPA has said all three criteria apply.

Walter also argued that EPA only had to solicit comment when it originally set forth the generic formula for determining nonconformance penalties, not for the specific rules promulgating penalties.

Chief Judge David Sentelle said it appears EPA did not provide notice and comment, and several times during oral arguments he pressed Walter on EPA's reasoning for not providing it.

Christopher Handman, an attorney with Hogan Lovells arguing on behalf of truck and engine makers that compete with Navistar and are challenging the rule, said a “good cause” exception to notice and comment would not be appropriate to benefit one manufacturer that waited until the last minute to tell EPA it was running out of the emissions credits it needed to continue producing its engines. Handman also countered EPA's argument that it already had accepted comment on the generic nonconformance penalty formula, saying the formula has changed, and notice and comment are required.

EPA issued the interim final rule on January 31 because Navistar was running out of emissions credits that allow it to produce certain heavy-duty diesel engines in model years 2012 and 2013 that exceed the nitrogen oxides emissions standard of 0.20 gram of nitrogen oxides per horsepower-hour. Walter said EPA chose to issue an interim final rule because a traditional rulemaking process would have taken six to nine months, during which time Navistar would have run out of emissions credits. Walter said EPA was faced with “very unique circumstances.” The interim final rule was effective immediately.

The interim final rule requires Navistar to pay nonconformance penalties, which are meant to alleviate concerns that manufacturers would be forced out of the marketplace if they cannot meet emissions standards based in part on technological issues. The penalties are based partly on money that nonconforming manufacturers save during production, which ensures that conforming manufacturers are not at a competitive disadvantage.

Navistar controls nitrogen oxides emissions from its engines with exhaust gas recirculation technology, which cleans emissions within the engine. Its competitors use liquid, urea-based selective catalyst reduction technology, which requires drivers regularly to refill a container with a fluid that reduces nitrogen oxides.

Navistar's competitors that are challenging the interim final rule are Mack Trucks Inc., Volvo Group North America LLC, Daimler Trucks North America LLC, Detroit Diesel Corp., and Cummins Inc.

36. Former Ambassadors Cite Foreign Policy Impacts From Oil Imports

More decisive action is needed to reduce US reliance on imported crude oil, which pushed the foreign trade deficit past $500 billion in 2011 to unsustainable levels, Securing America's Future Energy (SAFE) said in the first study by its new Diplomatic Council on Energy Security. "Although the prospects of rising US oil production are substantially more positive than just a few years ago, and net oil import volumes are forecast to decline as a consequence, projected expenditures on these imports are nevertheless projected to increase in real terms due to higher average oil prices," it said.

Transportation remains the primary demand reduction focal point, with new policies needed in vehicle efficiency, alternative fuels, and infrastructure, according to the study, "Oil and the Trade Deficit: Rising Energy Expenditures and US Energy Security." It said, "Widespread and growing road congestion across the United States will continue to undermine the potential gains attributable to increase vehicle efficiency and the expanded use of alternative fuels. Policies to create more stable road speed conditions are a crucial facilitator of lower sectoral oil consumption. Oil use must become a key metric by which transportation infrastructure program and project-level decisions are made."

Successfully addressing the growing US trade deficit's challenges will be a difficult and critical undertaking with reducing foreign oil dependence an important element, the study said. "In addition to helping make a meaningful improvement in the nation's trade deficit, success in this area will more broadly strengthen US energy security," it noted. "The nation must accelerate its efforts."

SAFE released the study as it formally launched DCES, which it formed to highlight foreign policy constraints caused by US dependence on foreign crude. The council's 24 ambassadors bring a diplomatic perspective to SAFE's mission to improve US energy security by reducing US reliance on foreign oil which also is promoted through the business and retired military leaders on its Energy Security Leadership Council.

Heavy dependence on foreign crude has made the US deploy armed forces to protect supply lines and forced the country to make alliances with politically unstable governments, observed Alfred Hoffman Jr., the 2005-07 US ambassador to Portugal and DCES's co-chair. "There is no question that recent geopolitical tensions in the Middle East have affected the cost of oil," he said at an event to launch the council and release its first report.

Elizabeth Frawley Bagley, 1994-97 US ambassador to Portugal and DCES's other co-chair, noted that as recently as 2002, the annual US trade deficit in petroleum was less than $100 billion and its contribution to the total foreign trade deficit was less than 25%. When crude prices peaked at $145/bbl in July 2008, oil's share of the total US foreign trade deficit had reached 45%, she continued.

"Progressively higher oil prices have, in fact, increased the total cost of the net US oil import burden in recent years, even as import volumes have declined," Bagley said. "As a result, the United States has run an aggregate deficit in petroleum of more than $1.5 trillion since 2007."

Other former US diplomats also warned that excessive reliance on imported crude can skew US foreign policy. C. Boyden Gray, 2005-06 ambassador to the European Union, also served as special envoy to the EU for EurAsian energy affairs and worked to encourage construction of a crude oil pipeline from Azerbaijan to the Mediterranean Sea as an alternative to Russian routes. "Europe's energy security problem is Russia," he said. "Ours is [the Organization of Petroleum Exporting Countries]." Gray said one major US energy policymaking problem is a failure to differentiate between electricity and transportation alternatives. "The wind turbines and solar collectors we build are great for addressing climate change, but have absolutely no impact on transportation, which is where the real problem with imported oil lies," he observed.

"America's economic security is at stake," maintained Christopher Burnham, 2005-06 United Nations undersecretary general. "As things continue to unravel in the Middle East, there will be a dramatic rise in oil costs…. Our foreign policy is held hostage to our need to protect oil supply lines. If we're going to lead with moral authority, we're going to have to change this. The shale energy revolution could help."

Timothy A. Chorba, 1994-97 ambassador to Singapore, said tremendous economic growth in Asia and the emergence of a new middle class has created an energy demand surge. This year, more cars will be manufactured and sold in China than in the US, he indicated.

Countries are staking overlapping territorial claims to potential resources beneath the South China Sea, ironically creating the greatest regional tension over resources which haven't been explored, he continued. Disputes have erupted involving China, Vietnam, Malaysia, Indonesia, Taiwan, and the Philippines, with India having recently entered the picture with plans to work with Vietnam to drill a well, much to China's consternation, Chorba said.

"The reason there has never been a comprehensive solution is that democracies act in political, predictable ways," said Thomas L. Siebert, 1994-98 ambassador to Sweden. "It's very tough to break away from oil's protected position in the US House and Senate. Yet we need to reduce the extraordinary cost to our foreign and economic security in having to protect overseas oil supplies. Shale oil discoveries in this country hold significant promise. So does growing gas production from the Marcellus and other shales."

37. US EPA Proposes Emergency Vehicle and SCR Maintenance Rule

The US EPA has proposed two amendments to the heavy- duty diesel engines emission rule:

1. relief is granted for emergency vehicles, such as fire trucks and ambulances, so the vehicles no longer face power disruptions related to diesel emission aftertreatment systems, and
2. SCR fluid replenishment requirements (previously approved on a case-by-case basis) will be added to the regulation.

For emergency vehicles, the proposed revisions allow manufacturers to request and EPA to approve modifications to emissions control systems on new and in-use emergency vehicles so they can be operated without reduced performance (due to, for example, a particulate filter regeneration) during emergency situations. For new certifications, these improved controls or settings would be approved as auxiliary emission control devices (AECD). For in-use vehicles, manufacturers would be allowed to submit requests for EPA approval of Emergency Vehicle Field Modifications.

The proposal also provides a short-term relief from emission standards for nonroad engines when the equipment is needed to respond to an emergency such as a flood or hurricane, so that any pre-set emissions or engine protection measures do not prevent the equipment from performing life-saving work. Manufacturers would be allowed to request and EPA to approve AECDs as part of the engine certification process. This flexibility is intended primarily for new engines used for power generation or in construction equipment.

Under the proposed SCR maintenance provisions, a fluid refill interval equal to the scheduled oil change interval would be set for light-duty vehicles and light-duty trucks. For centrally-fueled heavy-duty vocational vehicles (such as dump trucks, concrete mixers, and refuse trucks), the fluid refill interval would be at least as far (in miles or hours) as the vehicle's fuel capacity. For all other vehicles that use SCR, the fluid refill interval must provide a range of vehicle operation that is no less than twice the range of vehicle's fuel capacity. Finally, for SCR equipped nonroad diesel engines, EPA is proposing a fluid refill interval at least as far (in miles or hours) as the vehicle's fuel capacity.

The amendments have been published as a Notice of Proposed Rulemaking. The emergency vehicle provisions are also published as a Direct Final Rule (i.e., emergency vehicle provisions that do not receive adverse comment will become final 60 days from publication in the Federal Register).

38. MECA Releases Diesel Retrofit Sales Figures For 2011

The Manufacturers of Emission Controls Association (MECA) released the results of its survey of diesel retrofit devices sold by MECA member companies in 2011. The total number of US EPA and/or California ARB-verified diesel retrofit devices for both on road and off-road diesel engines sold in the United States (including California) was 20,177.

Of this total, 57% (11,506) were diesel particulate filters (DPF), including both passively and actively regenerated filters; 23% (4,663) were diesel oxidation catalysts (DOC); and 4% (881) were particle oxidation catalysts (POC), also referred to as flow-through filters. The above total also includes 3,127 closed-crankcase filters. In California, 7,558 diesel retrofit devices were sold, of which 89% (6,729) were DPFs and 11% (805) were POCs. Sector-wise, in the USA (including California), 17,506 diesel retrofit devices were sold for on-road diesel engines and 2,671 for off-road diesel engines.

Compared to previous years, the number of diesel retrofit systems sold in the United States continued to decline. MECA member companies sold 29,180 diesel retrofit devices in 2009 and 24,640 in 2010. The total number of DPF systems has increased slightly since 2009 (outside of California: 3,329 in 2009, 4,428 in 2010, and 4,777 in 2011; in California: 4,962 in 2009, 5,745 in 2010, and 6,729 in 2011). For DOCs, the total US sales have decreased significantly (11,906 in 2009, 9,926 in 2010, and 4,663 in 2011).

The decline in retrofit sales since 2009, especially for DOCs, is most likely due to the decrease in federal funding for clean diesel projects over the same time period, as well as the recent trend of funding being spent more on projects that use engine repowers and/or vehicle replacements rather than retrofit devices, said MECA. DPF sales, although increasing slightly, were expected to be much higher in 2011, especially in California due to the requirements of ARB's in-use truck and bus regulation--ARB projected that up to 100,000 retrofit DPFs could be installed over the 2011-2014 timeframe to comply with the regulation. In addition, ARB's in-use off-road diesel vehicle regulation was expected to generate further demand for DPFs, but amendments to the regulation approved in December 2010 meant to give fleets more time to comply due to the economic recession continue to depress the retrofit market opportunity for off-road diesel engines in the state.

39. EPA Releases Guidance on North American Fuel Availability for Ships

The U.S. Environmental Protection Agency released interim guidance for ship owners and operators clarifying how the U.S. government will implement fuel availability provisions when ships are unable to obtain fuel that meets standards protecting against sulfur pollution along the coast. The International Maritime Organization (IMO) has officially designated waters off of the coast of North America, known as the North American Emission Control Area (North American ECA), as areas where stringent international pollution standards apply for ships, including fuel sulfur limits. The guidance provides background information on the North American ECA fuel sulfur standards, explains how owners and operators of vessels can establish compliance with these requirements, and describes how an owner or operator of a vessel who cannot obtain compliant fuel oil can make a fuel oil non-availability claim.

The International Convention for the Prevention of Pollution from Ships (MARPOL) is a treaty designed to minimize pollution on the seas including dumping waste, oil, and exhaust pollution. MARPOL Annex VI sets out air emissions standards, including fuel sulfur limits, for ships. The United States implemented Annex VI in 2008 when Congress amended the Act to Prevent Pollution from Ships (APPS).

Annex VI requires ships operating in designated geographical areas, the ECAs, to meet the most advanced standards for fuel sulfur and other pollutants. The North American ECA will come into force on August 1, 2012. At that time, the maximum sulfur content of fuel oil used by ships in the ECA will be limited to 1.00 percent (10,000 ppm). This standard will change on January 1, 2015, to 0.10 percent m/m (1,000 ppm).

Compliance with both the Annex VI air emissions standards for ships and the Clean Air Act standards applicable to U.S. ships are expected to reduce the annual emissions of sulfur oxides by 1.3 million tons by 2030.

40. EPA Wins Sweeping Victory in Appeals Court Ruling Upholding GHG Rules

EPA has a won a sweeping victory in a federal appeals court ruling upholding all of the agency's greenhouse gas (GHG) vehicle and permitting rules from challenges to the policies, a decision which may give EPA a boost in its push to regulate GHGs under the Clean Air Act but could be appealed to the Supreme Court.

The U.S. Court of Appeals for the District of Columbia Circuit's unsigned per curiam June 26th opinion says EPA's finding that GHGs endanger public health and welfare, and a rule stemming from the finding to limit passenger car GHGs, “are neither arbitrary nor capricious” as industry, some states and other climate rule critics claimed. That marks a major win for EPA, as the endangerment finding underpins the agency's entire GHG regulatory program.

The court in Coalition for Responsible Regulation, et al. v. EPA et al., also rejected all challenges to the agency's “tailoring” rule establishing GHG permitting thresholds and a “timing” rule that EPA relied on to set the effective date of the GHG permitting program, after finding the plaintiffs could not prove they were injured because the rules are designed to reduce the number of sources subject to permits.

The timing and tailoring rules were seen as the most legally vulnerable after EPA raised thresholds established in the air law, set at 100 or 250 tons per year (tpy) for triggering air permits, up to 100,000 tpy for initial GHG permits. EPA defended the move by saying the 100/250 tpy threshold is too low for GHGs and would have resulted in “absurd results” by triggering GHG permits for millions of sources Congress never intended EPA to regulate.

Some observers predicted the court could scrap the tailoring and timing rules because the three-judge panel that heard oral arguments in the case on February 28th and 29th – Chief Judge David Sentelle, Judge David Tatel and Judge Judith Rogers -- appeared most skeptical of EPA's reliance on non-statutory doctrines to defend them.

But in the order, the court did not reject EPA's use of the absurd results or other doctrines the agency relied on in developing the permitting rules, including an “administrative necessity” claim in which EPA argued that the 100/250 tpy threshold would trigger so many GHG permits it would overload permitting agencies, and a “one-step-at-a-time” doctrine that EPA relied on to start with the largest sources.

The court did not address the merits of the tailoring or timing rules, instead finding that it lacked jurisdiction to rule on the merits because petitioners did not satisfy procedural requirements to demonstrate standing. “As an initial matter, we note that petitioners fail to make any real arguments against the timing rule,” the court says.

Additionally, the court in rejecting industry alternatives to the endangerment finding wrote “industry petitioners' greenhouse gas-exclusive interpretation of 'pollutant' is a 'plainly unreasonable reading' of the statute,” citing the 2007 Supreme Court ruling in Massachusetts v. EPA that initially held that EPA has Clean Air Act authority to regulate the gases.

The court concludes, “[W]e dismiss all petitions for review of the timing and tailoring rules, and deny the remainder of the petitions.”

The per curiam order means at least two of the three judges on the panel support it but that none signed it. There is no dissenting opinion, so it could mean that all three judges wrote different parts of the order. During oral arguments, the judges had indicated they preferred to reach a unanimous decision due to likelihood of appeal to the Supreme Court by opponents of EPA's climate rules.

EPA Administrator Lisa P. Jackson said the decision was a strong validation of, in the court’s own words, the “unambiguously correct” approach the agency took in response to the Supreme Court’s 2007 decision. “I am pleased that the [court] found that EPA followed both the science and the law in taking commonsense, reasonable actions to address the very real threat of climate change by limiting greenhouse gas pollution from the largest sources,” she said in a statement.

Two key congressional Democrats from California applauded the decision. Barbara Boxer, who chairs the Senate Environment and Public Works Committee, said it was a big victory for the American people's health. Henry A. Waxman, the House Energy and Commerce Committee's ranking minority member, said it was "a message to Congress that it's time to stop denying science."

41. EPA To Tighten National Soot Standards

In response to a court order, the U.S. Environmental Protection Agency (EPA) has proposed updates to its national air quality standards for harmful fine particle pollution, including soot (known as PM2.5). These microscopic particles can penetrate deep into the lungs and have been linked to a wide range of serious health effects, including premature death, heart attacks, and strokes, as well as acute bronchitis and aggravated asthma among children. A federal court ruling required EPA to update the standard based on best available science. EPA's proposal, which meets that requirement, builds on smart steps already taken by the EPA to slash dangerous pollution in communities across the country. Thanks to these steps, 99 percent of U.S. counties are projected to meet the proposed standard without any additional action.

The Environmental Protection Agency proposal could help deliver major health benefits by the end of the decade but force some oil refiners, manufacturers and other operations to invest in pollution abatement upgrades. Particle pollution measuring less than 2.5 micrometers in diameter is possibly the most deadly widespread air pollutant. Measuring one-thirtieth the width of a human hair, these particles come from activities ranging from wood burning to vehicle emissions and can cause respiratory and heart ailments by entering the lungs and bloodstream.

Facing a court-ordered deadline, the EPA proposed tightening the annual exposure to fine-particle soot from 15 micrograms per cubic meter of air to between 12 and 13 micrograms per cubic meter of air. Industry officials and environmentalists said the proposal, which will be finalized by mid-December, would have far-reaching implications for both the U.S. economy and public health.

The question of how to set an acceptable level of soot exposure has been the subject of political and legal wrangling for years. In 2006 the Bush administration rejected the advice of its Clean Air Scientific Advisory Committee to make the annual standard more stringent and kept it at 15 micrograms per cubic meter, although it strengthened the 24-hour standard from 65 to 35 micrograms. Thirteen states and several environmental groups challenged the 2006 standards in court, and in 2009 a federal appeals court ordered the EPA to rewrite the rule.

The EPA's staff and the Clean Air Scientific Advisory Committee, an independent group of experts, concluded that there is enough scientific evidence to lower annual average soot exposure to between 11 and 13 micrograms per cubic meter.

On June 6 Judge Robert Wilkins of the U.S. District Court for the District of Columbia ordered the EPA to issue its proposed rule by June 14.

Once a rule is finalized, the EPA must determine how many counties across the country will be out of attainment with the new soot standards, and those communities must eventually cut down on pollution or risk losing federal funds.

Jonathan M. Samet, a pulmonary physician who directs the University of Southern California Institute for Global Health and chairs the EPA's independent scientific advisory panel, said the scientific literature suggests there are adverse health effects from soot pollution "at the higher end of levels" that some Americans are exposed to right now, and the EPA administrator must adopt rules that ensure "an adequate margin of safety."

When looking at the causes of premature death in the United States, Samet added, "Particulate matter would be at the top of the list."

Gina McCarthy, EPA assistant administrator for air and radiation, said the agency would collect comment from the public as well as stakeholders to "determine the appropriate final standard." McCarthy said counties wouldn't have to comply with the new rule until 2020.

The EPA said 99 percent of U.S. counties are projected to meet the proposed standard without any additional action beyond what current and proposed clean-air rules require. Some of the proposed rules face court challenges. San Bernardino and Riverside counties in Southern California won't meet the 13 micrograms standard by 2020, and four additional counties, in Alabama, Arizona, Michigan and Montana, won't meet the lower 12 microgram standard, according to projections from the EPA.

The proposed changes, which are consistent with the advice from the agency's independent science advisors, are based on an extensive body of scientific evidence that includes thousands of studies – including many large studies which show negative health impacts at lower levels than previously understood. By proposing a range, the agency will collect input from the public as well as a number of stakeholders, including industry and public health groups, to help determine the most appropriate final standard to protect public health. It is important to note that the proposal has zero effect on the existing daily standard for fine particles or the existing daily standard for coarse particles (PM10), both of which would remain unchanged.

Meanwhile, because reductions in fine particle pollution have direct health benefits including decreased mortality rates, fewer incidents of heart attacks, strokes, and childhood asthma, these standards have major economic benefits with comparatively low costs. Depending on the final level of the standard, estimated benefits will range from $88 million a year, with estimated costs of implementation as low as $2.9 million, to $5.9 billion in annual benefits with a cost of $69 million – a return ranging from $30 to $86 for every dollar invested in pollution control. While EPA cannot consider costs in selecting a standard under the Clean Air Act, those costs are estimated as part of the careful analysis undertaken for all significant regulations, as required by Executive Order 13563 issued by President Obama in January 2011.

The move was welcomed by environmental groups, an important part of President Barack Obama's base of support. But it will give more fuel to Republicans who have staged sharp attacks on the EPA as the November 6 presidential and congressional elections draw nearer.

42. EPA Rejects Advisers' Call to Strengthen Adverse Health Finding On Ozone

EPA's latest draft review of the adverse health impacts from ozone rejects calls by the agency's advisers to conclude a "likely" causal link between cardiovascular effects and ozone exposure, instead retaining a softer "suggestive" causal relationship.

A closer connection between short-term ozone effects and cardiovascular impacts could in turn warrant EPA setting a stricter national ambient air quality standard (NAAQS) for ozone, because under the Clean Air Act the agency can only consider science on health effects -- and not other factors, such as costs -- in setting NAAQS.

In the third external review draft of EPA's Integrated Science Assessment (ISA) of ozone and related photochemical oxidants released June 19, the agency says, "The limited evidence is highly suggestive that [ozone (O3)] directly and/or indirectly contributes to cardiovascular-related morbidity, but much remains to be done to more fully substantiate the association."

EPA's Clean Air Scientific Advisory Committee (CASAC) has said that epidemiological studies of short-term ozone exposure support upgrading the causal determination for cardiovascular effects from "suggestive of a causal relationship" to "likely" to be a causal relationship, which would strengthen the link between the two. In a March 13 letter on the second ISA, CASAC said "the evidence from toxicological, human clinical, and 18 epidemiological studies of short-term ozone exposure all support upgrading the causal determination for cardiovascular effects from 'suggestive of a causal relationship' to 'likely to be causal relationship.' Moreover, this classification would be consistent with the 'likely to be causal relationship' determination for cardiovascular-related mortality."

EPA and others agree that short-term ozone exposures can cause respiratory problems, but the agency has so far said there is "limited evidence" of cardiovascular problems. Nor has EPA indicated that chronic exposures can result in either respiratory or cardiovascular harms or that exposure increases mortality risks.

EPA is currently reviewing science on ozone ahead of proposing a revision to the NAAQS, currently set at 75 parts per billion (ppb). The proposal had been due in 2013, but that target date will likely slip to 2014 due to the time taken by EPA to make changes to the ISA in response to earlier recommendations by CASAC.

Activists and some states are pushing for EPA to tighten the limit to at least 70 ppb, which was the standard EPA had been pursuing in a proposed revision to the NAAQS last year. At the time, EPA said the Bush EPA's 2008 limit of 75 ppb was too weak and at odds with CASAC's call for a 60-70 ppb standard. As a result, the agency initiated a rare discretionary revision to the standard, and was close to issuing a final rule last year.

However, President Obama forced EPA to scrap the 70 ppb rule, citing a need for regulatory certainty. Obama noted that EPA under the Clean Air Act is required to review the NAAQS every five years -- meaning a mandatory revision is due in 2013, and citing that mandate as a basis for scrapping the discretionary rule.

The Health Effects Institute (HEI), Oregon Health and Science University and others are looking at the issue, given what HEI has said is neglect of the issue by researchers who have long focused on respiratory illnesses. "However, several recent epidemiological studies that included assessment of associates with specific causes of death have reported larger associations between ambient exposures to [ozone] and cardiovascular mortality than respiratory mortality," according to an abstract of a planned HEI study, which will investigate whether short-term exposure of elderly volunteers to ambient ozone in a controlled exposure setting induces acute cardiovascular responses.

43. A123 Says New Battery Technology to Make EVs Cheaper

A123 Systems Inc said it has developed a new technology that allows lithium ion batteries to function in extreme temperatures, eliminating the need for separate heating and cooling systems and potentially making electric vehicles (EVs) cheaper. The development of Nanophosphate EXT, as the technology is called, could potentially increase the adoption of the struggling company's rechargeable batteries, analysts said.

Shares of the company shot up 61 percent to $1.67 on the NASDAQ following the announcement.

A123 said the ability to work in a wider range of temperatures and the lower costs will create new opportunities for its products in the transportation and telecommunications markets.

The high cost of lithium ion batteries has held back their large-scale adoption. The heating or cooling systems account for 10 to 20 percent of the total cost of the lithium ion battery, said Stifel Nicolaus analyst Jeff Osborne, citing the Electric Power Research Institute.

The company's announcement comes just days after it said there was "substantial doubt" about its viability as a business and warned of steep losses due to the recall of defective batteries.

A123, which developed as a start-up at the Massachusetts Institute of Technology, makes the battery for Fisker Karma, the BMW hybrid 3- and 5-Series cars and GM's all-electric Chevy Spark due in 2013.

The company plans to begin production of batteries based on the new technology in the first of half of 2013.

Though the new technology was a positive for the company, its financial position continued to be a cause for concern, said Needham analyst Michael Lew. "They have to sell more products. And they cannot afford to stumble again, like the quality issues in the past," Lew said.

Stifel analyst Osborne said the company will need to raise an additional $75 million by the fourth quarter of 2012 and another $200 million in 2013 to fund its ongoing operations. "Funding remains the biggest risk to A123's equity," said Osborne.

A123 stock is down about 96 percent from the $28 range it used to trade at in 2009. That year, A123 was given a $249 million grant by the Obama administration, and it went public.

44. Mexico Plans Fuel Economy Standard for Cars, Light-Duty Trucks as of 2016

Mexico plans to issue a fuel economy regulation for new cars and light-duty trucks later this year that is expected to prevent some 160 million tons of carbon dioxide emissions and save 327 million barrels of fuel in the period ending 2030, according to an Environment Secretariat (Semarnat) official. The Regulation for the Control of Emissions of Greenhouse Gases and Energy Efficiency Applicable for New Light Vehicles has been approved by Semarnat, the Energy Secretariat (Sener), and the Economy Ministry, according to Semarnat Undersecretary of Environmental Regulation Sandra Herrera.

It is scheduled for publication in the Official Journal in October or November and will become law 60 days afterward, she said.

The regulation is based on Mexico's General Law of Ecological Equilibrium and Environmental Protection. According to Herrera, the regulation will improve average corporate fuel economy for cars and light-duty trucks to 14.9 kilometers per liter (35 miles per gallon) by 2016.

The expected carbon dioxide savings of 160 million tons in the period ending 2030 are based on an average vehicle life span of 16 to 17 years. Drivers' fuel costs are expected to be 513 billion pesos ($37.5 billion) lower in the same period, thanks to the regulation. According to Herrera, Mexicans spent 1.3 billion pesos ($95 million) to fuel passenger cars and light vehicles in 2010, the most recent year for which figures are available.

The regulation will be gradually enforced to give manufacturers time to adapt, Herrera noted. “Manufacturers will be gradually encouraged to meet the target until 2016 when it will be mandatory,” Herrera said, adding that Semarnat will conduct audits to ensure compliance.

The regulation is being designed to resemble the United States' corporate average fuel economy (CAFE) program. The U.S. Environmental Protection Agency and National Highway Traffic Safety Administration have proposed a combined standard of 54.5 mpg by 2025, up from a combined 35.5 mpg average by model year 2016. Semarnat hopes Mexico's new government, to be elected July 1, will eventually make the regulation as ambitious as the U.S. version, Herrera added.

45. New Study Backs Up EPA Assertions on Low Cost of Tailpipe Standards

U.S. EPA's forthcoming new standards for the amount of sulfur in gasoline will not boost the price at the pump for consumers as industry has claimed, according to a recently released economic study. At issue are so-called Tier 3 air pollution standards for tailpipes that the agency is expected to propose this year and finalize in 2013 at the earliest. The agency is expected to lower the sulfur limit in gasoline from 30 parts per million to 10 ppm, a move that will bring it in line with Japan and the European Union and, the agency says, lead to significant health benefits.

The American Petroleum Institute has pushed back strongly on the proposal, arguing that the cost of upgrading refineries for compliance would lead to an increase in their operating costs of 6 to 9 cents per gallon, which could be passed on to consumers.

But a new study from Navigant Economics conducted on behalf of the Emissions Control Technology Association, or ECTA -- which represents companies that make products such as catalytic converters and other pollution controls technology -- says API is off base and looks at historical precedents.

They argue that API's study, conducted by Baker and O'Brien, significantly overestimates the cost of the standards. The new study concludes that the price of compliance would be closer to 1 cent per gallon, a finding that EPA and a competing study by MathPro Inc. have also reached.

Further, the report says that Baker and O'Brien "has a history of exaggerating the negative effects of EPA's sulfur reduction requirements on the refining industry," noting that the group significantly overestimated the costs of compliance with EPA's 2007 on-road heavy-duty diesel rule, which lowered the sulfur content in diesel from 500 ppm to 15 ppm.

The economists also looked back at the cost impact of EPA's Tier 2 standards, issued in 1999. EPA estimated those standards, which cut sulfur in gasoline from 300 ppm to 30 ppm, would result in a 2-cent-per-gallon increase in refinery costs. "Importantly, Tier 2 had no statistically significant impact on the retail price of gasoline," the report states.

Hal Singer of Navigant, one of the report's authors, said that suggests API's projections are off base. "If the cost this time is half what it was last time, and there wasn't any increase to consumers last time, then there won't be any this time," Singer said.

The report comes as the Tier 3 standards have been the subject of controversy on Capitol Hill.

Kentucky Rep. Ed Whitfield, a top Republican on the House Energy and Commerce Committee, has introduced legislation that would delay the standards, as well as impending regulations for greenhouse gas emissions from refineries and air quality standards for ground-level ozone. The bill has been rolled into a package of anti-regulatory, pro-exploration bills.

46. House Republicans up Attacks on Obama, EPA Rules In Advance Of Energy Jobs Vote

House Republicans are ramping up their criticism of Obama administration energy and environmental policies -- including EPA rules -- in advance of expected House votes on a package of energy production and environmental streamlining measures that are being recast as a jobs agenda.

House consideration of the Domestic Energy and Jobs Act the week of June 18 comes as falling gasoline prices and abundant natural gas supplies have threatened to further blunt the already tepid Capitol Hill focus on energy, whether from renewable energy or fossil fuels. Accordingly, the selling of the GOP energy measures as a job creator has been sharpened -- and attacks on EPA and other regulations retained -- even as the job creation potential of the measures remains unclear.

On a June 14 "blogger call," House Majority Whip Kevin McCarthy (R-CA) and several GOP colleagues from the House Energy Action Team focused heavily on the notion that the Obama administration is blocking fossil fuel and other energy development -- despite record natural gas development and low natural gas prices that have started to create disincentives for additional drilling. The lawmakers also showcased North Dakota's current oil-based prosperity as a symbol of the potential jobs benefits of GOP energy priorities.

The Domestic Energy and Jobs Act is actually a package of seven committee-passed bills that call for steps that include opening up more federal lands to energy production; streamlining of environmental permitting for both fossil and renewable projects; and more analysis and delay of EPA rules. Included in the package is H.R. 4471 -- the Gasoline Regulations Act -- that would call for "cumulative analysis" of several EPA actions and their impact on gasoline prices and would delay implementation of the agency's Tier III fuel standards, ozone standard, and refinery new source performance standards until after the analysis is complete.

Most of the provisions in the act are assumed to face significant resistance in the Senate, rendering the upcoming votes more of a messaging exercise.

47. House Panel Votes To Bar EPA from Setting Tailpipe Limits

The House Appropriations Committee has voted to bar the Environmental Protection Agency from setting vehicle tailpipe emissions limits for the 2017-25 model years, or allowing California to set its own rules. But the effort faces an uphill battle in the Senate and from the Obama administration, which oppose the GOP move.

Last year, the Senate and Obama administration refused to go along with the House, which had approved the same amendment in July 2011. The committee has again approved the amendment 26-18, with supporters picking up two new votes: Reps. Sanford Bishop, D-Ga., and Frank Wolf, R-Va.

The National Automobile Dealers Association has strongly supported the effort.

The amendment "shows continued bipartisan concern over how people can afford" the big jump in car prices as part of the 2025 regulations, said Bailey Wood, an NADA spokesman. The amendment would allow the National Highway Traffic Safety Administration to finalize corporate average fuel economy requirements for 2017-25, but would not allow EPA to set tailpipe emissions limits.

The committee also voted to cut the EPA's budget by 17 percent, or $3.2 billion. "We also prohibited funding for the implementation of numerous job-killing rules and policies," said Rep. Harold Rogers, R-Ky., the chairman of the Appropriations Committee. "These cuts and restrictions represent the committee's concern that EPA's unprecedented regulations are strangling American business and industry," Rogers said.

The Obama administration previously has required a 40 percent boost in fuel-efficiency standards for the 2012-16 model years at a cost of $51.5 billion to 34.1 mpg. On Tuesday, a federal appeals court said the EPA was "unambiguously correct" in finalizing the 2012-16 rules in April 2010. The decision was a big win for the Obama administration, which plans to finalize the 2017-25 fuel-efficiency standards and greenhouse gas emissions limits by August. The new rules will hike requirements to 54.5 mpg by 2025.

48. J.D. Power Reports EPA Emission Standard Impacts Class 8 Quality And Satisfaction

The introduction of engines that meet revised EPA regulations is once again taking a toll on heavy-duty truck quality and customer satisfaction, as customers are reporting more problems with their truck engine, according to the recently released J.D. Power and Associates 2012 U.S. Heavy-Duty Truck Customer Satisfaction Study(SM).

Overall customer satisfaction with heavy-duty trucks declines to 737 index points on a 1,000-point scale in 2012, compared with 751 in 2011, primarily due to an increase in the number of problems experienced. The study finds that quality of Class 8 trucks that are one model year old has decreased, with problem levels rising 9 percent to 223 problems per 100 trucks (PP100) in 2012, up from 204 PP100 2011. Overall quality is determined by the level of problems experienced per 100 trucks, with a lower score reflecting higher quality. Much of the overall quality decline is attributed to a higher rate of engine- and fuel-related problems, which have increased by 14 percent from 2011 (81 PP100 vs. 71 PP100, respectively).

The most problematic engine and fuel problems are driven by technology that is designed to reduce emissions from heavy-duty truck engines.

"Following the revised EPA regulations in 2007, there was an increase in problems and a decline in customer satisfaction, and we anticipated the same thing would happen with the introduction of 2010 EPA-compliant engines," said Brent Gruber, director of the commercial vehicle practice at J.D. Power and Associates. "Emission-related technology results in a high rate of problems, particularly with ECM calibration, exhaust gas recirculation (EGR) valves and engine sensors. The new, more complex engines are resulting in more problems and downtime."

Vocational truck customers experience an average of 2.2 unscheduled maintenance procedures per year, resulting in an average of 7 days of downtime, while on-highway owners report an average of 2.9 unscheduled maintenance procedures, or an average of 7.7 days of downtime.

"Engine reliability has the greatest impact on overall product satisfaction, so it's vital that truck and engine manufacturers work quickly to reduce the number of problems related to the emission technologies," said Gruber. "The truck brands of European companies have fewer problems, specifically, those related to the technology required to meet the emission standards, because they have been using the technology for years in other markets."

Gruber explains that since 2008, Europe has had emission standards similar to those enacted in the U.S. market in 2010, so manufacturers that build heavy-duty trucks for that market have the advantage of applying technology proven in Europe in its U.S. models. As a result, brands such as Freightliner and Volvo earn above-average satisfaction for engine reliability and dependability, as well as fewer engine- and fuel-related problems than industry average. On average, truck brands owned by U.S. companies experience 22 percent more engine- and fuel-related problems than their competitors owned by European companies (89 PP100 vs. 73 PP100, respectively).

The study measures the satisfaction of primary maintainers of Class 8 heavy-duty trucks that are one model year old in two product segments, on highway and vocational. In each segment, satisfaction is determined by examining six key factors: cab/body; cost of operation; engine; ride/handling/braking; transmission; and warranty.

Freightliner ranks highest in heavy-duty truck customer satisfaction in both the on-highway and vocational segments.

In the on-highway segment, which evaluates long- and short-haul trucks, Freightliner ranks highest with an index score of 750 and performs particularly well in all six factors. Volvo ranks second (739), while Peterbilt ranks third (736).

In the vocational segment, Freightliner ranks highest with an index score of 789. International ranks second (766) and Peterbilt ranks third (753).

The study also measures satisfaction with service received from authorized truck dealers by examining six factors: service advisor; service delivery; service facility; service initiation; service price; and service quality.

Kenworth ranks highest in Class 8 customer satisfaction with dealer service for a second consecutive year. Kenworth, with an index score of 804, performs particularly well across all factors. Following Kenworth in the rankings are Freightliner (802) and Volvo (784).

The 2012 U.S. Heavy-Duty Truck Customer Satisfaction Study is based on responses from 1,725 primary maintainers of one-model-year-old Class 8 heavy-duty trucks. The study was fielded in April and May 2012.

49. GM Urges California LCFS Credits Be Used For EV Rebates

A major auto company, utilities, ratepayer advocates and electric vehicle charging companies remain divided over a California rulemaking to determine how utilities must spend revenue they receive from selling credits they earn under the state's low-carbon fuel standard (LCFS) for supplying power to charge electric vehicles (EVs).

California's LCFS requires fuel providers to reduce the carbon intensity of gasoline and diesel 10% by the end of 2020. Fuel providers can comply with this mandate in part by purchasing credits generated by utilities and companies that provide electricity for EVs or that provide natural gas for natural gas vehicles, or hydrogen for hydrogen fuel-cell vehicles.

The California Public Utilities Commission (CPUC) is in the midst of a rulemaking -- “Order Instituting Rulemaking to Address Utility Cost and Revenue Issues Associated with Greenhouse Gas Emissions” -- to determine in part how the state's major electric investor-owned utilities (IOUs) can spend the money they make from selling LCFS credits generated by the sale of electricity to their EV-owning customers. The utilities are Pacific Gas & Electric Co., Southern California Edison Co. and San Diego Gas & Electric Co.

The California Air Resources Board (ARB), which is in charge of implementing and enforcing the LCFS regulation, has provided general guidance to CPUC that the revenue should be used to directly benefit plug-in electric vehicle (PEV) owners; however, CARB has left the details of carrying out the policy to CPUC.

In written comments to CPUC, General Motors (GM) pressed the regulators to require utilities to deposit revenue they make from selling LCFS credits into a fund that provides cash rebates to purchasers of EVs. “At this early stage, GM believes the single most important use of the LCFS credits should be to help reduce the cost of vehicle ownership to the consumer, in order to get more PEVs on the roads faster,” company officials state in June 12 comments to CPUC. GM says the utilities should be required to deposit credit revenue into the state's Clean Vehicle Rebate Program (CVRP). “These funds provide direct benefit to all PEV customers and have had a clear impact on PEV sales thereby increasing the number of transportation miles generated by electricity,” the company says. “For example, sales data for the Chevrolet Volt in California shows that vehicle incentives directly increase market adoption of PEVs.”

During the first 15 months since “launch,” Volt sales in California without state incentives averaged less than 150 units per month, according to GM. “Now that the Volt qualifies for single-occupancy HOV lane access and the $1,500 state rebate, average monthly sales in California have increased to more than 400 units per month,” the filing states.

GM opposes the IOUs' proposal to use the credit revenue to provide a credit on EV owners' monthly electricity bills. “At this nascent stage of the PEV market, there is very little empirical evidence supporting that any other program, such as lower electricity rates, will increase the adoption of PEVs,” the GM officials contend. The auto company also challenges assertions by the IOUs that upfront vehicle rebates are not feasible at this stage.

50. NOAA Says Warmest U.S. Spring on Record

So far, 2012 has been the warmest year the United States has ever seen, with the warmest spring and the second-warmest May since record-keeping began in 1895, the U.S. National

Oceanic and Atmospheric Administration reported recently. Temperatures for the past 12 months and the year-to-date have been the warmest on record for the contiguous United States, NOAA said.

The average temperature for the contiguous 48 states for meteorological spring, which runs from March through May, was 57.1 degrees F (13.9 C), 5.2 degrees (2.9 C) above the 20th century long-term average and 2 degrees F (1.1 C) warmer than the previous warmest spring in 1910.

Record warmth and near-record warmth blanketed the eastern two-thirds of the country from this spring, with 31 states reporting record warmth for the season and 11 more with spring temperatures among their 10 warmest.

"The Midwest and the upper Midwest were the epicenters for this vast warmth," Deke Arndt of NOAA's Climatic Data Center said. That meant farming started earlier in the year, and so did pests and weeds, bringing higher costs earlier in the growing season, Arndt said. "This warmth is an example of what we would expect to see more often in a warming world," Arndt said.

More long-lasting heat waves, record-high daytime temperatures and record-high overnight low temperatures are to be expected in a warming world, said Jake Crouch of NOAA's National Climatic Data Center. "And that's what we're seeing," Crouch said. "We've seen it quite a bit over the last 12 months."

An Arctic measurement related to climate reached a milestone this spring, NOAA reported: the concentration of atmospheric carbon dioxide at Barrow, Alaska, reached 400 parts per million, the first time a monthly average for this greenhouse gas passed that level at a remote location. The level of 450 ppm is regarded by many scientists and environmental activists as the upper limit the planet can afford if global temperature rise is to be kept to within 3.6 degrees F (2 C) this century. Some advocates suggest 350 ppm is a more appropriate target.

The 400 ppm mark for carbon dioxide in less remote locations, such as Cape May, New Jersey, has been reached for several years in the springtime, NOAA said in a statement. But measurements of carbon dioxide over 400 ppm at remote sites like Barrow - and at six other remote Arctic sites - reflect long-term human emissions of the climate-warming gas, rather than direct emissions from a nearby population center.

The global monthly mean level of atmospheric carbon dioxide was about 394 ppm in April, compared to 336 ppm in 1979, pre-industrial levels of about 278 ppm and ice age levels of about 185 ppm.

51. New Jersey Sued For Pulling Out Of Climate Initiative

Environmental groups sued New Jersey recently for Governor Chris Christie's decision to pull the state out of the Regional Greenhouse Gas Initiative, a 10-state compact that aims to cut air pollution from power plants. Last May, Christie declared the compact, known as RGGI and pronounced "Reggie," was an ineffective way of reducing carbon dioxide emissions, and announced the state would withdraw. In a lawsuit filed in Trenton's Superior Court, Appellate Division, the Natural Resources Defense Council and Environment New Jersey said that decision was illegal because state law required the Christie administration to notify the public of its intention and to provide a meaningful public comment period.

A spokesman for Christie, Michael Drewniak, called RGGI "a failed public policy that taxed businesses and residents and left New Jersey at a competitive disadvantage." "There was nothing illegal about our withdrawal from RGGI," Drewniak said in a statement. "Participation in the RGGI consortium was via a contractual arrangement with provisions for any state to pull out with notice and without penalty."

RGGI, which includes New England and Mid-Atlantic states, established limits on carbon dioxide emissions, thought to be a key factor in global warming. Under the plan, states agreed to cap and then reduce carbon dioxide pollution by 10 percent by 2018. The scheme also provides technical support for states that auction carbon credits to electric power plants.

New Jersey's Democrat-controlled state legislature voted earlier this year to continue New Jersey participating in RGGI. Last year, Christie, a Republican, vetoed a similar measure.

52. U.S. Stiffens Opposition to EU Law on Aviation Emissions

Senate lawmakers and the Obama administration recently stiffened their opposition to a European law that targets emissions from commercial jetliners and applied new pressure on Brussels and the United Nations to resolve global concerns. In a rare display of election-year bipartisanship, Democratic and Republican members of the Commerce Committee and the administration's top transportation official called the EU standard that puts a price on pollution unworkable.

"The European Union acted because it believes it needed to make a bold effort to reduce greenhouse gas emissions and I understand why they did so. But, I believe that their unilateral action is likely not sustainable by international law," the panel's chairman, Jay Rockefeller, said at a hearing. "I support the goals, but I have to oppose the action." Kay Bailey Hutchison, the committee's top Republican, said that she and Rockefeller "are in agreement" on the primary point. "The European Union, with this emissions trading scheme, is acting outside of their prerogative and most certainly will have a negative effect on our aviation community," she said. "The EU needs to step back."

It was the most extensive comments from key Senate lawmakers on the issue that has some observers concerned that the dispute could trigger a global trade fight since the law applies to all airlines and a number of countries have spoken out.

Transportation Secretary Ray LaHood, testifying at the hearing, called Europe "The Lone Ranger" for unilaterally imposing the measure in January and said the administration again would "strongly urge" it to cease the law's application. "We need to see real signs of flexibility from the EU," LaHood said.

The administration has threatened unspecified action if a compromise is not reached, but LaHood said no decision had been made on possible steps. He said discussions within the administration, however, are centered on the possibility of the United States filing a formal complaint to the United Nations. That move would raise the diplomatic stakes and introduce sticky legal questions with no outcome guaranteed. "We're debating that," LaHood said after Republicans and Democratic members urged the administration to pursue that route.

The law took effect in January and requires all airlines flying to and from EU airports to buy permits under an Emissions Trading Scheme (ETS). The issue is especially important to the

United States, whose airlines have a mature and lucrative transatlantic business. American Airlines, United Airlines and Delta Air Lines are looking to grow international travel.

Jos Delbeke, director general for climate action at the European Commission, defended Europe's position at the hearing and vowed not to cave to pressure. "There is no prospect of suspending the EU legislation," Delbeke said. He said the EU favored a global approach and is open to modifying it as part of a negotiated solution so long as market-based measures are similarly stringent, cover all airlines and include specific goals.

Separately, Senate lawmakers are weighing legislation that would give LaHood's office discretion to exempt U.S. airlines from complying with the EU law. A similar measure cleared the House of Representatives last year. The legislation's fate is unclear with other priorities demanding congressional attention. Airlines want Congress to take an aggressive stand and pass the bill, putting more pressure on the ICAO to come up with a plan.

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53. Beijing: to Implement Stricter Fuel Standards to Cut Pollution

Beijing will launch new fuel standards that will restrict sulfur content in order to cut emissions on May 31st, according to the city's environmental authority. The new standards will reduce sulfur content from 50 to 10 milligrams per kg of gasoline or diesel, Li Kunsheng, head of the vehicle emissions management department of Beijing Environmental Protection Bureau, said recently. "Sulfur content is a major environmental index for fuel. In this regard, Beijing's upcoming standards will be equivalent to the European Union's Euro V standards," Li said.

Decreasing the amount of sulfur in fuel can reduce damage to vehicles' exhaust catalysts and thus help cut emissions, he said.

The new standards are expected to reduce emissions by 15%, according to research conducted by the China Automobile Technology and Research Center (CATARC).

Li said nitrogen oxide, volatile organic compounds and small particulate matter from vehicle emissions are respectively responsible for 58%, 40% and 22% of air pollution in the city.

The new standards also reduce the limit for manganese in fuel from 0.006 grams to 0.002 grams per liter, according to Li.

The price of fuel will not immediately change after the new standards take effect, he said.

Local authorities will start testing oil products on the market on August 1st to ensure they are in line with the new standards, according to Fan Yaoguang, an official from the municipal industry and commerce bureau.

54. Pearl River Delta Air Pollution Report Shows Mixed Picture for Mainland, Hong Kong

Average levels of ambient sulfur dioxide and nitrogen dioxide fell in China's Pearl River Delta region in 2011 compared to the previous year, while ozone pollution worsened, according to a new air quality report released jointly by Hong Kong and Guangdong province. But the environmental group Clean Air Network said they found increases in each pollutant, as well as coarse particulate matter, in Hong Kong and said the Hong Kong Special Administrative Region's government could no longer blame the neighboring mainland China province for its local air pollution problems.

The report was released April 26 by Hong Kong's Environmental Protection Department and the Guangdong Environmental Protection Bureau. It covered results from the Pearl River Delta Regional Air Quality Monitoring Network.

More than three-quarters, 76 percent, of the regional monitoring stations reported air quality throughout the year that met China's national standards, according to the report.

The regional report showed that compared to 2010 levels, the annual average sulfur dioxide level dropped 4 percent and the annual average nitrogen dioxide level fell 7 percent. Annual average ozone levels rose 9.4 percent, the report said, while levels of coarse suspended particles less than 10 microns in size (PM-10) stayed about the same.

Since the regional monitoring network was established in 2006, annual average regional readings have fallen 49 percent for sulfur dioxide, 13 percent for nitrogen dioxide, and 14 percent for PM-10. However, average annual ozone levels have increased 21 percent regionally in that time.

The Guangdong Environmental Protection Bureau issued a statement saying that desulfurization and denitrification systems, controls on volatile organic compound emissions, and new vehicle idling rules regionally have helped lead to improvements in the province.

However, the Clean Air Network said in an April 26 statement that Hong Kong's 2011 general and roadside nitrogen dioxide levels were the highest there since 2006, up 3 percent and 28 percent respectively. Nitrogen dioxide is mainly formed from oxidization of nitrogen monoxide emitted from combustion, such as in power plants and vehicles.

While nitrogen dioxide remains a problem in Hong Kong, a review of the annual Pearl River Delta reports show that ozone, sulfur dioxide, and coarse particle levels are still lower than in the neighboring province.

Hong Kong's Environmental Protection Bureau approved stricter air quality objectives in January. They will be submitted for legislative approval and could go into effect in 2014. The government also is working on other air quality initiatives, including retrofitting of buses to reduce nitrogen dioxide emissions. Starting in June, newly registered buses and trucks in Hong Kong will have to meet Euro VI emissions standards.

According to state media reports at the end of March, Beijing municipality also is drafting plans to require newly registered buses and trucks vehicles to meet China V standards, similar to Euro V standards, in large part to control nitrogen dioxide emissions.

55. China to Spend $315 Million Yearly on Alternative-Energy Cars

China’s government will spend as much as 2 billion Yuan ($315 million) a year to develop alternative- energy vehicles to reduce fuel consumption, the finance ministry has announced. The government will also promote using buses with hybrid engines in major cities, Vice Finance Minister Zhang Shaochun said in a statement on the ministry’s website. Agencies and companies that provide public services, such as car-rental firms, will be encouraged to use alternative energy vehicles in 25 trial cities, Zhang said.

A projected tripling in vehicle population by 2020 will increase the country’s demand for fossil fuel and add to its air pollution. China buys more than half of its crude oil needs from overseas and is the world’s second-largest importer of oil after the U.S.

Air quality in all of the 32 Chinese cities that track pollution falls short of World Health Organization guidelines, with Beijing among the world’s most polluted cities. The finance ministry urged cities to exempt alternative- energy vehicles from restrictions on the issue of license plates and limiting the use of cars on certain days. Municipal authorities should also introduce preferential policies for parking, electricity rates and highway tolls, while speeding up construction of charging stations, according to the statement.

Automakers including General Motors Co. (GM), Volkswagen AG (VOW) and BYD Co. have announced plans to introduce hybrids or electric vehicles in China.

56. China to Spend $27bn on Energy Efficiency and Renewables

China plans to spend $27 billion (£17bn) this year to promote energy conservation, emission reductions and renewable energy. The country's finance ministry said it wants to promote energy-saving products, solar and wind power and accelerate the development of renewable energy and hybrid cars.

China is the world's biggest emitter of carbon dioxide, followed by the United States.

A recent report by the International Energy Agency (IEA) said China spurred a jump in global carbon emissions to their highest ever recorded level in 2011, offsetting falls in the US and Europe.

However, its CO2 emissions per unit of GDP, or its carbon intensity, fell by 15% between 2005 and 2011, the IEA said, suggesting the world's second-largest economy was finding less carbon-consuming ways to fuel growth.

In the long term, China is targeting to cut its greenhouse gas emissions by 40-45% by 2020, compared with 2003 levels and aims to boost its use of renewable energy to 15% of overall energy consumption.

57. China Must Act Urgently To Curb City Emissions: World Bank

China must act urgently on multiple fronts if it is to cut greenhouse gas emissions from its rapidly expanding cities and hit government targets for curbing carbon intensity, according to a new report from the World Bank. Cities generate an estimated 70 percent of energy-related greenhouse gases and with China set to increase its number of urban residents by 350 million over the next 20 years, the Bank says the case for urgent action is strong.

"For the 12th Five-Year Plan period, a 17 percent reduction target for carbon intensity has been set," World Bank country director for China, Klaus Rohland, wrote in a forward to the 588-page report. "Addressing cities' emissions will be a crucial element of this planned reduction."

China has set a goal of reducing the economy's carbon intensity by 40-45 percent in 2020 compared with 2005, while the Five-Year Plan covers the period from 2011-2015.

The report, titled Sustainable Low-Carbon City Development in China, says industry and power generation each contribute as much as 40 percent of city emissions. The remaining 20 percent of the carbon footprint is left by transport, buildings and waste. The Bank called for energy-efficient buildings and industries, transport systems offering alternatives to cars, and better management of water and waste, making five key recommendations to achieve low-carbon city development.

"A few key complementary actions - on the land and municipal finance agenda, on facilitating coordination across different governmental entities - could help to empower city governments to effectively implement low-carbon action plans," Shomik Mehindratta, a co-editor of the report, said in the World Bank statement.

The report said it did not set out to be a compendium of best practice, but a collection of material building on analytical work and real investment project experiences. To that end, the final chapter of the report is given over to an analysis of the financial instruments the World Bank has available to support the building of low-carbon cities in China.

The Bank said 67 percent of projects in its existing China lending portfolio had environmental, climate change, or low-carbon objectives. "In the Chinese context, where the financial architecture to support low-carbon investments is still evolving, the expertise the World Bank has developed and its ability to blend different instruments to finance low-carbon projects represent a unique opportunity," the report said.

An update to the report is planned over the next 18-24 months to update the findings and lessons presented, as well as experience from the implementation of pilot schemes.

58. China Cries Foul After U.S. Sets Tariffs on Solar Imports

The United States imposed punitive tariffs on solar panel imports from China, the latest in a series of trade disputes between the world's two biggest economies and sparking accusations by Beijing of protectionism. The new tariffs of around 30 percent, much bigger than had been expected, were set on Thursday by the U.S. Commerce Department after it ruled in favor of local firms which said Chinese exporters were dumping cut-price panels on their market.

The size of the tariffs is larger than Chinese companies had expected and some analysts said it might prompt them to manufacture elsewhere or look for alternative markets.

"The U.S. decision lacks fairness and China expresses its strong displeasure", a spokesman for China's Ministry of Commerce, Shen Danyang, said in a statement posted on the ministry's website. "By deliberately provoking trade friction in the clean energy sector, the U.S. is sending the world a negative signal about trade protectionism," Shen said.

However, Beijing stopped short of threatening immediate retaliation.

"We believe these measures by the United States damage China-U.S. cooperation in the renewable and clean energy sectors ... We hope the United States can appropriately resolve the relevant issues and take practical steps to respond to China's demands," Foreign Ministry spokesman Hong Lei said.

The tariffs apply to most top Chinese exporters, including Suntech Power Holdings Co Ltd and Trina Solar Ltd, at about 31 percent.

President Barack Obama, running for re-election in November, has promised to crack down on what he said are unfair Chinese trade practices. The United States already has punitive duties on steel pipe, pencils, electric blankets and bedspring imports from China and was also reported in March to be investigating if imports of stainless steel sinks are sold at unfairly low prices.

Chinese officials have threatened to impose trade duties on U.S. shipments of polysilicon, the key material used in solar panels, if the U.S. moves to penalize Chinese solar companies. "The anti-dumping ruling increases the risk of retaliatory action by Chinese government on U.S. polysilicon imports into China," Deutsche Bank said in a report.

The solar panel ruling follows a complaint filed last October by the U.S. subsidiary of Germany's SolarWorld AG, and six other U.S. companies that alleged unfair competition and had sought duties well above 100 percent.

China's solar companies hold more than 60 percent of the global market. The U.S. market alone accounts for about 20 percent of sales of China's largest solar panel manufacturers. Their heavy reliance on subsidized U.S. and European markets has prompted criticism that loans from Chinese state-run banks and low prices gave the companies an unfair advantage.

Under the decision, 59 Chinese solar companies that petitioned Washington in the case will also face an import duty of about 31 percent, including Yingli Green Energy, LDK Solar, Canadian Solar, Hanwha solar One, JA Solar Holding and Jinko Solar.

59. Taiwan Adopts Standards to Limit Levels of Airborne Fine Particulate Matter

Taiwan has adopted standards for airborne fine particulate matter less than 2.5 microns in diameter that mirror those in the United States and Japan in an effort to improve air quality. The Taiwan Environmental Protection Administration said on May 14th that based on scientific evidence of harm to human health caused by the fine particles, it has revised national ambient air quality standards to list them as an air pollutant.

Previously, TEPA monitored only concentrations of total suspended particles, coarse particulate matter, carbon monoxide, ozone, lead, nitrogen dioxide, and sulfur dioxide in the air.

The agency said the PM-2.5 standards are 15 micrograms per cubic meter as a yearly average and 35 micrograms per cubic meter as a daily average. “The levels are the same as those in the United States and Japan. The standards are among the strictest in the world,” TEPA said in a news release.

For years, environmental groups and residents of industrial cities, such as the steelmaking centers of Kaohsiung and Taichung, have asked the central government to control PM-2.5 levels to minimize human exposure, which can result in lung disease, emphysema, lung cancer, and other ailments. Fine particles are considered more dangerous than large particles because they travel deeper through the respiratory system and are more likely to be toxic, containing heavy metals and cancer-causing organic compounds.

TEPA has set 2020 as a target year for meeting the yearly average standard.

To minimize emissions of PM-2.5 precursors, such as volatile organic compounds, nitrogen oxides, and sulfur oxides, since late 2011 TEPA has strengthened emission regulations for the steelmaking industry's electric arc furnaces, sintering plants, and power generators.

TEPA said recently revised regulations for vehicles and the petrochemical industry also will help reduce emissions of PM-2.5 precursors.

TEPA estimates that affected industries will have to invest 6 billion Taiwan new dollars ($203.4 million) to upgrade their facilities. Violators will be subject to fines and other punishment.

TEPA has monitored levels of PM-2.5 at 57 automatic air monitoring stations nationwide since 2005. Agency statistics show that in 2010, the average level of PM-2.5 was 31.4 micrograms per cubic meter.

According to Yen-rui Hsieh, director-general of TEPA's Department of Air Quality Protection and Noise Control, TEPA will soon upgrade about 30 air quality monitoring stations. Beginning in July or August, TEPA will start sampling fine particles over 24 hours using a manual method, considered more precise than the automatic one. However, PM-2.5 readings automatically recorded by existing 24 hour, seven days a week real-time monitoring systems will still be posted online for public reference, according to TEPA.

TEPA plans to replace the current Pollution Standards Index with an Air Quality Index that incorporates the new PM-2.5 standards.

60. India Diesel Price to Be Raised, or Not, Maybe

After a recent steep hike in petrol prices, the government is bracing itself to bite another bullet on the diesel front. A ministers' meeting on controlled fuel, coming any time after May 31, may decide on a Rs 4 to Rs 5 per liter rise in diesel prices according to official sources in speaking to the press. “The huge subsidy on diesel, LPG and Kerosene has almost thrown government's finances in disarray and the revision is warranted in order to check that,” the sources said on condition of anonymity.

The state-owned oil companies currently are losing Rs 512 crore per day on selling diesel, domestic LPG and kerosene. Diesel is currently sold at a loss of Rs 15.35 a liter, kerosene at Rs 32.98 per liter loss and oil firms lose Rs 479 on sale of every 14.2 kg domestic LPG cylinder.

However, there was no reason given behind why the meeting would take place only after May 31, but analysts said that the government battling a backlash from within and outside due to a steep Rs 7.50 a liter hike in petrol prices, is perhaps buying time to let frayed nerves cool before calling the Empowered Group of Ministers (EGoM), where UPA's allies and critics of price hike, the TMC and DMK, are also represented. The EGoM on oil headed by Pranab Mukherjee was due to meet earlier. The ministers' meeting on revision of diesel, LPG and kerosene prices has not taken place since July 2011.

Amid protests and a call for an opposition-sponsored bund on May 31, a slight revision in petrol prices is considered possible soon, a little ahead of the next revision cycle for petroleum prices. “We are planning to revise petrol prices as the global crude has stabilized in the past fortnight. The volatility in rupee is still posing some problem, but we will see how far it can be done,” a top source from one of the leading oil companies told Deccan Herald. Sources said the cut could be to the tune of Rs 2 to Rs 3.

Oil companies revise petrol prices on the 1st and 16th of every month on the basis of average international price of crude and the exchange rate during the previous fortnight. A day after the steepest ever hike to the tune of Rs 7.50 per liter in petrol prices, Indian Oil Company chairman R S Butola had said the firms will pass on the benefit to consumers in the next revision cycle as the international oil prices showed some softening trend.

Aware of the widening price difference between petrol and diesel, the finance ministry is again looking at the possibility of raising excise duty on diesel cars, a demand which was overlooked in the Budget 2012-13.

However as the discussions proceed, Petroleum Minister S. Jaipal Reddy said the government has no immediate plan to hike prices of diesel, liquefied petroleum gas (LPG) and kerosene. “I am not touching the prices of diesel, LPG or kerosene,” Reddy told reporters when asked about the possibility of hike in prices of these products. “Reddy also said his ministry has recommended raising taxes on diesel-driven vehicles.

The government provides subsidies of Rs31 per liter on kerosene, Rs13.64 per liter on diesel and Rs479 for each cylinder of LPG.

Due to weakening rupee and high prices of crude oil in the international markets, the oil subsidy burden on the government is set to rise substantially. It is also putting heavy pressure on the balance sheets of oil marketing companies. Oil marketing companies claim they are losing over Rs5 billion per day on sale of diesel, kerosene and domestic LPG.

Reddy said no date has been fixed yet for the meeting of the ministerial panel to review subsidies on petroleum products. The Empowered Group of Ministers (EGoM) headed by Finance Minister Pranab Mukherjee was scheduled to meet to discuss oil subsidy. But the meeting was postponed.

Oil companies theoretically do not require the government's permission to raise petrol prices after it was declared a decontrolled fuel in June 2010, though in practice they inform the oil ministry before raising pump rates. Pricing decisions for diesel, kerosene and cooking gas are taken by the EGoM chaired by Finance Minister Pranab Mukherjee.

"If the oil minister is saying it is not the right moment to raise prices of regulated fuel, it is unlikely that the EGoM will disregard his views. It is the oil ministry that initiates the proposal to hike fuel prices and the EGoM takes the final call," an official with direct knowledge of the matter said, requesting anonymity.

Finding it difficult to raise diesel prices as it may fuel inflation, the finance ministry is again considering a proposal to raise excise duty on diesel cars to discourage people from buying cars that run on heavily subsidized fuel. The proposal made by the oil ministry has been pending with the finance ministry for a while. But after the Inter-Ministerial Group (IMG) on inflation met recently, oil minister Jaipal Reddy renewed his demand and said he has asked the government to raise taxes on such vehicles.

A senior official of the Central Board of Excise and Customs said a proposal is pending but no decision has yet been taken. He, however, indicated that the government is now inclined to consider the proposal given the huge gap between the retail prices of the two motor fuels.

Before the Union Budget for 2012-13, Reddy had demanded additional excise duty of Rs 80,000 on diesel vehicles. The proposal was, however, opposed by the automotive industry and the department of heavy industries.

The idea of additional excise levy has been tossing around in the oil ministry since 2008-09 as a way of raising funds to at least partially meet the Centre's burden on subsidizing diesel. But the idea never made it to the formal discussion table since it was felt that the funds garnered would not be significant in view of the massive size of the fuel subsidy burden.

The recent hike in petrol prices by 11% or Rs 7.50 has created a big gap between retail prices of petrol and diesel. While diesel is selling for Rs 41 a liter in Delhi, the petrol retail rate is above Rs 73 a liter. The gap has also affected the fuel consumption pattern, and diesel demand growth outstripped petrol for the first time in 15 years last year.

The finance minister is also likely to write a letter to all chief ministers to consider cutting the Value Added Tax (VAT) on petrol. On its part, the Centre may lower its duties to give some relief to the common man in view of the steep hike in petrol prices. Already, Delhi, Uttarakhand and Kerala have announced a cut in VAT on petrol.

In the Budget, the finance minister had hiked excise duties for both petrol and diesel cars with engines under 1,200cc (petrol) and 1,500cc for diesel cars with length exceeding four meters to 24% from 22% and a fixed duty of Rs 15,000. Engines exceeding the above capacity were charged with an ad valorem duty of 27%.

The finance minister had, however, avoided raising additional duty separately on diesel cars.

Japanese auto major Toyota recently said the government policy of controlling diesel prices is not healthy and is distorting demand in the car market. "This is not healthy. We expect the government to take some action," Hiroshi Nakagawa, managing director of the company's India subsidiary, Toyota Kirloskar Motor, said. Nakagawa said the diesel subsidy is leading to a substantial drop in the demand for petrol vehicles.

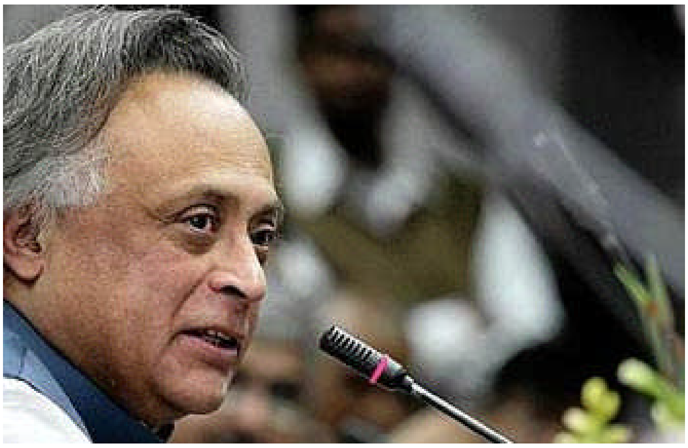
Recurring hikes in retail prices of petrol have seen the running cost of petrol cars skyrocket, making them unattractive for buyers. The per kilometer running cost for a diesel car is less than half when compared to that of a petrol vehicle (Rs 2.15 per km for diesel when compared to petrol's Rs 5.22). Nakagawa said the prices of the fuels should be linked to international market. "Globally, the common way is that oil follows international market rates."

To fall in line with the market, Toyota is trying to expand the number of diesel variants on its models. The company, that imports diesel engines for fitting them on models like Liva hatchback, Etios sedan, Innova MPV and Fortuner SUV, is also considering setting up a diesel engine plant. Nakagawa, however, said a decision on the matter is yet to be taken.

As outrage against petrol price hike poured on to the streets across the country, Rural Development Minister Jairam Ramesh took the reformist line calling for removal of subsidy on petroleum products such as diesel, kerosene and LPG.

Ramesh called the subsidies "misdirected" and argued that they are meant for the benefit of the rich. He pointed at the 20 per cent subsidy for diesel, which is guzzled by the SUVs.

"In our country if we combine diesel, kerosene and LPG Rs.1, 90,000 crore is the amount of subsidy given. The budget of the entire rural development and drinking water ministries in comparison is Rs.99, 000 crore. What kind of a country is this?" he asked.



"For development of rural areas (we spend merely) Rs.99, 000 crore, but give such heavy subsidy for diesel SUVs. For defense we spend Rs.1, 00,080 crore but give much more as subsidy," Ramesh added replying to a question on petrol hike.

He called for a roadmap to be drawn for phase out of the subsidies.

Hitting out at the misdirected subsidies, the outspoken minister said, "There were many in the country that were getting subsidy benefits without really needing them. There are many lower and middle income families which use LPG, but there are many rich, including myself, who get subsidy on LPG cylinders despite not needing it. There is a subsidy of Rs.503 on every LPG cylinder."

61. Petrol Cheaper, Diesel to Cost More in Delhi

While petrol will be cheaper by 92 paise, diesel will cost 37 paise more. The Delhi government may have kept its promise but, at the same time, it has reversed its last year's decision to waive off 12.5% value added tax on the Rs 3.37 hike on diesel that was announced by the Centre in 2011. Currently priced at Rs 71.16, petrol will cost Rs 70.24 once the decision notified by the office of the lieutenant governor of Delhi becomes effective. The Delhi government had declared that it would waive off 20% VAT on the hiked price of petrol announced by the Centre in May. Diesel, priced at Rs 40.91, will now be available for Rs 41.28.

Presenting the budget for 2012-13 on May 28th, chief minister Sheila Dikshit had proposed to provide relief from the steep Rs 7.54 hike in the petrol price by slashing the 20% VAT on the hiked component. Forgoing the VAT would have resulted in a cut in petrol price by Rs 1.26. Later on June 3rd, the Centre rolled back the hike component in the capital by Rs 2.02. Thus, the Delhi government's plan to cut down the 20% VAT on hiked component of every liter of petrol came down to 92 paise.

The decision to reverse the diesel waiver has come as a welcome move for the city that is reeling under massive levels of pollution due to a growing number of vehicles. Delhi already imposes a cess of 40 paise on sale of each liter of diesel and the government has been thinking of measures to curb the number of diesel vehicles on roads.

62. Pakistan Considering Importing Diesel, Furnace Oil from India

The Pakistan government is considering a proposal to meet its needs for diesel and furnace oil from India as imports from the neighboring country will cost 30 per cent less than those from Gulf countries, according to a media report. "We are in deficit and will take up the issue of diesel and furnace oil import with an Indian team scheduled to meet with us in Islamabad," Petroleum Minister Asim Hussain told The Express Tribune.

Hussain said Pakistan is a major importer of diesel and furnace oil and the two products could be purchased from India at cheaper rates. "We are interested in fulfilling our total requirements of diesel and furnace oil through imports from India," he said.

The government is also discussing proposals to import 200 million cubic feet of liquefied natural gas (LNG) a day and 500 MW of electricity from India, the report said.

A plan to import oil, LNG and electricity from India is being discussed after the federal cabinet decided in principle to grant Most Favored Nation-status to the neighboring country.

Pakistan's total diesel consumption is 6.9 million tons a year and domestic refineries produce 3.2 to 3.4 million tons while the remaining quantity is imported. Furnace oil demand stands at about nine million tons, of which refineries produce about 2.5 million tons while the rest is imported. Consumption of furnace oil is expected to surge to 16 million tons by 2015-16 because of new power projects.

Hussain said Pakistan was also discussing the option of gas imports from India.

63. Sri Lanka: Time to Battle Air Pollution

The toxic fumes released into the air on a daily basis in this country may not have reached a level of high concern yet, but could prove to be a serious problem if more steps to combat air pollution are not taken quickly. According to Chairman, Central Environmental Authority (CEA), Charitha Herath, “the ambient air quality level [in Sri Lanka] is not as bad as in some industrial countries. We are even better than some South Asian countries.” Air pollution, he explained, is mainly two-fold – industrial air and vehicle emissions. “We have regulated the industrial side and set minimum standards for the issue of Environment Protection Licenses, or EPL. The EPL will be given only if the air quality emissions are under the regulated standards,” said Herath. The issue of vehicle emissions is presently being tackled by the establishment of vehicle emission testing centers, he said. However, the CEA Chairman also admitted that complaints had been received with regard to the operations of some of these centers.

“The CEA and Department of Motor Traffic have started a new program to monitor these canters, and to develop better arrangements for them to follow,” he said. According to Operations Director, Environmental Foundation Limited, Vimukthi Weeratunga, however, air pollution is a matter of concern and could have a serious impact unless looked into soon. “It is a very serious problem, both economically and environmentally. By not improving the roads, it takes so much time to get to one place. Vehicles spend a lot of time on the roads, and they are emitting toxic fumes,” he said.

To add to that, he said, the prevalence of so many low efficiency engines, particularly in three wheelers, result in a high emission of toxic gases. Vehicle emission tests have been somewhat effective, he said, in controlling the emission of toxic fumes. “But this is still not the best solution. The best solution would be to bring in the best fuel and high efficiency engines.” He also noted that European cities have very stringent standards, and are therefore considered cleaner.

“We are fortunate Colombo is a coastal city, so the pollutants get pushed away. But because of this, it doesn’t mean we shouldn’t pay any attention to the issue. And in Kandy, because the city sits in a valley, there is no way to push the pollutants away, so the city itself seems quite polluted,” explained Weeratunga. He added that one way of combating air pollution at present would be to plant large amounts of trees. “There are many health issues related to air pollution. This could result in economic losses. Also, investors won’t come to polluted cities,” he said. “It [air pollution] is not out of hand now, but if you keep ignoring it, it could become an issue. People are not looking at it as an economic loss,” said Weeratunga.

Meanwhile, CEA Chairman, Charitha Herath, said that analyzing economic losses resulting from air pollution could not be easily done, and is not being done by any country. On the issue of low efficiency engines, Herath said that “Standards set for vehicle emissions are low, compared to the European standards. If we set it higher, half the vehicles on our roads will have to be removed.” He added that the issue of air quality was one that needed more public awareness. “Air quality monitoring does not make any sense if the public is unaware of air pollution issues. We all have some responsibilities towards maintaining air quality,” he said.

64. China Ministry Official Outlines Plans to Counter Problems with Air, Water, Soil Quality

China faces continuing problems with water quality, air quality, and rural pollution, a Ministry of Environmental Protection official said at a news conference in Beijing on the state of the environment over the past year. Vice Minister Wu Xiaoqing said on June 5th that curtailing emissions of air pollutants such as sulfur dioxide and nitrogen oxides and reducing chemical oxygen demand and ammonia nitrogen in wastewater will be major tasks for the rest of this year.

While a 2011 national target for nitrogen oxide emissions called for a 1.5 percent reduction from the previous year, Wu said levels actually rose 5.73 percent. He said the ministry is shooting for a “zero growth” in emissions of nitrogen oxides in 2012. He said the growth rate had dropped “significantly” since last year but predicted “tremendous pressure” to meet 2015 targets.

Under its 12th Five-Year Plan (2011-2015) China is aiming to reduce levels of nitrogen oxides and ammonia nitrogen by 10 percent by 2015 compared to 2010 levels and reduce sulfur dioxide emissions and chemical oxygen demand levels by 8 percent over the same period, Wu said.

Wu said the ministry will continue to expand its air quality monitoring network to help meet national PM2.5 standards to be in place in 2016. Measuring of PM2.5 has begun in 33 cities under a pilot program as of May, Wu said. Locations include Beijing, Shanghai, Guangzhou, and Nanjing. Seventy-four cities will have installed the equipment needed to monitor compliance with the 2016 standards by the end of October, with a view to conducting trial operations by the end of

2012. The cities will mainly be in the Tianjin-Beijing-Hebei province region and the Yangtze River and Pearl River delta regions, the ministry has said.

These areas are likely to see further restrictions on heavy polluting industries and tighter restrictions on approvals of new steel, cement, glass, coal, chemical, and other heavy industry projects, according to a June 5th report from the Xinhua news agency quoting Yang Zhiming, deputy director of the Hebei Environmental Protection Bureau.

Wu said the ministry “encourages qualified cities and regions” to conduct monitoring under the new system and publish their information for the public to see. However, Wu criticized “certain” foreign embassies and consulates in China for monitoring PM-2.5 levels and publicizing the information on the social networking site Twitter, calling it “inconsistent” with international practice and “technically not in line with the standards and requirements in China.” The U.S. Embassy in Beijing and U.S. consulates in Shanghai and Guangzhou have been releasing PM-2.5 levels recorded at their facilities via Twitter. Wu suggested that the actions could contravene international conventions on diplomacy and should stop.

"According to the Vienna Convention on Diplomatic Relations ... foreign diplomats are required to respect and follow local laws and cannot interfere in internal affairs," Wu told the news conference. "China's air quality monitoring and information release involve the public interest and are up to the government. Foreign consulates in China taking it on themselves to monitor air quality and release the information online not only goes against the spirit of the Vienna Convention ... it also contravenes relevant environmental protection rules."

Chinese Foreign Ministry spokesman Liu Weimin called on foreign diplomatic missions to respect China's laws and regulations and to stop issuing the readings, "especially over the Internet". "If the foreign embassies want to collect this kind of information for their own staff and diplomats, I think it's up to them," Liu told reporters. "They can't release this information to the outside world."

The U.S. embassy acknowledges on its website (beijing.usembassy-china.org.cn) that its equipment cannot be relied upon for general monitoring, saying "citywide analysis cannot be done ... on data from a lone machine".

On June 1, a Shanghai Environmental Protection Bureau official also suggested that it is “illegal” for the U.S. consulate there to release its own readings, according to a report in state-owned media.

Also at the news conference Wu said environmental tax policies under study could provide a way for “using economic measures to control corporate behavior” and for ensuring that the costs of “environmental pollution caused by enterprises” are covered by those businesses. Wu said his ministry, the Ministry of Finance, and the State Administration of Taxation are formulating policies that will lead to a draft Environmental Protection Tax law. He did not provide a time line or say what industries might be covered.

65. Experts Explore Beijing's Air Pollution

Air pollution has been a persistent headache for Beijing, prompting experts to weigh in with their thoughts on what is causing the problem, as well as possible ways to fix it according to the Xinhua news agency. In January, Beijing began to publish hourly air quality reports based on an international standard of measuring PM2.5, or airborne particulate matter smaller than 2.5

micrometers in diameter, which experts say pose the most serious health hazard. Monitoring data show that the average PM2.5 concentration in the Chinese capital is nearly double the national standard, which is set at 35 micrograms per cubic meter.

Beijing used to release air quality readings based on the measurement of PM10, or particulate matter less than 10 micrometers in diameter, but its PM10 data has never met the national standard and currently exceeds the standard by 20 percent.

Air pollution control has been a priority for the city's policy makers since the "Defending the Blue Sky" project was launched in 1998. A five-grade classification of air quality on the basis of pollution indices has been used in Beijing, with grade I being the best and grade V the worst. Days with grade I or II air quality are considered "blue sky days." Annual "blue sky days" have increased from 100 in 1998 to 286 in 2011. However, environmental authorities in Beijing announced in early June this year that they will stop counting "blue sky days," as the total could hardly reflect the specific situations in different parts of the city.

Experts say although the city's air quality has been improving gradually, the progress remains far from acceptable and serious challenges in improving air quality loom ahead.

Experts believe that vehicle emissions are the greatest source of Beijing's air pollution. More than 5 million vehicles are currently registered in Beijing, and the number keeps climbing, said Chai Fahe, deputy head of the Chinese Research Academy of Environmental Sciences. Chai said although the number of cars in Beijing is only half that in Tokyo, the frequency of use is much higher. Beijing cars run 45 km per day on average, while those in Tokyo run an average of 19 km per day. More than 70 percent of Beijing's cars are concentrated in the downtown areas, he added.

Li Kunsheng, an official with the Beijing Environmental Protection Bureau, said China still has no efficient laws and regulations for eliminating high-polluting vehicles

Du Shaozhong, another official in the bureau, suggested that Beijing should strengthen measures such as encouraging the scrapping of high-polluting vehicles and improving fuel standards.

Hao Jiming, an academician with the Chinese Academy of Engineering, said the city should improve its public transportation networks, as the high number of private cars and slow-running vehicles on the road increase emissions of harmful particles.

Hao also said the city should readjust the locations of residential and working areas in order to reduce traffic flows.

Experts have also warned that air pollution in Beijing cannot be eased without taking measures to curb emissions of pollutants in surrounding cities. Tang Xiaoyan, a professor with Beijing-based Peking University, found that when air pollution is heavy in Beijing, the nearby cities of Taiyuan, Shijiazhuang and Hohhot, as well as Tianjin municipality, also face heavy pollution. Wang Yuesi, a researcher with the Chinese Academy of Sciences, said hazardous heavy metals found in the air over Beijing come from ferrous metal smelting and coal burning in the Beijing-Tianjin-Hebei area. Data show that Tianjin municipality and Hebei province both have a large number of cement, steel, oil refining and petrification industries that burn a total of 350 million tons of coal per year. About 24.5 percent of the PM2.5 in Beijing comes from those industries.

Wang Yuesi said in addition to the Beijing municipal government, the central government should also pay more attention to tackling pollution in the neighboring provinces of Hebei, Henan and Shandong.

Zhu Tong, a professor with Peking University, suggested building a scientific research and data collection platform to investigate and monitor the air pollution situations in Beijing as well as nearby cities and provinces. Moreover, a management platform that transcends administrative boundaries should also be established to coordinate and direct pollution control work in different provinces and cities, Zhu added.

66. Release of All PM2.5 Readings Starts in Shanghai

PM2.5 readings of all of the city's 10 monitoring spots and average density of local PM2.5 will now be released at the website of Shanghai Environmental Monitoring Center. The city's latest hourly PM2.5 reading, the latest 24-hour reading and a chart illustrating PM2.5 change within 24 hours will all be available at the website and at Weibo sites of the Shanghai Environmental Protection Bureau and local government.

By the end of this year, Shanghai will officially announce the hourly and daily readings of all six types of pollution - PM10, sulfur dioxide, carbon dioxide, PM2.5, ozone and carbon monoxide - under a national new air quality monitoring standard. The six pollutants will be included in the new air quality evaluation system to better indicate overall air pollution conditions in the nation. Currently, the system includes only PM10, sulfur dioxide and carbon dioxide.

Officials from the Shanghai Environmental Protection Bureau said the days with excellent and good air quality in a year are expected to drop by 10 to 15 percentage points from the current 90-odd percent under the new evaluation system. "Among the three new pollutants, PM2.5 - "fine" particles measuring 2.5 microns or less in diameter - is the one with the biggest public concern, as it can affect air quality and visibility and explains why what people feel is different from the current air quality evaluation," said Liu Dailin from the bureau.

Since March, Shanghai has released real time PM2.5 figures at two national control spots in Putuo and Zhangjiang. Shanghai has established 30 PM2.5 monitoring spots, including the 10 national control spots set up under governmental requirements for the city's size and scale of its industry. Almost all of the 10 national control spots are in downtown areas with dense population, while a spot at Dianshanhu Lake in rural Qingpu is used only as a benchmark for good air quality and not included in the local air quality evaluation.

The Ministry of Environmental Protection issued the new air quality monitoring standard by adding PM2.5, ozone and carbon monoxide to the evaluation system and named Shanghai, Beijing, Tianjin and those in the Yangtze River Delta and Pearl River Delta regions and provincial capitals to be the first in China to adopt PM2.5 and ozone monitoring before year's end.

67. China Emissions Study Suggests Emissions Could Be Higher Than Thought

China's carbon emissions could be nearly 20 percent higher than previously thought, a new analysis of official Chinese data showed recently, suggesting the pace of global climate change could be even faster than currently predicted. China has already overtaken the United States as the world's top greenhouse gas polluter, producing about a quarter of mankind's carbon pollution that scientists say is heating up the planet and triggering more extreme weather. But pinning down an accurate total for China's carbon emissions has long been a challenge because of doubts about the quality of its official energy use data. It is that data which is used to compute how the planet's climate will change, helping plan for more extremes of drought, flood and the impact on crops.

"The sad fact is that Chinese energy and emission data as primary input to the models will add extra uncertainty in modeling simulations of predicting future climatic change," say the authors of a study in the journal Nature Climate Change. The report was conducted by researchers at the Chinese Academy of Sciences, along with experts from the universities of Cambridge and Leeds in England and Maryland in the United States. It was led by Dabo Guan of the University of Leeds, studied two sets of energy data from China's National Bureau of Statistics. One set presented energy use for the nation, the other for its provinces. They compiled the carbon dioxide (CO_2) emission inventories for China and its 30 provinces for the period 1997-2010 and found a big difference between the two datasets.

"The paper identifies a 1.4-billion ton emission gap (in 2010) between the two datasets. This implies greater uncertainties than ever in Chinese energy statistics," Guan, a senior lecturer at the School of Earth and Environment at Leeds University, told reporters. That is slightly more than the annual emissions of Japan, one of the world's top-five greenhouse gas polluters.

Guan added that China is not the only country with inconsistent energy data.

Scientists say the world is already racing towards a warming of 2 degrees Celsius or more in coming decades because of the rapid growth in emissions from burning fossil fuels and deforestation. Adding another billion tons into computer models would accelerate the pace of expected warming.

According to Chinese national statistics, on average, CO_2 emissions have been growing 7.5 percent annually from 1997 to 7.69 billion tons in 2010, the authors say in the study. In contrast, aggregated emissions of all Chinese provinces have increased 8.5 percent on average to 9.08 billion tons in 2010. By comparison, U.S. emissions were 6.87 billion tons in 2010, the Environmental Protection Agency says.

The scientists said differences in reported coal consumption and processing at the provincial level were the main contributors to the discrepancy in energy statistics.

The findings also expose the challenges China faces in introducing emissions trading schemes, which need accurate measurement, reporting and verification of energy use and carbon pollution at the local and national level. Yang Fuqiang, a former Chinese energy official and senior adviser for the Natural Resources Defense Council in Beijing, said provinces routinely underestimate both their carbon emissions and their energy utilization rates. "I would say the biggest concern about the accuracy and reliability of (China's emissions) data is coal - and that comes from too many small coal mines supplying small enterprises and industrial plants. They have no monitoring systems and generally speaking, they are also avoiding tax," he said. With provinces now under pressure to meet targets, they are now likely to underestimate emissions, he added.

China is committed to reducing energy intensity - the amount produced per unit of GDP - by 16 percent over the 2011-2015 period, and carbon intensity by 17 percent. It also plans to cap total energy use at 4.1 billion tons of standard coal by 2015.

It said “poor quality of energy data” was the “dominating factor” for the discrepancies. China's National Bureau of Statistics, which collects and publishes the national and provincial data, has officially said the discrepancies are related to “different conversion factors,” though this does not take into account differences in coal consumption figures given (for 2010 it was 3,163 megatons nationally and 3,910 megatons provincially), the report said.

Discrepancies also exist because the “statistical approach on data collection, reporting and validation is opaque,” the report said. Since statistics departments in China “are not politically independent agencies,” they are “often [pressured] by other government agencies to provide statistical data ‘to fit’ different political purposes,” the report said.

But David Hathaway, vice president of the consulting firm ICF International in Beijing, told the press that the discrepancies likely exist because China is conducting inventories using both a top-down and a bottom-up approach, while most other countries use only the former. “You could say that it is a bit unfair to point out this gap,” Hathaway said. “It is a peculiarity of the Chinese system that they are doing both a bottom-up and a top-down approach. Of course there is going to be a gap one way or another, and we don't see other countries doing it so there is no real reference.”

68. Scientist says China's Carbon Emissions May Be Overstated

China's carbon emissions could be much lower than estimated by a U.N. panel of scientists, according to a leading Chinese climate change specialist. The comments by Professor Wang Yi, director of the climate change research center at the Chinese Academy of Sciences in Beijing, add spice to a long-running debate about the accuracy of the country's energy use data.

A study published recently in the journal Nature Climate Change (see above) said China's carbon emissions could be nearly 20 percent greater than estimated due to discrepancies between provincial-level and national figures. But Wang said in an interview that research being conducted by his institute pointed to the opposite conclusion. That is because the methodology used by the Intergovernmental Panel on Climate Change (IPCC), a U.N. panel of climate scientists, does not take sufficient account of the big differences in calorific content of China's many grades of coal, Wang said. "We have some preliminary calculations and current emissions may be 10-20 percent less than the result based on IPCC methodology," he said.

Even if the findings are confirmed, Wang said they would not change the bigger picture: China pumps out more carbon than any other country, about 22 percent of the global total.

Wang, who was speaking in London en route to a U.N. Earth summit in Rio, is working on a report with The Climate Group, a coalition of governments and companies that promotes policies and technologies to reduce global emissions.

Wu Changhua, the group's Greater China director, said better energy-use data was essential for, among other things, the development of China's proposed national carbon trading scheme. She said China was making strides in areas such as renewable energy and clean coal but was struggling to fit together all the pieces of a strategy for sustainable economic development. Progress on smart grids and power storage, for instance, had lagged developments in solar and wind technology. "What China has is the political will, the belief and the desire but not necessarily all the solutions in hand," Wu said.

69. China to Boost Air Transport Capacity

China will build more airports and expand airline fleets, as the number of air trips in the country is expected to double by 2020, a top civil aviation official said recently. Chinese will make 700 million air trips in 2020, as the civil aviation industry will maintain strong growth momentum over the next one or two decades, according to Li Jiaxiang, head of the Civil Aviation Administration of China (CAAC).

China will have over 240 airports for civil aviation use by 2020, up from 180 in 2011, while 100 existing airports are planned to be renovated or expanded in the 2011-2015 period, Li said at an annual conference of the International Air Transport Association. In 2015, the number of airports for civil aviation use will exceed 230, with passengers set to reach 450 million, Li added.

He projected the country's number of passenger planes to reach 2,700 by the end of 2015, up from 1,764 at the end of 2011.

China's civil aviation industry lags behind in infrastructure and capacity and major airports are running at full capacity, Li noted.

Meanwhile, Chinese airlines will see their international markets overshadowed by the worsening European sovereignty debt crisis and growing downside risks in the world economy, said Wang Changshun, chairman of Air China, the country's flagship carrier.

China's civil aviation industry had 500.1 billion Yuan (79 billion U.S. dollars) in revenues in 2011, up 21.2 percent from 2010, according to CAAC figures.

However, profits in 2011 dropped 13.9 percent year on year to 36.3 billion Yuan as passenger flow slowed and jet fuel costs increased, the figures showed.

70. Industrial, Transportation Efficiencies Could Reduce Black Carbon Emissions in Asia

Low-cost programs to improve efficiencies in industrial brick kilns and heavy duty trucking fleets would aid in the reduction of black carbon emissions in South Asia, according to an Environmental Protection Agency report. EPA identified heavy duty trucking and brick making as sectors that offer high-impact, readily accessible opportunities to reduce emissions of black carbon, a “short-lived” pollutant linked to climate change.

A reduction in atmospheric concentrations of black carbon in South Asia would offer immediate health benefits and would slow the rate of near-term climate change, according to the report Reducing Black Carbon Emissions in South Asia: Low Cost Opportunities, released on June 11th. The high concentration of black carbon in South Asia's atmosphere poses a serious threat to water supplied by the Himalayas, alters rainfall patterns and the annual monsoon season, and contributes to severe health effects related to air pollution, according to EPA.

The report identified a number of strategies for mitigating black carbon emissions resulting from the industrial, transportation, and residential sectors. EPA identified emission reduction opportunities in the transportation sector, a significant contributor of black carbon emissions in South Asia. The report outlined several behavior changes, such as tightening gas caps, using low-rolling resistance tires on heavy-duty trucks, and maintaining constant speeds that could reduce black carbon emissions. EPA estimated that training programs to address the behavioral changes could improve fuel economy by between 5 percent and 20 percent.

71. Japan to Develop Ultra-Small Cars to Cut Emissions

The Japanese government and auto industry plan to develop ultra-small cars that seat one or two people for short-haul transportation. The plan is designed in part to reduce greenhouse gas emissions, Ministry of Land, Infrastructure, Transport, and Tourism officials said on June 1st. The ministry, together with the Ministry of Economy, Trade, and Industry and the Japan Automobile Manufacturers Association (JAMA), hopes to draft specifications for safety, emissions, durability, and other elements for the new class of vehicle by the end of the year, a MLITT official told the press. The ultra-small car would have a 0.125 liter engine and be smaller than Japan's popular 0.6 liter Kei cars. Kei cars, which account for roughly one-quarter of Japan's 4 million annual passenger car sales, have a length limit of just over 11 feet long, a width limit of just under 5 feet, and a height limit of 6.5 feet. Specifications could set a minimum daily driving distance for the ultra-small cars of about 10 kilometers (6.2 miles), the official said. The planned vehicle class was first discussed several years ago in response to the termination of bus and other public transportation services in rural areas, which affected many elderly citizens who often cannot afford larger vehicles, according to a JAMA official.

SOUTH AMERICA

72. Chilean Ministry to Require Measures to Reduce Coarse Particle Pollution in Ports

The industrial port of Huasco and the surrounding area in northern Chile will be declared a “latent zone” for coarse particulate matter, forcing authorities and local industry to adopt measures to limit emissions and improve air quality, according to a decree issued May 18 by the Environment Ministry. Chilean environmental regulations refer to “saturated zones” and “latent zones.” The latter means air quality is close enough to the legal limit to warrant measures being taken.

The ministry said its decision to declare the area a latent zone follows annual concentrations of particles 10 microns or less in diameter (PM-10) in excess of 80 percent of the maximum limit for three consecutive years (2007-2010). Environment Minister Maria Ignacia Benitez said the high levels of air pollution have been recognized since the 1990s but little action has been taken. “This government is tackling the issue and, with the publication of this decree, we are taking a major step,” she said.

The decree will be reviewed by the General Comptroller of the Republic before being published in Chile's official gazette, expected to occur by the end of May. Authorities will then begin work on a prevention plan for the affected area.

The port of Huasco, located 700 kilometers (435 miles) north of Santiago, is home to the 608-megawatt Guacolda coal-fired power plant, partly owned by Arlington, Va.-based AES Corp, and an iron ore pellet plant owned by Chilean steel group CAP.

The declaration also will cover an area stretching from Carrizalillo in the north to Punta Alcalde in the south where Endesa Chile, the country's largest electricity producer (owned by Italy's ENEL), plans to invest more than $1.4 billion in a 740MW coal-fired power plant.

73. Price tag On Climate Change in Latin America: $100 Billion

Damage from climate change could cost Latin American and Caribbean countries $100 billion per year by 2050 if average temperatures rise 2C (3.6F) from pre-industrial levels, as is seen likely, according to a new report. The region accounts for only 11 percent of global greenhouse gas emissions, but it is considered particularly vulnerable to impact from climate change due to its geographic location and reliance on natural resources, the report commissioned by the Inter-American Development Bank said. The development bank released the study days before Brazil hosted the UN's Conference on Sustainable Development, the Rio+20 on June 20-22.

The collapse of the coral biome in the Caribbean, the disappearance of some glaciers in the Andes and some degree of destruction in the Amazon basin were climate change damages highlighted in the report. For example, the net loss of agricultural exports in the region due to climate change would be between $30 billion and $52 billion in 2050. "Losses of this magnitude would limit development options as well as access to natural resources and ecosystem services," the report said.

But the development bank pointed out that the cost of helping countries adapt to the effects of climate change would be minor relative to the price tag for potential damage. It estimates that around 0.2 percent of GDP for the region, or about 10 percent of the costs of physical impacts, would be needed to support climate adaptation.

Latin America has had recent success reducing greenhouse gas emissions, mainly from changes in land-use policies, such as the reduction of emissions related to deforestation. According to the report, the region's greenhouse gas emissions fell 11 percent from the start of the century to 4.7 billion metric tons (5.19 billion tons) of carbon dioxide equivalent in 2010.

While progress has been made in preserving land that would be vulnerable to clear cutting for agriculture or other uses, the IDB said more is needed from the region. The transport and power sectors are expected to increase their share of greenhouse gas emissions by 50 percent by 2050, the report said. These two sectors alone could contribute per year 2 billion metric tons of CO_2e (carbon dioxide equivalence) in the region, according to the report.

This could push total greenhouse gas emissions in the region to 7 billion metric tons (7.7 billion tons) by 2050, or 9.3 metric tons (10.3 tons) per capita of carbon dioxide. "The reductions anticipated in land use change emissions will be more than compensated by increases in emissions from other sectors," said the report.

The IDB said the region should aim for no more than 2.2 metric tons (2.43 tons) of emissions per capita. To achieve that goal, the institutions behind the analysis said it would be necessary to invest around $110 billion per year, or 0.6% of projected Latin American GDP in 2050. "The report concludes that a pathway that promotes land-use policies stringent enough to achieve zero net emissions ... by 2030, combined with efforts to eliminate the carbon footprint in the power and transport sector by 2050 (along with other actions), would achieve the 2 tons per capita."

MIDDLE EAST

74. Israeli Car Importers Face Fines for Failure to Publish Accurate Air Pollution Data

Israel's Environmental Protection Ministry plans to fine three major vehicle importers for failing to publish accurate air pollution data for their vehicles. The fines would be the first sanctions imposed since Israel's Clean Air Law came into effect in January 2011. The vehicle importers have been informed that they will be fined $50,000 each for a single instance of failure to provide vehicle pollution figures or failure to use the proper colors signifying pollution level in printed materials describing their vehicles, the ministry said on May 22nd.

All publications about new commercial vehicles must include specified air pollution and fuel consumption data, as required by the Clean Air Law, the ministry said in a statement. The companies have 30 days to appeal the decision.

According to the ministry, Mayer Cars and Trucks failed to include any pollution information in a leaflet on the Volvo V70 and XC70 models, while Eastern Automobile Marketing similarly failed to include pollution information in online advertisements for the Range Rover. In addition, the Shlomo Group published a promotional leaflet for the Opel Insignia in which air pollution data for the car appeared without colors, without any special emphasis, without a bar charting the pollution levels, and under the misleading title “Green Score,” the ministry said.

Among other things, the Clean Air Law aims to provide car purchasers with sufficient knowledge to help them choose the “cleanest” and most economical vehicle available, the ministry said.

75. Israeli Ministry Seeks to Limit Generator Use, Boost Solar Panels

The Israeli government must act to minimize the polluting effects of its emergency plan to avert a power shortage this summer, the Environmental Protection Ministry and advocacy groups say. In particular, the ministry and green groups called for a limit on the operation of large generators that burn polluting fuels and an immediate increase in quotas for rooftop photovoltaic panels.

The emergency plan recently submitted by the Energy and Water Resources Ministry advocates the reactivation of a variety of power sources that run on relatively dirty fuels. It does not mention solar alternatives. Proposed measures in the emergency plan include connecting diesel-powered generators owned by government agencies or industrial firms to the national grid and allowing some existing power plants, including those in Haifa and Tel Aviv, to run on fuel oil.

The Environmental Protection Ministry would need to lower its urban air pollution standards to enable either action. The Environmental Protection Ministry has counter-proposed that generators located within 500 meters of a residential area, tourist attraction, vacation destination, or public building be allowed to run for no more than 100 hours per year. More isolated generators could operate for up to 300 hours per year, it said.

The ministry also asked that it be empowered to require owners of private power plants to submit an environmental impact statement if the ministry fears a given generator will cause particularly severe pollution.

In a May 2nd letter to Energy and Water Minister Uzi Landau, Erdan requested that increased quotas for solar energy production be added to the draft proposal scheduled for discussion by the Cabinet the week of May 14. The quotas are the amount of solar power that can qualify for above-market tariffs when sold to the Israel Electric Co.

Several green groups wrote their own letter to Prime Minister Benjamin Netanyahu on May 2nd, saying solar roof installations would be the simplest and cleanest way to help bridge the anticipated energy gap. The emergency plan “utterly disregards the existing and available potential of solar rooftops, which stands at more than 300 megawatts and much of which could flow already by this summer,” the organizations said. “The potential is not being realized due to absurdly limited quotas, despite the fact that solar roof construction has great advantages.”

Power shortages expected this summer stem from both a halt of natural gas supplies from Egypt and delays in building a new power plant in the lower Galilee. Some power plants already are using diesel fuel as a substitute for natural gas, but diesel burns less efficiently and requires dedicated machinery.

76. Israel Advances Programs to Reduce Oil Dependence in Transportation Sector

Israel is moving forward with a 10-year initiative to develop technologies that reduce the global use of oil in transportation, launching new standards and government-sponsored trials in recent weeks. At a ministerial meeting on June 3rd, the government approved Eyal Rosner to direct the $365 million initiative. Eugene Kandel, head of the National Economic Council, said during the meeting that more than 100 startup companies are currently active in Israel's alternative energies sector, in addition to 100 university-based groups researching oil-replacement technologies.

Energy and Water Resources Minister Uzi Landau added that his ministry is encouraging research and development of natural gas fuels, hoping to have concrete results to report by the end of the year. It has also been instrumental in adopting standards required to move compressed natural gas (CNG) testing forward.

The most recent, Standard 6235 was written by the ministry and published on June 4th by the Israel Standards Institute. It stipulates the technical requirements for the design, construction, operation, and maintenance of CNG refueling stations, and for the integration of natural gas pumps at existing fueling stations. It follows on the heels of natural gas Standard 6119, which regulates CNG-vehicle propulsion systems to allow for their expanded use.

An institute-approved standard becomes binding only once the Industry, Trade, and Labor Ministry determines that all or part of its technical specifications is needed to address issues of public health, safety, and environmental quality.

With the support of both the Energy and Water Resources Ministry and the Environmental Protection Ministry, the Ten gas station chain recently launched a six-month pilot program using M15 fuel, which adds 15 percent methanol to 85 percent benzene, to power a fleet of private cars in the Haifa area. While the caloric values of methanol are about half those of benzene, the price is less than half, so the use of methanol reduces costs per kilometer. It is also biodegradable, so potential leaks pose a lower risk of environmental damage. After the pilot, Dor Chemicals said it plans to build a $400 million factory in the Negev region that will produce about half a million tons of methanol per year.

77. Israel Adopts EU-Style Standards for Annual Vehicle Emission Tests

Israel is upgrading its annual vehicle licensing process by attaching manufacturers' air pollution standards, as required in Europe, to mandated emissions tests. The new regulations, signed by Environmental Protection Minister Gilad Erdan on June 10th, specify maximum carbon monoxide and hydrocarbon emission levels according to engine size, or by year of manufacture for cases in which manufacturer guidelines are lacking. The new rules will go into effect in September.

In addition, the ministry said it will begin to supervise inspections directly to ensure that polluting vehicles are taken off the roads. The regulatory changes will most significantly affect cars running on diesel fuel and those manufactured before 1995, which in the past were not regulated as strictly as other vehicles
.
“From now on, we can be sure that once a vehicle is on the road, it is functioning according to current standards, and unnecessary damage to public health has been avoided,” Erdan said in a prepared statement.

All vehicles in Israel must by law undergo an annual road worthiness test that checks carbon monoxide and hydrocarbon levels in the vehicle's exhaust, among other things. Until now, less stringent methods were used for checking older gasoline-powered vehicles, as well as vehicles operating on diesel fuel. Vehicles with gasoline engines from 1995 and later were checked according to the threshold values determined by their manufacturers for each model. Gasoline-powered vehicles manufactured before 1995 and all vehicles with diesel engines were measured according to a single value per year of manufacture. Tests on older and diesel vehicles were thus less exact, inconsistent with current European standards and, according to the ministry, not always implemented by the inspection centers.

Starting in September, all vehicles will be judged by the manufacturers' standards, leading to a meaningful reduction of polluting cars that pass the licensing tests, the ministry said. It added that it will join the Ministry of Transportation in overseeing the testing process to enforce the new regulations.

Implementation of the new regulations is “a further step in reducing the number of polluting vehicles in Israel and improving air quality,” the ministry said in a statement.

Motor vehicles are the leading cause of air pollution in most of Israel, although the ministry added that in some locations, such as Ramat Hovav and the Haifa Bay, industrial pollution is a close second.

GENERAL

78. Warming Gas Levels Hit 'Troubling Milestone'

The world's air has reached what scientists call a troubling new milestone for carbon dioxide, the main global warming pollutant. Monitoring stations across the Arctic this spring are measuring more than 400 parts per million of the heat-trapping gas in the atmosphere. So far, only the Arctic has reached that 400 level, but the rest of the world will follow soon.

"The fact that it's 400 is significant," said Jim Butler, global monitoring director at the National Oceanic and Atmospheric Administration's Earth System Research Lab in Boulder, Colo. "It's just a reminder to everybody that we haven't fixed this and we're still in trouble."

Carbon dioxide is the chief greenhouse gas and stays in the atmosphere for 100 years. Before the Industrial Age, levels were around 275 parts per million. For more than 60 years, readings have been in the 300s, except in urban areas, where levels are skewed. The burning of fossil fuels, such as coal for electricity and oil for gasoline, has caused the overwhelming bulk of the man-made increase in carbon in the air, scientists say.

It's been at least 800,000 years - probably more - since Earth saw carbon dioxide levels in the 400s, Butler and other climate scientists said.

Readings are coming in at 400 and higher all over the Arctic. They've been recorded in Alaska, Greenland, Norway, Iceland and even Mongolia. But levels change with the seasons and will drop a bit in the summer, when plants suck up carbon dioxide, NOAA scientists said. So the yearly average for those northern stations likely will be lower and so will the global number.

Globally, the average carbon dioxide level is about 395 parts per million but will pass the 400 mark within a few years, scientists said.

The Arctic is the leading indicator in global warming, both in carbon dioxide in the air and effects, said Pieter Tans, a senior NOAA scientist. "This is the first time the entire Arctic is that high," he said.

"It's an important threshold," said Carnegie Institution ecologist Chris Field, a scientist who helps lead the Nobel Prize-winning Intergovernmental Panel on Climate Change. "It is an indication that we're in a different world."

79. Global CO2 Emissions Hit Record in 2011 Led By China: IEA

China spurred a jump in global carbon dioxide (CO2) emissions to their highest ever recorded level in 2011, offsetting falls in the United States and Europe, the International Energy Agency (IEA) reported recently. CO2 emissions rose by 3.2 percent last year to 31.6 billion metric tons (34.83 billion tons), preliminary estimates from the Paris-based IEA showed. China, the world's biggest emitter of CO2, made the largest contribution to the global rise, its emissions increasing by 9.3 percent, the body said, driven mainly by higher coal use.

"When I look at this data, the trend is perfectly in line with a temperature increase of 6 degrees Celsius (by 2050), which would have devastating consequences for the planet," Fatih Birol, IEA's chief economist told reporters. Scientists say ensuring global average temperatures this century do not rise more than 2 degrees Celsius above pre-industrial levels is needed to limit devastating climate effects like crop failure and melting glaciers. They believe that is only possible if emission levels are kept to around 44 billion metric tons of CO2 equivalent in 2020.

Birol cited cutting fossil fuel subsidies, boosting energy efficiency and moving away from coal as "buttons to push" for world governments to help meet emission targets. Key points:

- He warned about the impact of phasing out nuclear power output after the Fukushima accident in Japan, which helped push Japanese carbon emissions 2.4 percent higher in 2011.

- In China, CO2 emissions per unit of GDP - or its carbon intensity - fell by 15 percent between 2005 and 2011, suggesting the world's second-largest economy was finding less carbon-consuming ways to fuel growth.

- India's emissions rose by 140 Mt, or 8.7%, moving it ahead of Russia to become the fourth largest emitter behind China, the United States, and the European Union. Despite these increases, per-capita CO_2 emissions in China and India still remain just 63% and 15%, respectively, of the OECD average.

- In the United States, the world's second-biggest CO_2 emitter, a switch to natural gas from coal in power plants, a slower economy and a mild winter helped cut emissions by 1.7 percent. US emissions have now fallen by 430 Mt (7.7%) since 2006, the largest reduction of all countries or regions. This development has arisen from lower oil use in the transport sector--linked to efficiency improvements, higher oil prices and the economic downturn which has cut vehicle miles traveled--and a substantial shift from coal to gas in the power sector. "The replacement of coal by shale gas is a key factor and what happened in the U.S. could very well happen in China and other countries and could definitely help in reducing CO_2 emissions," the IEA economist said.

- In Europe, a relatively warm winter combined with sluggish growth helped cut emissions by 1.9 percent.

Asked about prospects for global carbon emissions in 2012, Birol said: "It would come as a very, very big surprise to me if we saw a significant decline in CO_2 emissions."

The 450 Scenario of the IEA's World Energy Outlook 2011, which sets out an energy pathway consistent with a 50% chance of limiting the increase in the average global temperature to 2 C, requires CO_2 emissions to peak at 32.6 Gt (just 1.0 Gt above the 2011 level) no later than 2017. The 450 Scenario sees a decoupling of CO_2 emissions from global GDP, but that goal might be difficult to reach as the rate of growth in CO_2 emissions in 2011 exceeded that of global GDP. "The new data provide further evidence that the door to a 2 C trajectory is about to close," said Birol.

80. IEA: Global Oil Demand Growth Accelerating

After posting near-zero annual growth in the fourth quarter of 2011, global oil demand growth will gradually accelerate throughout 2012, culminating in an increase of 1.2 million b/d by this year's final quarter, the International Energy Agency said in its latest monthly oil market report. Global oil consumption is set to rise by 800,000 b/d this year to 90 million b/d, unchanged from the agency's previous report, with gains in developing countries more than offsetting declining demand within countries of the Organization for Economic Cooperation and Development.

The International Monetary Fund raised its global economic growth projections for this year and 2013 in the World Economic Outlook published last month. IMF now forecasts 2012 growth of 3.5%, revised from 3.3% in January, and 4.1% next year, up from the prior forecast of 4%. Leading the upside revisions are stronger growth projections for the US, Germany, France, Canada, and Japan.

IEA said the world's four biggest markets—China, the US, Europe, and Japan—should dominate the demand story in 2012. Chinese growth is forecast to maintain its global dominance in 2012, climbing by 400,000 b/d to 9.9 million b/d and accounting for nearly 50% of total worldwide growth.

Large demand declines are foreseen this year in Europe, down by 300,000 b/d to 13.9 million b/d, and in the US, down by 200,000 b/d to 18.7 million b/d. But Japan will buck the falling OECD demand trend, rising by 40,000 b/d to 4.5 million b/d, IEA said.

Among products, gas oil and diesel will provide the majority of the demand growth in 2012. Gas oil's strength, largely attributable to the economies of the non-OECD, is seen growing by 500,000 b/d to 14 million b/d, supported by the still relatively strong industrial, construction, and agricultural sectors. OECD demand for gas oil is projected to fall by 70,000 b/d in 2012 to 12.5 million b/d, with lower heating oil demand outweighing increases foreseen in OECD diesel demand.

Having fallen by 80,000 b/d in 2011, gasoline demand is forecast to expand by 180,000 b/d in 2012, taking global gasoline consumption to 22.5 million b/d, IEA forecasts. Most of the growth is a result of rapidly expanding non-OECD incomes, as non-OECD gasoline demand is forecast to climb by 290,000 b/d to 8.7 million b/d. Demand will continue to contract in the mature OECD markets.

Global oil supply increased by 600,000 b/d to average 91 million b/d in April, up 3.9 million b/d from a year earlier, as crude production in the Organization of Petroleum Exporting Countries accounted for more than 70% of the increase. Higher supplies from Iraq, Nigeria, and Libya lifted OPEC production from by 410,000 b/d to 31.85 million b/d, as Iranian crude output was unchanged at 3.3 million b/d in April, according to IEA.

IEA said it's "call on OPEC crude and stock change" is raised by 200,000 b/d to 30.9 million b/d for this year's third quarter and by 400,000 b/d to 30.7 million b/d for the fourth quarter, with the 2012 average now 30.3 million b/d.

OPEC's April effective spare capacity declined to 2.38 million b/d from 2.54 million b/d in March, IEA estimates. And for this year's third quarter, OPEC sustainable crude capacity is expected to increase by 330,000 b/d to 35.3 million b/d.

OPEC has increased output for 7 months running, and volumes are now nearly 3 million b/d above April 2011 levels. Higher OPEC production has, in part, offset constrained non-OPEC supplies stemming largely from unplanned outages, and OPEC's Persian Gulf producers also appear to have ramped up output ahead of the anticipated disruption in Iranian crude flows in coming months as the European Union's July 1 oil embargo nears, IEA said.

EU and US sanctions are expected to impact 800,000-1 million b/d of Iranian exports compared to 2011 volumes.

Meanwhile, the agency's figures show that non-OPEC supply increased by 100,000 b/d to 52.9 million b/d in April from a month earlier, as a seasonal rise in biofuels output offset declining supply in the UK North Sea and at synthetic crude plants in Canada.

Non-OPEC supplies are expected to rise by 600,000 b/d to 53.3 million b/d in 2012, down 90,000 b/d from last month's estimate due to downward revisions to Africa and Latin America. The outlook assumes that substantial production stoppages affecting the Sudan, South Sudan, Syria, and Yemen persist for much of 2012, the report said.

81. A Plea From The Planet's Top Scientists

Ahead of the recent G8 summit outside Washington and the upcoming Rio+20 environmental gathering in Brazil, the national science academies of 15 countries – including China – issued joint statements calling on world leaders to give greater consideration to the role of science and technology in addressing Earth's most pressing problems.

Prioritizing three areas – water and energy, natural disasters and greenhouse-gas emissions – the scientists urged governments to “engage the international research community in developing systemic, innovative solutions” to these “global dilemmas” in particular.

In separate statements on the challenges to be confronted, the scientists singled out: how to simultaneously meet water and energy needs; how to build resilience to natural and technological disasters; and how to improve knowledge of greenhouse gases to verify progress towards national goals and international commitments.

The statements – published on the website of the Royal Society, the United Kingdom’s national science academy, and elsewhere – were signed by representatives from Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Morocco, Russia, South Africa, the United Kingdom and the United States.

“Needs for affordable and clean energy, for water in adequate quantity and quality, and for food security will increasingly be the central challenges for humanity,” the scientists wrote, noting that these elements are strongly linked. Therefore, long-term, integrated, regional water and energy planning is essential, they said, cautioning: “Viewing each factor separately will lead to inefficiencies, added stress on water availability for food production and for critical ecosystems, and a higher risk of major failures or shortages in energy supply.”

On natural and technological disasters, the 15 noted the “huge social and economic costs on societies” that disasters impose. These costs can be lessened, the scientists wrote, by reducing exposure and adopting new strategies, including: risk surveillance, improvements in public-health systems and infrastructure standards, advanced information technology, and resilience capacity within development assistance.

“Our academies of science,” they continued, “are committed to working together with over 100 science, engineering and medicine counterpart organizations around the world to continue the process of better understanding the causes of disasters, finding ways to make society more resilient, making that information widely available, and helping to implement the many actions needed.”

Regarding emissions and carbon sinks, the scientists pointed out that “without globally standardized reporting of emissions, and improvements in understanding of natural sources of emissions, verification of progress in meeting climate-change targets is problematic”. Accurate national estimations of both natural and human-caused greenhouse gases – including carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) – are essential, they said. So, too, “better understanding of the global distribution of black carbon (which is soot, rather than a greenhouse gas) would both improve our ability to manage its impact on human health and allow better assessment of its contribution to climate change”.

Within global bio-geochemical cycles, they concluded, it is vital that the possibility of “major and/or rapid increases in atmospheric greenhouse gases” be understood. The largest of those risks include potential release of carbon dioxide and/or methane from high latitudes, ocean sediments, changes in ocean bio-geochemistry and circulation, and changes in the rain-forest carbon budget.

82. Suppliers Ride the MPG Wave Saving Fuel Brings High Profits

Gasoline at $4 a gallon and government-mandated fuel economy targets are creating vast opportunities for many big global suppliers. In North America, those suppliers are selling turbochargers, direct injection, stop-start equipment, eight-speed transmissions and many other systems that save fuel.

"If you bring a real idea to an OEM to improve fuel economy or lower emissions, they will seriously listen," says Tim Manganello, CEO of BorgWarner Inc., a top maker of turbochargers.

The trend is particularly beneficial for large global suppliers with major operations in Europe, such as Robert Bosch GmbH and ZF Friedrichshafen AG. In Europe, home of $8 a gallon gasoline, those companies have been developing fuel-saving technology for decades.

While top European suppliers are thriving in North America, nearly all top suppliers enjoyed a good year in 2011. Most posted solid increases in revenue last year as vehicle sales continued to bounce back from the recession, according to the annual Automotive News ranking of top suppliers of original-equipment parts to automakers in North America.

Demand for fuel-efficient parts is a boon to ZF, a German supplier that produces transmissions and other parts. The company's North American arm, ZF Group NAO, posted sales of original-equipment parts last year in North America of $2.68 billion, up 47 percent from 2010. The company is No. 17 on the list of suppliers to the North American auto industry. ZF is supplying fuel-saving eight-speed transmissions to Chrysler Group from plants in Kokomo, Ind., and Germany. The transmissions are available in the Chrysler 300 and Dodge Charger. In the fall, they will be installed in the re-engineered Ram 1500 pickup. The eight-speed transmission boosts fuel economy at least 6 percent vs. ZF's six-speed automatic, ZF says.

Meanwhile, ZF is spending 300 million euros, or about $386 million at current exchange rates, to build a transmission plant in Greenville, S.C. The factory will produce eight-speed transmissions along with nine-speed automatic transmissions for front-wheel-drive vehicles typically powered by a V-6. Deliveries start in 2013 from the plant. The plant's production capacity is spoken for, the company says, and expansion plans are under way. The company expects the nine-speed will boost fuel economy by at least 10 percent vs. a six-speed fwd transmission, ZF says.

ZF says demand for its electric power steering also is strong. Electric power steering eliminates the hydraulic power-steering pump, which reduces weight and drag on the engine. ZF's electric power steering plant in Florence, Ky., supplies General Motors vehicles such as the GMC Terrain and Chevrolet Equinox, Cruze, Volt and Malibu. ZF says it is expanding the plant to meet growing demand.

Meanwhile, North American automakers are snapping up turbochargers, which save fuel by capturing waste energy in exhaust gases and using it to force more air into the engine. And because turbos boost engine output, a turbo-equipped inline-four is roughly equivalent in horsepower and torque to a V-6 without a turbo. This allows automakers to downsize engines, saving weight and fuel. Honeywell Turbo Technologies says a car with a turbocharged inline-four is about 20 percent more fuel efficient than a comparable vehicle with a heavier V-6.

Last year, about 10 percent of new vehicles in North America were sold with turbos, says Tony Schultz, vice president for the Americas for Honeywell Turbo Technologies (No. 87 on the list). In 2016, he expects that number to reach 23 percent. Honeywell and BorgWarner (No. 28) dominate North America's market for turbochargers.

But Germany's Continental AG is seeking a piece of the action with its family of turbochargers built by affiliated supplier Schaeffler Group of Germany. Continental Automotive Systems U.S. Inc. is No. 3 on the list, while Schaeffler Group USA Inc. is No. 59. Continental won the contract to supply turbos to Ford Motor Co.'s three-cylinder engine, which went on sale this spring in Europe. Ford plans to offer the engine with a turbo in the spring of 2013 on an as-yet unidentified vehicle or vehicles in North America.

Also, a turbo-making joint venture of Robert Bosch and Mahle GmbH, Bosch Mahle Turbo Systems, is knocking on automakers' doors. The joint venture, founded in 2008, has said it has production contracts with six global automakers and expects to produce 1 million turbochargers annually by 2013. Robert Bosch's North American unit is No. 4 on the list; Mahle Inc., the North American subsidiary of the German company, is No. 49.

Turbochargers are key components of Ford's EcoBoost family of engines, along with direct injection and other technologies. Ford introduced EcoBoost in 2009 on a few models, such as the Lincoln MKS, and has steadily spread it to other vehicles.

The technology is well-known as an mpg-booster for the popular Ford F-150 pickup. BorgWarner supplies the turbo for the pickup's 3.5-liter V-6. The EcoBoost option's sticker price is $1,095 as an upgrade from a 5.0-liter V-8 on various F-150 models.

The automaker expects to offer the optional engine on 90 percent of its nameplates in 2014.

Turbo makers are investing heavily for the future, part of an industry wide quest to coax more efficiency from internal combustion engines. For instance, Honeywell won a 2012 Automotive News PACE Award, in part by using ceramic ball bearings on steel raceways to reduce friction in its turbos. The annual PACE Awards celebrate and honor innovation by automotive suppliers.
GM's mild hybrid

GM's eAssist engine technology is another new opportunity for suppliers. The technology turns a vehicle into what the industry calls a mild hybrid. The system provides extra power to the wheels, but it doesn't propel a vehicle by itself. The system uses an electric motor-generator, supplied by Continental that is bolted to the front of the engine and takes the place of the alternator. A drive belt connects the motor-generator to the crankshaft, boosting the engine with an extra 15 hp when the vehicle accelerates, say, onto a freeway.

Power for the motor-generator is supplied by a small lithium ion battery stored in the trunk. It is recharged by energy captured by the motor-generator during braking and coasting. Hitachi Vehicle Energy Ltd. makes the lithium ion battery cells for the 115-volt battery pack, which GM assembles.

The base powertrains of the Buick LaCrosse and Regal include eAssist as standard equipment. It's also on the Chevrolet Malibu Eco model and will be available on the upcoming redesigned 2014 Chevrolet Impala.

GM says eAssist boosts fuel economy up to 25 percent vs. a comparable car without the technology. The 2013 Malibu Eco, with a base sticker of $25,995, including shipping, is rated at 37 mpg on the highway.

Using mild hybrid starter generators to boost fuel efficiency is "popular in Europe today and in its early stages of gaining ground in North America," Continental said in a statement. "We feel this type of technology will expand in the coming years throughout North America, as automakers look for solid tools to assist them in meeting the upcoming CAFE standards." Federal corporate average fuel economy standards mandate sharp boosts in mpg over the coming years.

GM's eAssist package also includes a stop-start system, which saves fuel by turning the engine off at a complete stop and restarting it when the driver's foot leaves the brake. And stop-start, common on hybrids such as the Toyota Prius, is on the verge of huge growth in North America because it is spreading to non hybrids.

Stop-start requires a beefed-up battery, a more durable starter, various sensors, plus an electric auxiliary water pump. Direct injection is a nice complement because it eases restarting.

Ford's stop-start system, which debuts as a $295 stand-alone option on the redesigned 2013 Fusion this summer, generates fuel savings of 4 to 10 percent, depending on driving conditions, Ford says. Denso International America Inc. (No. 5) is supplying the starter. Ford has not said which upcoming vehicles will get stop-start. But EcoBoost vehicles, because they have direct injection, are strong candidates.

The Fusion will use a more durable 12-volt lead-acid battery, called an absorbent glass mat battery, purchased from Johnson Controls Inc. (No. 2). In the battery, mats of glass fibers are sandwiched between lead plates. Because the glass fibers soak up the batteries' electrolyte fluid, the batteries won't spill, even if damaged. So while saving fuel often requires the high-end engineering of turbochargers and hybrid batteries, even the humble 12-volt starter battery provides an opportunity for suppliers with better technology.

83. Study Forecasts High Growth in Global Low (Zero) Emission Vehicle Market

According to a new market research report[1], the global low emission vehicle market was valued $21.13 billion in 2011 and is expected to grow from $27.45 billion in 2012 to $103.13 billion by 2017. About 826.8 thousand low emission vehicles were shipped on a global level for 2011 and the number is expected to reach 3532.1 thousand units by 2017.

Various low emission vehicle types that are covered in the report are Mild Hybrid Electric Vehicle (MHEV), Full Hybrid Electric Vehicle (FHEV), Plug-in Hybrid Electric Vehicle (PHEV), and Pure Electric Vehicle (EV or BEV).

FHEVs are expected to remain as market leaders during the forecasted period. Market for FHEVs and BEVs will develop at a faster rate due to governments' initiatives to develop charging infrastructure and development in battery technology.

84. G8 Joins Coalition on Short-Lived Climate Forcers

Leaders of the G8 group of most advanced economies threw their weight behind efforts to curb emissions of methane, black carbon and hydrofluorocarbons (HFCs) during their recent annual meeting in the US. Germany, France, Italy, Russia and the UK agreed to join the Climate and

[1] "Low (Zero) Emission Vehicle Market (2012 - 2017) - By Degree of Hybridization & Type of Traction Battery Used - Global Forecast, Trends & Analysis" published by MarketsandMarkets

Clean Air Coalition, which was set up in February by the US and six other countries to address short-lived climate pollutants.

The pledge, offered by Group of Eight leaders at the conclusion of their May 18-19 meeting in Camp David, Md., is designed to enhance global action to cut emissions that remain in the atmosphere for only a short time. More than one-third of the rise in global temperatures is considered to be caused by short-lived pollutants.

The coalition was launched by the United States, Bangladesh, Canada, Mexico, Sweden, and the U.N. Environment Program and now includes 15 countries, plus the European Commission, UN environment program and World Bank. Current targets include emissions from diesel engines, inefficient brick kilns and methane from landfills.

In a May 19 statement, G-8 leaders said participating in the coalition "will enhance our collective ambition in addressing climate change by complementing efforts to address CO2 emissions." Targeting those short-term pollutants "can help reduce global warming, improve health, and increase agricultural productivity, as well as energy security," according to the statement.

The G-8 leaders also commissioned the World Bank to prepare a report on how to integrate efforts to curb those short-term pollutants with existing bank activities. The leaders also urged the World Bank to solicit input from various nations to evaluate the latest approaches to financing projects to reduce methane, a greenhouse gas emitted during natural gas extraction but also from landfills and agricultural activities.

The G8 leaders committed to taking comprehensive action to reduce short-lived climate pollutants as a compliment to reducing CO2, describing the new effort as a means to promote "increased ambition" to protect the climate. The leaders also reaffirmed their commitment to limit the increase in global temperatures to less than 2°C over pre-industrial levels, to phase-out inefficient fossil-fuel subsidies over the medium term, and to increase food security.

Short-lived climate pollutants include black carbon soot, methane, and hydrofluorocarbons, which are factory-made gases used in refrigeration and air conditioning and the fastest growing climate pollutant in the U.S. Reducing the short-lived climate pollutants can cut the rate of climate change in half and in the Arctic by two-thirds for the next 30 to 40 years, according to a recent assessment by UNEP and the World Meteorological Organization carried out by more than 50 of the world's leading climate scientists.

85. C40, ICLEI Release Pilot Framework to Track Citywide Greenhouse Gas Emissions

On May 14th, a group of organizations released a pilot protocol that aims to standardize how cities and communities measure and report on their greenhouse gas emissions. The pilot Global Protocol for Community-Scale Greenhouse Gas Emissions includes a listing of the minimum emissions data cities need to collect and quantify under the framework, including greenhouse gases released from residential and commercial buildings; air, water, and road transport; wastewater treatment facilities; and other sources.

The pilot protocol was developed by the C40 Cities Climate Leadership Group and ICLEI-Local Governments for Sustainability, in collaboration with the World Bank Group, the U.N. Human Settlements Program, the U.N. Environment Program, and the World Resources Institute.

C40 is a global group of large cities that have joined to address climate change. The group includes 40 member cities and 18 affiliate cities. ICLEI is an international association of local, state, and regional governments that focuses on sustainable development. The organizations are recruiting a group of 10 to 20 cities to implement the pilot framework over the next six months. The selected cities will be globally representative. Data from the pilot will be used to fine-tune the final version of the protocol, which is expected to be released in approximately six months.

The pilot protocol was released at an event during the United Nations Framework Convention on Climate Change talks in Bonn, Germany.

City officials from New York City and Portland, Ore., as well as representatives from Buenos Aires, Mexico City, Paris, and Taipei, helped develop the framework.

The emissions accounting and reporting framework contained in the pilot is simplified and streamlined compared to an earlier draft version released in March. The pilot version also requires cities to report on six gases identified as greenhouse gases by the Intergovernmental Panel on Climate Change—carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride—as a minimum requirement.

The protocol is designed for use by authorities with jurisdiction over states, cities, counties, districts, or other entities. It is designed to help local governments account for how activities affect the city's emissions footprint and make decisions about curbing emissions.

86. Cities' Support Crucial to Achieve Goal of 20M Electric Vehicles by 2020, IEA Says

Cities' construction of charging infrastructure and other support will be critical to putting 20 million electric vehicles on the road by 2020 as part of an effort to slash energy consumption and greenhouse gas emissions, according to a report[2] released on May 5th by the International Energy Agency. The report said electric vehicles (EVs) offer one of the most promising technology pathways for cutting transportation's 20 percent share of overall global primary energy use in 2009, and its 25 percent share of energy-related carbon dioxide emissions, nearly half of which are from passenger vehicles. Their production also could spur economic growth, the report said.

The 75-page report, which IEA produced in concert with several other international groups, describes how 16 “pioneering” cities in Asia, Europe, and North America are preparing for mass market deployment of electric vehicles.

Today's EV market is very small—for example, Los Angeles and the Dutch city of Rotterdam combined have fewer than 3,000 EVs in operation. But the market is growing. A record 40,000 EVs and plug-in hybrids were sold worldwide in 2011. Los Angeles is aiming to have 80,000 electric vehicles on the road by 2015, while Rotterdam aims for 200,000 by 2025, the report said.

According to IEA, a target of 20 million electric vehicles (EVs) worldwide must be met by 2020 to both increase energy security and reduce greenhouse gas emissions. The report said urban programs are critical to reaching the goal because the relatively short commutes of most urban dwellers make cities the ideal “test beds.”

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[2] “The EV City Casebook: A Look at the Global Electric Vehicle Movement”

EV technology needs to go through several stages of market development, optimization, and scale-up, it said. The 16 cities use a variety of innovative policy measures and programs, with many employing a mix of financial and non-financial consumer incentives to boost demand for vehicles and charging infrastructure. Financial incentives include rebates or tax credits on vehicles, often paired with national government purchase subsidies, and exemptions from vehicle registration taxes or license fees, reduced tolls and parking fares, and discounts for charging equipment and installation.

Cities are jump-starting markets by purchasing EVs for municipal fleets and adding hybrid buses for public transportation, the report said.

According to the report, given a moderately clean electricity supply, EVs can achieve 50 grams of carbon dioxide per kilometer, well below today's most efficient cars, which emit between 100 and 150 grams per kilometer. Even hybrid electric vehicles achieve only around 90 grams of carbon dioxide per kilometer, it said.

87. Diesel Fumes As Hazardous As Passive Smoking Says World Health Organization

Diesel fumes cause cancer, the World Health Organization's cancer agency declared this week, a ruling it said could make exhaust as important a public health threat as second-hand smoke. The risk of getting cancer from diesel fumes is small, but since so many people breathe in the fumes in some way, the science panel said raising the status of diesel exhaust to carcinogen from "probable carcinogen" was an important shift.

"It's on the same order of magnitude as passive smoking," said Kurt Straif, director of the International Agency for Research on Cancer department that evaluates cancer risks. "This could be another big push for countries to clean up exhaust from diesel engines."

Since so many people are exposed to exhaust, Straif said there could be many cases of lung cancer connected to the contaminant. He said the fumes affected groups including pedestrians on the street, ship passengers and crew, railroad workers, truck drivers, mechanics, miners and people operating heavy machinery.

The new classification followed a weeklong discussion in Lyon, France, by an expert panel organized by the IARC. The panel's decision stands as the ruling for the IARC, the cancer arm of the World Health Organization.

The W.H.O. decision, the first to elevate diesel to the “known carcinogen” level, may eventually affect some workers who are heavily exposed to exhaust. It is particularly relevant to poor countries, where trucks, generators, and farm and factory machinery routinely belch clouds of sooty smoke and fill the air with particulates.

The United States and other wealthy nations have less of a problem because they require modern diesel engines to burn much cleaner than they did even a decade ago. Most industries, like mining, already have limits on the amount of diesel fumes to which workers may be exposed.

The American Cancer Society is likely to come to the same conclusion the next time its scientific committee meets, said the director, Dr. Otis W. Brawley. Debra T. Silverman, a cancer researcher for the United States government who headed an influential study published in

March that led to Tuesday’s decision, said she was “totally in support” of the W.H.O. ruling and expected that the government would soon follow suit in declaring diesel exhaust a carcinogen.

Three separate federal agencies already classify diesel exhaust as a “likely carcinogen,” a “potential occupational carcinogen” or “reasonably anticipated to be a human carcinogen.” Dr. Silverman, chief of environmental epidemiology for the National Cancer Institute, said her study of 50 years of exposure to diesel fumes by 12,000 miners showed that nonsmoking miners who were heavily exposed to diesel fumes for years had seven times the normal lung cancer risk of nonsmokers.

The W.H.O. also said diesel exhaust was a possible cause of bladder cancer. Diesel exhaust now shares the W.H.O.’s Group 1 carcinogen status with smoking, asbestos, ultraviolet radiation, alcohol and other elements that pose cancer risks.

Dr. Silverman said her research indicated that occupational diesel exposure was a far greater lung cancer risk than passive cigarette smoking, but a much smaller risk than smoking two packs a day.

Many studies have suggested links between diesel and lung cancer, but Dr. Silverman said hers was the first to measure with precision how much diesel exhaust each group of mineworkers was exposed to. Her study clearly established that the more a miner was exposed to diesel, the greater his cancer risk, she said.

Cancer killed 7.6 million people worldwide in 2008, the most recent year for which the WHO has full data. Lung cancer was the most deadly type, accounting for 18 percent of cancer deaths.

IARC said it had considered recent advances in diesel technology which had cut levels of particulates and chemicals in exhaust fumes, particularly in developed economies, but said it was not yet clear how these might translate into health effects. "Research into this question is needed," it said. "In addition, existing fuels and vehicles without these modifications will take many years to be replaced, particularly in less developed countries, where regulatory measures are currently also less stringent."

IARC said gasoline exhaust fumes should be classified as "probably carcinogenic to humans", a finding that was unchanged from its previous assessment in 1989.

88. New Evidence Links Ozone Exposure to Potential Heart Attacks

Young, healthy adult volunteers exposed for two hours to ozone developed physiological changes associated with cardiovascular ailments, according to a new study reported in Circulation, an American Heart Association journal. Study participants showed evidence of vascular inflammation, a potential reduced ability to dissolve artery-blocking blood clots, and changes in the autonomic nervous system that controls the heart's rhythm. The changes were temporary and reversible in these young, healthy participants.

Ground level ozone is created when pollutants from vehicles, power plants, industry, chemical solvents and consumer products react in the presence of sunlight. Recent epidemiology studies have reported associations between acute exposure to ozone and death but little is known about the underlying pathophysiological pathways responsible.

"This study provides a plausible explanation for the link between acute ozone exposure and death," said Robert B. Devlin, Ph.D., the study's lead author and senior scientist at the U.S. Environmental Protection Agency's (EPA) National Health and Environmental Effects Research Laboratory in Research Triangle Park, N.C.

Devlin and colleagues focused on a single, short-term exposure and not the effects of years of exposure to ozone. Researchers exposed 23 volunteers, ages 19 to 33, to 0.3 parts per million (ppm) of ozone. The dose was higher than the EPA's eight hour ozone standard of 0.076 ppm. However, a person breathing 0.3 ppm for two hours receives roughly the same amount of ozone as does a person breathing the lower 0.076 ppm for eight hours, Devlin noted.

Study participants underwent two controlled exposures — one to clean air and one to ozone-polluted air — at least two weeks apart. During each exposure, participants alternated 15-minute periods of stationary cycling and rest.

None of the participants reported complaints or physical symptoms after inhaling clean air or ozone. However, immediately following and the morning after ozone inhalation, tests showed significant ozone-induced vascular changes compared to clear-air exposure. These changes included:

- Increase in blood levels of interleukin 1beta, a signature marker of inflammation that appears to play a key role in heart disease.
- Decrease in plasminogen activator inhibitor 1 and plasminogen, components that play an important role in dissolving blood clots that may form along arterial walls.
- A change in heart rhythm, indicating altered autonomic nervous system control of heart rate.

Epidemiology studies have also associated acute exposure to another ubiquitous air pollutant, particulate matter (PM), with death in elderly people with cardiovascular disease. Particulate matter is tiny airborne particles that can be inhaled into the lungs. Controlled exposure studies of both humans and animals have described PM-induced changes that are very similar to those described in this ozone study, suggesting that both pollutants may be causing death by affecting similar pathways, the researchers said.

The World Health Organization estimates 2 million people worldwide, mostly elderly people with cardiovascular disease, die because of acute exposure to air pollution. The EPA puts the yearly U.S. toll at 40,000-50,000 deaths.

89. Exxon CEO Calls Climate Change Engineering Problem

Exxon Mobil CEO Rex Tillerson said recently that efforts to address climate change should focus on engineering methods to adapt to shifting weather patterns and rising sea levels rather than trying to eliminate use of fossil fuels. Tillerson said humans have long adapted to change, and governments should create policies to cope with the Earth's rising temperatures.

"Changes to weather patterns that move crop production areas around -- we'll adapt to that. It's an engineering problem and it has engineering solutions," Tillerson said in a presentation to the Council on Foreign Relations. "The fear factor that people want to throw out there to say 'We just have to stop this,' I do not accept."

Exxon Mobil, once one of the staunchest critics of climate change research, has acknowledged under Tillerson's leadership that human-made emissions have contributed to altering the planet's climate. The company now supports taxing carbon emissions.

Still, Tillerson said issues such as global poverty were more pressing than climate change, and billions of people without access to energy would benefit from oil and gas supplies. "They'd love to burn fossil fuels because their quality of life would rise immeasurably," he said. "You'd save millions upon millions of lives by making fossil fuels available to parts of the world that don't have it," he added.

Tillerson's remarks followed by just a few days a global meeting in Rio de Janeiro aimed at setting up goals for sustainable development to help the very people the oil executive mentioned. Many of the world's poorest are expected to feel the harshest effects of climate change, including sea level rise, more severe storms, floods and droughts. The gathering of government officials, business people and non-governmental groups ended with what some participants considered lackluster results. (See below)

The U.N. Intergovernmental Panel on Climate Change has emphasized the need for mitigation of global warming, including limiting climate-warming carbon emitted by fossil fuels like oil, along with adaptation to it.

90. Rio+20 Ends With Weak Commitment

Global leaders ended a U.N. development summit with what was widely considered a lackluster agreement, leaving many attendees convinced that individuals and companies, rather than governments, must lead efforts to improve the environment. Nearly 100 heads of state and government gathered over three days in efforts to establish "sustainable development goals," a U.N. drive built around economic growth, the environment and social inclusion. But a lack of consensus over those goals in Rio de Janeiro led to an agreement that even some signatory nations said lacked commitment, specifics and measurable targets.

A series of much-hyped global summits on environmental policy has now fallen short of expectations, going back at least to a 2009 U.N. meeting in Copenhagen that ended in near chaos. As a result, many ecologists, activists, and business leaders now believe that progress on environmental issues must be made locally with the private sector, and without the help of international accords.

Most troubling for many critics of the summit is the fact that leaders arrived in Rio merely to sign a text that their diplomats had all but sealed beforehand. The text, dubbed "The Future We Want," left little room for vision or audacity from presidents and prime ministers, critics argued.

Some heads of state and government stayed away, given the global economic slowdown, worsening debt woes in Europe and continued violence in the Middle East. Notable absentees included U.S. President Barack Obama, German Chancellor Angela Merkel and British Prime Minister David Cameron, all of whom attended a gathering of the Group of 20 major economies earlier this week in Mexico.

The summit, known as Rio+20, was never expected to generate the sort of landmark accords signed at the 1992 Earth Summit in Rio, which included a treaty on biodiversity and agreements that led to the creation of the Kyoto protocol on greenhouse emissions. Although this week's meeting attracted more than 50,000 people, many were disappointed that the leaders made few specific commitments on issues ranging from energy to food security to oceans.

The completion of a draft text even before the arrival of government heads gave the gathering itself a sense of finality from the start. Some delegates left on Thursday and by late Friday a handful of leaders were still delivering ceremonial addresses in a large, empty hall. Instead of forging legally binding treaties, organizers say, the purpose of the summit was to initiate a process to define a new set of development principles. But that process, like most global diplomacy, is rife with conflicting interests and tensions between rich countries and the developing world.

91. UN Aviation Body Says It Will Have Emissions Plan by March

The head of the United Nations body that oversees civil aviation has said that he expects to have a draft proposal on measures to tackle emissions from aviation by March 2013, rather than at the end of 2012 as he had said previously. The International Civil Aviation Organization's governing council is expected to discuss "market-based measures" to reduce emissions next week. Secretary-General Raymond Benjamin said he will ask it to eliminate one of four options on the table at that session. Others could be ruled out when the council meets again in the autumn.

"I believe that the turning point will be in March next year, when we will put one option on the table, if all goes well," he said. "It depends on the member states."

Stiff resistance from China, the United States and other nations to the European Union's airline emissions trading scheme has put the ICAO under pressure to come up with a global alternative that could resolve the dispute. Under the EU's system, airlines must buy permits for greenhouse gas emissions for planes operating in, and traveling to and from, Europe. Opponents say that violates non-EU states' sovereignty, and that ICAO is the right place to come up with an emission-reduction plan.

Benjamin said his ultimate objective is ICAO's autumn 2013 assembly, where its 191 members would have to approve any global emissions plan. The full assembly meets only once every three years. "We have to have something for the assembly," he said. But an early consensus on the smaller council would give some reassurance that the U.N. body can help resolve escalating conflict over the EU plan.

Airbus says that because of the trade row, Chinese airlines have suspended long-distance jet orders worth up to $14 billion.

The ICAO council's President Roberto Kobeh Gonzalez told reporters in March that the four options being considered are mandatory offsetting of emissions from airlines, mandatory offsetting with some revenue-generating mechanism, and two cap-and-trade systems. Under one, all aviation emissions could be traded. Under the other, only increases or decreases from an initial emissions baseline could be traded.

The governing council of the International Civil Aviation Organization (ICAO) has further narrowed its list of possible market-based measures for reducing the sector's greenhouse gas emissions. Six options were originally considered.

The council has discarded three options so far: two in March and another at a meeting in Montreal on 26-27 June. The latest option to be dropped consists of creating a 'baseline and credit' emissions trading scheme to reward airlines or countries that outperform a pre-determined benchmark. According to the working group responsible for developing the measures, the limited potential for reducing aviation emissions would have resulted in extensive use of credits from other sectors. As a result, there was little difference between this option and another based on global mandatory offsetting.

The mandatory offset approach and the other two remaining options – an offset system with an extra transaction fee for raising climate funding and a 'cap and trade'-style trading scheme – will be considered at the next ICAO council meeting in November.

92. Making Ships More Energy-Efficient Key to Sustainable Development, IMO Chief Says

Improving the energy efficiency of the shipping industry is an important part of the International Maritime Organization's effort to ensure sustainable maritime development, the agency's secretary general, Koji Sekimizu, said June 25th. “We're considering any clear action to ensure energy efficiency not only in the context of climate change but also because we recognize that fossil fuel resources are not infinite,” Sekimizu told a news briefing.

Other “pillars” IMO has identified to promote sustainable shipping include:

- creating mechanisms to transfer green technology to developing countries;
- developing maritime infrastructure;
- strengthening the capacity of the Sweden-based World Maritime University; and
- promoting acceptance and implementation of IMO's conventions on the environment.

Sekimizu, from Japan, succeeded E.E. Mitropoulos of Greece at the helm of the IMO in January. The briefing at IMO headquarters was designed to present the U.N. agency's commitment to a sustainable maritime development strategy.

Sekimizu also summed up IMO activities at the Rio+20 conference, where global political leaders agreed to form an expert working group to define sustainable development goals.

Sekimizu said the agency's sustainable maritime development strategy would cover “every important environmental issue” and that “market-based measures should be included.” But Sekimizu said it was too early to detail what role such measures would play.

According to the latest IMO figures, international shipping produces 870 million metric tons of carbon dioxide annually, almost 2.7 percent of the world's total.

93. World Development Banks to Invest $175B in Sustainable Transportation Systems

The world's eight largest multilateral development banks pledged on June 20th to invest $175 billion by 2022 to fund sustainable transportation systems, thus reducing deaths related to air pollution and traffic accidents. The World Bank, the Asian Development Bank, and six other banks announced the financing at the Rio+20 sustainable development conference. The bulk of the funds will be used to replace dirty buses with cleaner ones that will operate on their own fast-track lanes; improve freight transport to take trucks off the road; build subways in some cities; and reduce the amount of urban parking through more efficient management.

Asian Development Bank President Haruhiko Kuroda, on behalf of the banks, told a news conference, “Developing countries have the opportunity to leapfrog to a greener future of less motorization, shorter commutes, and more energy-efficient transport systems.”

According to the Manila-based international lender, without dramatic changes, global carbon dioxide emissions from the transportation sector are projected to increase nearly 50 percent by 2030 with profound environmental, economic, and social consequences. Meanwhile, many large Asian cities suffer from severe air pollution related to transportation.

ADB said sustainable transport solutions are available, citing its projects involving low-cost electric vehicles in the Philippines, urban metro rail systems in Vietnam, bus rapid-transit systems in Mongolia and Bangladesh, and inland waterway transport in China.

The other multilateral banks involved are the African Development Bank, CAF (Development Bank of Latin America), the European Bank for Reconstruction and Development, the European Investment Bank, the Inter-American Development Bank, and the Islamic Development Bank.