

E-news update October 3 2005

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- 1.1. Turmes report sends strong signal to EU leaders - MEPs call for up to 25% of EU energy to be renewable by 2020

29 September 2005, The Greens/EFA in the European Parliament

An overwhelming majority of MEPs today supported a historic report that urges the European Commission and Council to speed up the development of renewable energies in all sectors, including transport, electricity, heating and refrigeration. The report, drafted by Green/EFA group energy coordinator and MEP for Luxembourg Claude Turmes, also supports the target of 25% of energy consumed in the EU to come from renewable sources by 2020. Speaking just after MEPs voted on his report, Turmes said: "This is a timely vote. With oil prices predicted to stay constantly high over the next months, and the devastating effects of climate change increasingly apparent, I am pleased to see that such a broad consensus is emerging in the Parliament. We have sent an unmistakable request to the Commission to come up with strong new legislation and pave the way for a stable legislative framework for the next 15 years." "There are currently more than 21 different technologies available which can convert renewable energy sources for all sorts of energy needs, and the costs for utilising these sustainable sources have been decreasing over the last decade. We have the technology and the organisational skills. What we need now is a stable investment climate. That is the key task that European politicians must get right." "The EU's renewable energy industry has a turnover of €15bn and employs more than 250,000 people. It is one of the few industries in which Europe has a technological lead in the world." "MEPs have demanded that renewable energy, which makes up 10% of the overall energy consumed in the EU today, increases to 20% – 25% by 2020. By 2020 renewables have the potential to be as important an energy source in EU as gas and oil are."

1.2. European Aviation Could Join Climate Emissions Trading Scheme

27 September 2005, ENS

The European aviation industry could begin to participate in the EU's Greenhouse Gas Emissions Trading Scheme (ETS) as early as 2008, if a plan presented today by the European Commission is adopted. The plan is aimed at reducing air travel's growing contribution to climate change. Airplanes are an increasing source of greenhouse gas emissions that are causing global warming, the Commission said, giving the example of a return flight for two from Amsterdam to the Thai resort of Phuket. The trip produces more of the greenhouse gas carbon dioxide (CO₂) than the average new car does in a year. In a formal Communication, the Commission says the most promising way to tackle aviation emissions is to bring aircraft operators into the EU's Greenhouse Gas Emissions Trading Scheme (ETS). The ETS sets an overall cap on greenhouse gas emissions, within which participating operators can buy and sell emission allowances as needed. The Commission sees the market mechanism as a permanent incentive for airlines to minimize their emissions. The aviation industry is growing and so is the amount of greenhouse gases emitted by aircraft. Environment Commissioner Stavros Dimas said, "The boom in flying is bringing with it a rapid rise in greenhouse gas emissions. Extending emissions trading to the aviation sector will limit these emissions and ensure that aviation, like all other sectors, contribute to reducing the harmful greenhouse gases. Through emissions trading, airlines will be able to do so at the least possible costs." Vice President and Commissioner for Transport Jacques Barrot said, "There is a growing consensus in the aviation sector that emissions trading represents the best way forward to cut greenhouse gas emissions." Aviation's share of overall EU greenhouse gas emissions is still modest at about three percent, but its emissions are growing faster than any other sector and risk undermining progress achieved through emission cuts in other areas of the economy, said the Commission. EU emissions from international flights grew by 73 percent from 1990 to 2003. This increase could widen to 150 percent by 2012 unless action is taken, the Commission estimates. Such growth would cancel out more than a quarter of the eight percent reduction in total greenhouse gas emissions that the Kyoto Protocol requires the EU-15 to achieve between 1990 and 2012. CO₂ emissions from domestic flights are subject to emission targets under the Kyoto Protocol, but international flights are not. British Airways today welcomed the European Union's decision to develop proposals to include aviation in the EU emissions trading scheme. The airline believes that emissions trading is the most environmentally effective and economically efficient way to manage carbon dioxide emissions from aviation. Andrew Sentance, British Airways' chief economist and head of environmental affairs, said, "The EU scheme should provide a practical and realistic way of addressing the climate change impact of carbon dioxide emissions from aviation." British Airways is willing to participate in the EU's Greenhouse Gas Emissions Trading Scheme. "We believe that it should apply initially to intra-EU flights only. There is no international agreement to introduce emissions trading for global aviation and we do not want the EU scheme to be sidelined by international disputes or for EU airlines' competitiveness to be jeopardized," he said. But the Commission differs from British Airways on this point. From an environmental point of view, the Commission said today that the ETS should cover all emissions from any flight departing from the EU, whether to another EU destination or a third country. EU and non-EU carriers would be treated equally. British Airways is the only airline participating in the UK government's trial emissions trading scheme and its domestic flight and property carbon dioxide emissions are down 23 percent compared to a 1998-2000 baseline. The airline has improved its fuel efficiency by 27 percent since 1990 and, earlier this month, launched a scheme where its customers can volunteer to help to offset the carbon dioxide emissions from their flights. The European Union's 6th Environmental Action Programme committed the bloc to take specific action to reduce greenhouse gas emissions from aviation if no such measures were taken by the International Civil Aviation Organization (ICAO), the responsible international body, by 2002. ICAO has not taken such action, but it has endorsed the concept of emissions trading. In preparing its strategy the Commission examined several other types of market-based solutions, including airline ticket or departure taxes and emissions charges, but concluded that these would be either less effective in environmental terms or less cost-efficient.

1.3. Commissioner Dimas to hold first sectoral dialogue on climate change

27 September 2005

Environment Commissioner Stavros Dimas will hold talks on tackling climate change with politicians representing European and national associations of local and regional authorities at the Committee of the Regions (CoR) on Thursday, 6 October. The meeting, to be chaired by CoR First Vice President Sir

Albert Bore, is the first such 'sectoral dialogue' between the associations and a Commissioner. The idea of holding face-to-face talks on a specific area of EU policy was put forward by Commission President José Manuel Barroso in February following the annual 'structured dialogue' with the associations, where broader themes are discussed. Commissioner Dimas said: "This thematic session of the structured dialogue will provide the opportunity to discuss the issue of climate change in the light of progress made towards the implementation of the Kyoto Protocol. The Commission firmly believes that sessions within the dialogue must seek to strengthen links between the European institutions and local and regional authorities. I am convinced that this represents a further step towards bringing Europe closer to its citizens." First Vice-President Bore also welcomed the initiative. "Climate change is something which affects every one of us and it can only be tackled effectively by working together in partnership, at the regional, national and international level," he said. "This dialogue also reflects the fact that local and regional authorities have considerable responsibilities in terms of implementing EU environmental laws. Climate change is an issue that we cannot afford to ignore: we all have a duty to protect the planet for the sake of future generations." The contribution of local and regional government to combating climate change will be the subject of an upcoming opinion by CoR member Kenneth Bodfish (PES), leader of Brighton and Hove City Council, UK. The opinion was requested by the UK Presidency. The sectoral dialogue talks will be held from 15:30-17.30 on 6 October, directly after a meeting of the CoR's Commission for Sustainable Development (DEVE), in Room 52 at the Committee's headquarters, 101 Rue Belliard, 1040 Brussels.

1.4. European commission to publish plan to tackle aviation emissions 27 September 2005

On Tuesday 27 September the European Commission is due to publish its "Statement of Intent" on the measures that it believes are required to tackle the impact from aviation emissions on climate change. The Commission is likely to recommend a number of measures including bringing aviation into the EU Emissions Trading Scheme. Friends of the Earth wants the EU to introduce effective economic measures to bring aviation emissions under control as soon as possible, but the EC is unlikely to act until 2008 at least. In the meantime Friends of the Earth is urging the British Chancellor, Gordon Brown, to increase Air Passenger Duty and for the UK Government to review its aviation strategy. Last week Environment Minister Elliot Morley said it was "...ludicrous that aviation is completely outside any of the international agreements and other measures relating to emissions control and it can't go on." The announcement comes as concern is growing about the threat. Last week the Tyndall Centre for Climate Change research published a report warning that every household, motorist and business will have to reduce their carbon dioxide pollution to zero, if the growing aviation industry is to be incorporated into Government climate change targets. Friends of the Earth's aviation campaigner, Richard Dyer, said: "The massive growth in aviation is threatening to destroy any hope of tackling climate change. Europe must act to tackle the problem. But whatever measures are proposed the critical test is whether they are effective enough to bring aviation's emissions under control as fast as possible." "But we cannot afford to wait years for Europe to act. Gordon Brown should announce an increase in Air Passenger duty in his next Budget statement, and the Government must urgently review its disastrous aviation strategy." Background: The Commission has spent several years examining and evaluating the effectiveness and practicalities of introducing various economic measures designed to control aviation's climate emissions. These include: Kerosene (aviation fuel) tax, Emissions charge - levied on actual emissions - similar to a tax and Bringing aviation into the EU Emissions Trading Scheme (ETS) Earlier this year the commission also consulted the public, Governments and other organisations and asked for their views on how aviation's climate impacts should be addressed The importance of the Statement Aviation is the fastest growing source of climate change emissions both in the UK and internationally. Yet aviation emissions from international flights are not included in the Kyoto Protocol or national climate reduction targets because of disagreement about who is responsible for them. The Tyndall research, published last week, found that if aviation growth in the UK and EU continues at current rates it will make it virtually impossible for both to meet their objective of tackling climate change even if all other industries reduce their carbon emissions to zero. Tyndall also found that technology improvements will result in emission cuts of only 1.2 per cent per year. Meanwhile growth in the industry is over 5 per cent per annum in some EU countries. It is therefore clear that economic measures to reduce demand are imperative. The EC statement will be the first time that any nation - or group of nations - has made a serious proposal to tackle this issue. Most other countries outside the EU (particularly the US) are

against the introduction of any fiscal measures to address climate change. Indeed, in 2004 the US even made a concerted attempt at the International Civil Aviation Organisation (ICAO) meeting in Montreal to prevent the EU taking action to control its own emissions! What will the Statement say? The Statement is likely to favour bringing aviation into the EU Emissions Trading Scheme. But this is unlikely to be possible until 2008 at the very earliest. Under the EU ETS a budget is set for the amount of carbon that companies are allowed to emit. The emissions trading scheme allows European companies that emit less carbon dioxide than allowed to sell unused allotments to those who overshoot the target. It will probably propose additional 'flanking instruments' (such as an emissions charge) to help deal with aviation's full climate impacts. Aviation has additional climate changing impacts because emissions have a bigger effect at high altitude. It will confirm the EC policy of taxing energy and signal the intention to remove barriers to taxation of kerosene (aviation fuel) in the longer term. But the Statement won't fully grasp the nettle It won't set targets for cuts in aviation emissions It won't set a timetable for the implementation of measures It won't give details of the measures required It won't lay down the geographical coverage of the measures. Although the Commission is believed to be in favour of the widest possible coverage, i.e. intra EU and international departures from EU airports. What happens next? Member states will consider the proposals and are likely to discuss it at the European Council in December 2005. A working party will be set up to work on design and implementation issues during 2006. 2006 should see progress towards implementation. Introduction likely after 2008, but could be as late as 2012 What is the view of the UK Government and other EU Government's think? UK Government is very keen to see aviation brought into the Emissions Trading Scheme, the 2003 Aviation White Paper laid out its intention to use its current EU presidency to make progress towards bringing intra EU aviation into phase 2 of the EU ETS "in 2008 or as soon as possible thereafter". The UK is the most enthusiastic supporter of bringing aviation into the EU ETS. Other EU Member States are believed to range from being mildly supportive of ETS to outwardly hostile to any measures that they believe will increase the cost of flights. Some Member States believed to favour an emissions charge or kerosene taxation over ETS. Proposals for an Emissions charge or ETS will require a majority of the 25 Member States to vote in favour. But an EU-wide kerosene tax requires unanimity. What does the aviation industry think? In the UK at least, the aviation industry is broadly supportive of bringing aviation into the EU ETS, BAA, BA, Virgin Atlantic and Rolls Royce amongst others have given their support. BAA is active in lobbying the aviation industry in other Member States to support bringing aviation into the EU ETS. Their position is broadly:- climate emissions from aviation are a major problem - so action is inevitable, so they are lobbying for the option that they see as having the least economic impact on the industry. The industry intensely dislikes the prospect of taxes. It has also seen powerful industry interests succeed in watering down the effectiveness of phase 1 of the EU ETS. The industry generally likes ETS because it sees it as an opportunity to buy its way out of the climate issue and avoid making the emission cuts itself What does Friends of the Earth think? 2008 - and probably longer - is too long to wait for action. The UK and other Member States should act now to curb aviation growth. For example in the UK, Gordon Brown should increase Air Passenger Duty in his pre budget statement later this year. Earlier this month the Swedish Government proposed a tax on all airline tickets. The UK Government should also urgently review its aviation strategy. Whatever measures are introduced they must force aviation to play its part in an overall strategy to reduce total carbon emissions by 3% year on year, Friends of the Earth's Big Ask campaign is calling on the UK Government to set legally binding targets to achieve this. EU targets should be set to reduce the sector's emissions by 8% by 2010 and 30% by 2020 (based on 1990 levels), this is likely to mean that aviation will have to pay for reductions in other sectors through the ETS Friends of the Earth favours the widest possible geographic coverage and 'flanking instruments' to address the full climatic impacts. It's positive that energy taxation is an EC objective, but disappointing that it is a long-term aim. Bringing aviation into the existing EU ETS is unlikely to be effective on its own, scenarios evaluated in June 2005 by consultants working for the EC show a limited impact on emissions. It's also likely that including aviation in the existing EU ETS could seriously undermine the environmental integrity of that scheme. See Tyndall summary (2) for further information. In any case, the EU and Member States should have a 'plan B' prepared in case it proves impossible to bring aviation into the ETS.

ENERGY AND EMISSIONS

2.1. Steps to Limit Global-Warming Gas

28 September 2005, NYT

By ANDREW C. REVKIN: Capturing and storing the carbon dioxide generated by power plants and factories could play an important role in limiting global warming caused by humans, says an international climate research group associated with the United Nations. In a new report the group, the Intergovernmental Panel on Climate Change, says doing so could cut the cost of stabilizing carbon dioxide concentrations in the atmosphere as much as 30 percent compared with other options, like switching to cleaner technologies. Altogether, sequestering carbon dioxide could eventually account for slightly more than half of what is needed to prevent dangerous concentrations in the atmosphere, says the report, which was released on Monday and is online at www.ipcc.ch. But the report cautions that while the method is cheaper than others, it would significantly raise the cost of electricity for many years. For that reason, several authors and United Nations officials said, it is unlikely that the technique will be adopted voluntarily by industries in wealthy countries. "First there has to be a policy in place to provide the incentive" to adopt such technologies, said Bert Metz, a Dutch environmental official who was the lead author of the report. Carbon dioxide is the main heat-trapping smokestack and tailpipe emission linked by scientists to a prolonged global warming trend. The report says the most promising methods for capturing and storing the gas are those already in use in Canada <http://topics.nytimes.com/top/news/international/countriesandterritories/canada/index.html?inline=nyt-geo>, Norway <http://topics.nytimes.com/top/news/international/countriesandterritories/norway/index.html?inline=nyt-geo> and Algeria <http://topics.nytimes.com/top/news/international/countriesandterritories/algeria/index.html?inline=nyt-geo>, where some industries inject it into wells. But many power plants are not situated over rock layers that can serve as a long-term repository for the gas. In such instances, the carbon dioxide would have to be piped or transported, raising the cost. The report also said there were many unanswered questions about how much gas might be stored. "A lot of people, including myself, would like to think you can do everything with renewables and energy efficiency, with photovoltaic panels and wind turbines and more sensible urban planning and so on," said one author, Kenneth Caldeira, a staff scientist at the Carnegie Institution's Department of Global Ecology at Stanford University. "The reality of it is that the energy in fossil fuels is too attractive and cheap right now to give them up completely."

2.2. IPCC Report Finds CO2 Storage Could Reduce Climate Change Effects

27 September 2005

Hurricanes Katrina and Rita have focused the world's attention on the global warming phenomenon. It seems clear that worldwide temperatures, especially those in the oceans, have risen over the last decade. Whether this is due to a natural cyclical process, or is in part at least caused by human activity - in the form of greenhouse gas emissions - remains a hotly debated subject. The Intergovernmental Panel on Climate Change (IPCC), which conducts research under the mandate of United Nations Environment Program (UNEP) is convinced that industrial pollution is a significant factor in global warming. In its latest study, released on Monday, the IPCC concludes that "capturing and storing the carbon dioxide (CO2) produced by power plants and factories before it enters the atmosphere could play a major role in minimizing climate change." UNEP Executive Director Klaus Töpfer observed: "While the most important solutions to climate change will remain energy efficiency and cleaner energy sources, this new report demonstrates that capturing and storing carbon dioxide can supplement these other efforts." "Since emissions of carbon dioxide - the most important cause of climate change - continue to rise in many parts of the world, it is vital that we exploit every available option for reducing their impact on the global climate. CO2 capture and storage can clearly play a supporting role," stated Secretary-General Michel Jarraud of the World Meteorological Organization (WMO). The report notes that capturing CO2 emissions won't require extensive new technology, as "many components of carbon dioxide capture and storage technology are already mature, including several applications of CO2 capture, pipelines and gas injection into geological formations." The IPCC estimates that using such technology could "lower the costs of mitigating climate change over the next 100 years by 30 percent or more. In addition, capture and storage of CO2 in geological formations could account for 15 - 55 percent of all emission reductions (equal to 220 to 2,200 billion tonnes (Gt) of CO2) needed between now and 2100 for stabilizing greenhouse gas concentrations in the atmosphere." The report notes that three CCS projects are already in operation, in Algeria, Canada and the North Sea off the Norwegian coast. However, it also observed that the "potential of

capture and storage could be limited by several important non-technology constraints. In particular, unless governments adopt climate change policies that put a cost on emitting CO₂, there will be no incentive to use these technologies." As the U.S. is the world's biggest energy consumer, and consequently the biggest emitter of greenhouse gasses, its adherence to any such program to capture and store CO₂ is essential. The federal government, however, remains indifferent, if not actively opposed, to any programs aimed at curbing the harmful effects of these emissions in fueling global warming. While most climatologists have indicated that no direct cause and effect relationship can be established between greenhouse gas emissions and monster storms like Katrina and Rita, they do agree that warmer ocean temperatures increase their intensity. That intensity has a direct effect on the economy, especially in regions, such as Florida and the Gulf Coast, where hurricanes are a fact of life. It also has a particular effect on the insurance industry, which has to pay for a good portion of the losses caused by the storms. If it is even remotely possible that human activity is helping to fuel the increase in frequency and intensity of hurricanes, typhoons and other natural weather phenomena, then it would seem logical to take whatever steps are available to try and reduce that activity. Or, at least, as the IPCC suggests try to contain its more harmful components. A number of experts don't think of the relation between greenhouse gasses and global warming/climate change as remote, but as fact. The "IPCC Special Report on Carbon Dioxide Capture and Storage" was written by 100 experts from over 30 countries and reviewed by many experts and governments. It "assesses the most up-to-date literature available in scientific and technical journals around the world and was requested by the Parties to the United Nations Framework Convention on Climate Change (UNFCCC)," said the bulletin. The Report is being posted in English at: www.ipcc.ch. The full press release and other information on climate change is also available on the UNEP Website at: <http://www.unep.org>.

CLIMATE IMPACTS

3.1. Drastic Climate Change to Dry Europe in 100 Y - Survey

1 October 2005, Sofia news agency

The drought and insufferable heat that hit most of Europe in 2003 will be a normal occurrence in 50 years. Averages of 30 degrees Celsius will no longer be unusual in the June, July and August. In the winter, instead of snow falling, rain will, and whenever it does so, then it will last longer and be heavier. Scientists at the Max Planck Institute for Meteorology presented Friday their first model calculations for the future of the climate. According to the calculations, in the next 100 years, the climate will change more than ever. The consequences for Europe and the world are drought, floods and glacial melt. Given particular conditions, it is expected that the sea ice in the North Pole region will completely melt in the summer. Extreme weather events in Europe will increase in frequency and strength. These results come from the latest climate model calculations from the German High Performance Computing Centre for Climate and Earth System Research. The global temperature could rise by up to four degrees by the end of the century. Because of this warming, the sea level could rise on average by as many as 30 centimeters. In addition to the findings about the complex interplay between atmosphere and ocean, the current climate models from the Max Planck Institute for Meteorology also include new findings about the effects of aerosols and the influence of the earth's carbon cycle. The results confirm speculations over recent years that humans are having a large and unprecedented influence on the climate and are fuelling global warming. To verify their own climate model calculations, the researchers first simulated the climate of the last century and compared the results with the real climate. The results by the climate researchers from Hamburg will be presented in the report from the IPCC, the Intergovernmental Panel on Climate Change, developed every five years, on the commission of the WMO, World Meteorological Organisation, and the UNEP, United Nations Environmental Programme. The IPCC report is provided to governments as an independent source of information. In total, 1000 scientists worldwide are working on the fourth edition of the progress report, due for release in 2007. German film director Roland Emmerich filmed the global warming with his big-budget natural catastrophe movie "The Day After Tomorrow." The United Nations is seeking to slow the process down with the Kyoto Protocol.

3.2. Alaska landscape transformed by warmer climate

28 September 2005, Reuters

By Yereth Rosen: Sinking villages perched on thawing permafrost, an explosion of timber-chewing insect populations, record wildfires and shrinking sea ice are among the most obvious and jarring signs that Alaska is getting warmer as the global climate changes, scientists say. "We are the canary in the mine, unfortunately, and the harbinger of what is yet to come for the rest of the world," said Patricia Cochran, executive director of the Anchorage-based Alaska Native Science Commission. Atmospheric temperatures in the remote state have risen 3.6 to 5.4 degrees Fahrenheit (2 to 3 degrees C) over the past five decades, according to the recently released Arctic Climate Impact Assessment, a comprehensive study by scientists from eight nations. That heating, most pronounced in winter and spring, is much more dramatic than in the rest of the world, which has had an average increase in land surface temperatures of 1 degree F (0.6 C) over the last century, according to the Environmental Protection Agency. Many scientists believe the earth is warming because of the release of greenhouse gases such as carbon dioxide that trap solar heat in the atmosphere. A massive beetle infestation has swept through millions of acres (hectares) in south-central Alaska over the past decade, scientists said, because significantly warmer weather is delaying the usual winter die-off of insect populations. The insects' voracious attack on spruce bark has left forests tinder-dry while general heat-induced stress have weakened forests, with lightning strikes making them a fire hazard in the Chugach Mountain foothills, said Glenn Juday, a professor of forest ecology at the University of Alaska Fairbanks. "All the trees in the boreal forest are showing unusual symptoms of warmth-related health problems," Juday said, noting that Alaska had its biggest and third-biggest fire seasons in the past two summers. "The warmer it gets the more we burn," Juday said. Sinking towns: In the cooler interior regions, buildings are slumping and roads are buckling as permafrost -- frozen soil -- thaws and turns into softer, spongy soil. The Inupiat village of Shishmaref on a narrow Chukchi Sea barrier island is preparing to move as the town sinks into the ground. "For those of us who live in the changing conditions every day, there's no question. We see it. We feel it every single day," Cochran said. Satellite records released on Wednesday showed that sea ice coverage in the arctic region has fallen for the last four years with "unusually early springtime melting in areas north of Siberia and Alaska," according to a study by the University of Colorado, NASA and the University of Washington. Shrinking sea ice has created hardships for sea animals like polar bears that find their prey at the ice's edge. Heated-up waterways are throwing off long-established salmon cycles and, according to one scientist, have allowed a warmth-loving, salmon-wrecking parasite to thrive in the Yukon River. Warming is accentuated in high-latitude regions like Alaska in part because of thinner atmospheres in the polar region, concentrating greenhouse gases, and in part because of the nature of atmospheric currents, according to studies. Such changes have also contributed to falling ice coverage in the Arctic Sea, with spring and summer melting happening 17 days earlier than usual, according to the satellite study. The disappearance of ice and snow uncovers dark surfaces of the ground and sea, which absorb more solar heat and warm up the landscape, said Vladimir Romanovsky, a permafrost expert at the University of Alaska Fairbanks' Geophysical Institute.

3.3. Arctic ice 'disappearing quickly'

28 September 2005, BBC

By Richard Black: The area covered by sea ice in the Arctic has shrunk for a fourth consecutive year, according to new data released by US scientists. They say that this month sees the lowest extent of ice cover for more than a century. The Arctic climate varies naturally, but the researchers conclude that human-induced global warming is at least partially responsible. They warn the shrinkage could lead to even faster melting in coming years. "September 2005 will set a new record minimum in the amount of Arctic sea ice cover," said Mark Serreze, of the National Snow and Ice Data Center (NSIDC), Boulder, Colorado. "It's the least sea ice we've seen in the satellite record, and continues a pattern of extreme low extents of sea ice which we've now seen for the last four years," he told BBC News. September lows: September is the month when the Arctic ice usually reaches a minimum. The new data shows that on 19 September, the area covered by ice fell to 5.35 million sq km (2.01 million sq miles), the lowest recorded since 1978, when satellite records became available; it is now 20% less than the 1978-2000 average. The current rate of shrinkage they calculate at 8% per decade; at this rate there may be no ice at all during the summer of 2060. An NSIDC analysis of historical records also suggests that ice cover is less this year than during the low periods of the 1930s and 40s. Mark Serreze believes that the findings are evidence of climate change induced by human activities. "It's still a controversial issue, and there's always going to be some uncertainty because the climate system does have a lot of natural variability, especially in the Arctic," he said. "But I think the evidence is

growing very, very strong that part of what we're seeing now is the increased greenhouse effect. If you asked me, I'd bet the mortgage that that's just what's happening." Confusing movement: One of the limitations of these records is that they measure only the area of ice, rather than the volume. "One other factor could be movements of sea ice," said Liz Morris, of the British Antarctic Survey, currently working at the Scott Polar Research Institute in Cambridge, UK. "If it all piles up in one place, you might have the same total amount of ice," she told the BBC News website, "and there is some evidence that ice is piling up along the north Canadian coast, driven by changes in the pattern of winds and perhaps ocean currents." Most data on sea ice thickness comes from records of military submarines, which regularly explored passages under the Arctic ice cap during the Cold War years. Submarines can cross the Arctic Ocean along tracks taken decades before, and note differences in the ice thickness above; but that may mean little if the ice itself has moved. Professor Morris is involved in a new European satellite, Cryosat, which should be able to give definitive measurements of ice thickness as well as extent; its launch is scheduled for 8 October. But she also believes that the NSIDC data suggests an impact from the human-enhanced greenhouse effect. "All data goes through cycles, and so you have to be careful," she said, "but it's also true to say that we wouldn't expect to have four years in a row of shrinkage. "That, combined with rising temperatures in the Arctic, suggests a human impact; and I would also bet my mortgage on it, because if you change the radiation absorption process of the atmosphere (through increased production of greenhouse gases) so there is more heating of the lower atmosphere, sooner or later you are going to melt ice." Arctic warming fast: Though there are significant variations across the region, on average the Arctic is warming twice as fast as the rest of the planet, according to a major report released last year. The Arctic Climate Impact Assessment, a four-year study involving hundreds of scientists, projected an additional temperature rise of 4-7C by 2100. If the current trend can be ascribed in part to human-induced climate change, Mark Serreze sees major reasons for concern. "What we're seeing is a process in which we start to lose ice cover during the summer," he said, "so areas which formerly had ice are now open water, which is dark. "These dark areas absorb a lot of the Sun's energy, much more than the ice; and what happens then is that the oceans start to warm up, and it becomes very difficult for ice to form during the following autumn and winter. "It looks like this is exactly what we're seeing - a positive feedback effect, a 'tipping-point'." The idea behind tipping-points is that at some stage the rate of global warming would accelerate, as rising temperatures break down natural restraints or trigger environmental changes which release further amounts of greenhouse gases. Possible tipping-points include: the disappearance of sea ice leading to greater absorption of solar radiation, a switch from forests being net absorbers of carbon dioxide to net producers, melting permafrost, releasing trapped methane. This study is the latest to indicate that such positive feedback mechanisms may be in operation, though definitive proof of their influence on the Earth's climatic future remains elusive. Story from BBC [NEWS:http://news.bbc.co.uk/go/pr/fr/-/2/hi/science/nature/4290340.stm](http://news.bbc.co.uk/go/pr/fr/-/2/hi/science/nature/4290340.stm).

CONFERENCES

4.1. Invitation to the South African national conference on climate change

South Africa will be hosting its first National Conference on Climate Change from 17 to 20 October 2005. The event will be held at the Gallagher Estate Conference Centre in Johannesburg, and will be composed of two related parallel sessions: the Science Conference, scheduled to start on 17 October 2005 and the Consultative Conference scheduled to start on 18 October 2005. The overall objective of the event is that: "All South Africans are informed about all aspects of climate change from a Global, African and South African perspective and are empowered to consider climate change mitigation and adaptation in all their endeavours and spheres of influence". In the light of the pressing need for an internationally coordinated response to the challenges of climate change, and the ongoing international interactions on this matter - most recently at the Greenland Dialogue - I would like to take this opportunity to invite you to join us at this ground breaking event. More information about this event will be available in our website www.deat.gov.za.

4.2. EMA 9th Annual Fall Conference

Environmental Markets Association, an international nonprofit dedicated to serving environmental markets worldwide, cordially invites you to attend the 9th Annual Fall Conference, November 6-9, 2005 in San Francisco, CA. For complete details, please visit

<http://www.emissions.org/conferences/fallconference05>. The Conference includes two full days of educational sessions with topics including GHG market trends, RECs markets, updates on CAIR/CAMR, RGGI, NOx/SOx market updates, a look forward to the future of emissions markets, and much more. Registration online: To register online, go to the 9th Annual Fall Conference website at <http://www.emissions.org/conferences/fallconference05>. For the complete agenda or more information, please go to the 9th Fall Conference website or contact Lauren LeMunyan at llemunyan@emissions.org.

4.3. Fourth Municipal Leaders Summit on Climate Change

Montréal, Canada, December 5 – 7, 2005. ICLEI - Local Governments for Sustainability in partnership with the Federation of Canadian Municipalities (FCM), the World Association of the Major Metropolises (Metropolis), the United Nations Environment Programme (UNEP) and the City of Montréal is pleased to invite all municipal leaders to the Fourth Municipal Leaders Summit on Climate Change, 5-7 December 2005 in Montréal, Quebec, Canada. The Summit is taking place as a parallel event of the Eleventh Conference of the Parties (COP 11) to the United Nations Framework Convention on Climate Change (UNFCCC), to be held from 28 November to 9 December, and the First Meeting of the Parties (MOP 1) to the Kyoto Protocol, which entered into force earlier this year. The Summit will provide an international venue for the latest knowledge and best practices in building sustainable cities and communities through greenhouse gas mitigation and adaptation strategies. The Summit will also facilitate a dialogue among national and supranational orders of government, multilateral bodies and international organizations about the important role of local government in addressing climate change issues. A major output of the Summit will be a Municipal Leaders Declaration that will be formally delivered to the COP 11 by a delegation of Summit participants, facilitated by ICLEI in cooperation with the UNFCCC Secretariat. We encourage your participation in this important gathering of local government leaders. Please keep the dates free in your calendar! Further details on the Summit agenda, logistics and registration are available on ICLEI's website at: www.iclei.org/montrealsummit. Updated information on COP 11/MOP1 can be found at: www.ec.gc.ca/climate/cop11_e.html (in English), and at www.ec.gc.ca/climate/cop11_f.html (in French), as well as in the UNFCCC website, www.unfccc.int. The Summit Secretariat team, based in Toronto, Canada, will be pleased to assist you and can be contacted at montreal.summit@iclei.org, phone 1.416.392.0273 or fax +1. 416.392.1478.

PUBLICATIONS

5.1. Verification system design for RGGR and RGGI

New report by Environmental Resources Trust released. You can download this report at: <http://www.ert.net/pubs.html>. A summary of the report: The Northeast States and several Mid-Atlantic States are currently developing a Regional Greenhouse Gas Registry (RGGR), a policy and accounting framework capable of quantifying and registering greenhouse gas emissions and project-related emission reductions or "offsets." This registry framework will be used to support the following program types: (1) a regional voluntary reporting program developed by a group of northeast states, (2) mandatory reporting programs developed by individual States, (3) a mandatory regional cap-and-trade program called the Regional Greenhouse Gas Initiative (RGGI), and (4) a project offset program under RGGI. The process of assuring the quality of data reported to an emissions registry is generally referred to as 'verification'. The objective of a verification process is to enable the verifier to issue a verification statement and verification opinion on whether the assertions regarding emissions and other information made by a reporter are free from material misstatements. The goal of the verification system recommended and outlined in this white paper is to provide a high level of data quality assurance to all mandatory, voluntary, and RGGI programs—that will be useful to current and future regulatory efforts—while minimizing both public and private costs. RGGR and the verification system design in this white paper are unique in that they present the first example of integrating so many different program types together. As a result, there are opportunities and challenges with developing a comprehensive verification system. Both are addressed, in part, through a recommendation for a centralized verification system for all program types that, in addition to assuring data quality and improving efficiency, will better ensure that consistent and harmonized data is entered and maintained in the registry. This paper provides general recommendations—relevant for all program types—on the following verification system design issues: Reporting and verification

system design, Reporting and verification system focus, Verification system design, Accreditation process, Funding scheme, Liability and legal sanctions, Verification process, Verification rigor (risk-based), Verification steps, Conflict of Interest (COI), Material discrepancy and de minimus tests, Dispute resolution, Data handling and documentation, Verification statements, Confidentiality and non-disclosure agreements, Record keeping and retention. In addition to general recommendations on these issues, initial program-specific recommendations are also provided. These program-specific recommendations address the expectation that the rigor of the verification approach used for each type of State or regional greenhouse gas program will likely vary.

5.2. CO2 Price Dynamics: The Implications of EU Emissions Trading for the Price of Electricity

Released by the Energy research Centre of the Netherlands (ECN). This study analyses the relationship between EU emissions trading and power prices, notably the implications of free allocation of emission allowances for the price of electricity in countries of North-western Europe (Belgium, France, Germany and the Netherlands). To study this impact, it uses a variety of analytical approaches, including interviews with stakeholders, empirical and statistical analyses, theoretical explorations, and analyses by means of the COMPETES model. The study shows that a significant part of the costs of freely allocated allowances is passed through to power prices and discusses its implications in terms of higher electricity prices for consumers and profits for producers. It concludes that free allocation of emission allowances is a highly questionable policy option for a variety of reasons and suggests that auctioning might offer a better perspective. For more information on the report, please visit: <http://www.ecn.nl/library/reports/2005/c05081.html>. The publication can be downloaded as a PDF-file from the ECN website: <http://www.ecn.nl/docs/library/report/2005/c05081.pdf>.

5.3. The Emerging Spot Market for Certified Emission Reductions

by Thomas Langrock, Wolfgang Sterk and Bettina Wittneben. Twenty-three CDM projects have been registered with the CDM Executive Board to date and hence the day draws nearer when the first CERs will be issued. This paper describes the framework that will enable countries and companies to transact CERs. It outlines the various institutions that need to be established and requirements that need to be met before CERs can be transferred. Governments and the UNFCCC Secretariat still have to set up the CDM registry, the Independent Transaction Log and national registries. Governments will also need to invest substantial efforts into meeting the eligibility criteria for participating in the CDM and Art. 17 emission trading and to establish clear rules for the authorisation of private entities to participate in the mechanisms. Moreover, the EU needs to clarify if Art. 49(2) of the EU Registry Regulation is supposed to apply to the transfer of CERs, in which case the EU would need to conclude international agreements before any CERs could be transferred into the EU. If these efforts are neglected, the development of a spot market for CERs may take another one or two years. It may also be necessary to explicitly allow the parking of CERs in the pending account of the CDM Executive Board until the conditions for transferring them to their destinations have been met. The paper can be downloaded at: <http://www.wupperinst.org/Sites/Projects/rg2/1078.html>.

ANNOUNCEMENTS

6.1. News from Ad-hoc group for modeling and assesment of contributions of climate change

The methodological and scientific aspects of the Brazilian Proposal are studied by an Ad-hoc group for Modeling and Assessment of Contributions of Climate Change (MATCH). This group calculates countries relative or absolute contributions to climate change and aims to improve robustness of calculations and more rigorously assess uncertainties and methodological choices. A first scientific paper - Analyzing countries' contribution to climate change: scientific and policy-related choices - has been prepared by this ad-hoc group and was published September 2005. The next expert meeting of MATCH is taking place from the 27 to 28 October 2005 in Reading, UK. More information about the MATCH group, meeting and papers are available at <http://www.match-info.net>.
