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## CLIMATE-L NEWS

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## **GENERAL NEWS**

### **1) UGANDA TO NEGOTIATE FOR ENVIRONMENT**

New Vision (Kampala)

March 7, 2003

Internet: <http://allafrica.com/stories/200303070016.html>

UGANDA will lead Africa in international negotiations for the protection of the environment, the state minister for environment, Kezimbira Miyingo, has said. He was launching the Greater Horn of Africa Climate Forum in Entebbe on Tuesday. Miyingo said there was an urgent need for Africa to address the threat of global warming through the Kyoto Protocol. "When we meet as Africa we should lobby so that we have the Kyoto Protocol to reduce green house gases," he said. Ends

## **2) CHINA TO HOLD INT'L SYMPOSIUM ON CLIMATE CHANGE**

Peoples Daily

March 7, 2003

Internet: [http://english.peopledaily.com.cn/200303/07/eng20030307\\_112858.shtml](http://english.peopledaily.com.cn/200303/07/eng20030307_112858.shtml)

The effects of a warming climate on the world's ecology and sustainable development will be discussed in the coming International Symposium on Climate Change (ISCC) scheduled in Beijing from March 31 to April 4. With a theme of "Climate Change: Science and Sustainable Development", the symposium will not only cover scientific problems about climate change, but also involve related political, economic, environmental and diplomatic topics.

According to sources with the China Meteorological Administration, the symposium aims to meet the pressing demands for scientific research on global climate change. In addition, it will serve as an impetus to drive China's exchanges and cooperation with other countries in climate change. Global warming of the past century has increasingly influenced economic construction, social development and people's lives. It is also closely connected with the security of water, food and energy resources as well as human health. As the largest developing country, China has taken workable measures to alleviate the harmful impact of climate change and worked out general strategies to solve related problems. Preparations for the international symposium are going on well, already attracting over 400 participants both at home and abroad.

The ISCC will be jointly held by the State Development Planning Commission, Ministry of Science and Technology, Ministry of Education, State Natural Science Fund Committee, China Association for Science and Technology, Chinese Academy of Sciences, China Meteorological Administration and World Meteorological Organization.

## **3) ITALY, GERMANY FACE OFF OVER ENERGY TAXES AS EU FINANCE MINISTERS MEET**

AP

March 7, 2003

Internet:

[http://story.news.yahoo.com/news?tmpl=story&u=/ap/20030307/ap\\_wo\\_en\\_ge/eu\\_fin\\_eu\\_finance\\_1](http://story.news.yahoo.com/news?tmpl=story&u=/ap/20030307/ap_wo_en_ge/eu_fin_eu_finance_1)

BRUSSELS, Belgium - Italy and Germany faced off again over energy taxes intended to help Europe meet its targets under the Kyoto protocol on climate change, as European Union finance ministers took up the long-debated package again Friday. Ahead of the meeting, the EU's head office said it would launch disciplinary procedures against France for breaching the limit on budget deficits for countries using the euro. But with the economy deteriorating around Europe, ministers seemed to be more tolerant of French insistence on tax cuts to stimulate growth, even if it meant a little more red ink in the short run.

"We're living in difficult times so we should show some understanding for each other," said Henri Grethen, Luxembourg's economy minister. French Finance Minister Francis Mer pledged to get his budget in line next year, and said the prospects for economic growth would become clearer once the Iraqi crisis had been resolved. "After the Iraqi events, the sky will be clearer," he told RTL radio Friday. The 6-year-old energy tax package is intended to raise minimum levels of tax on energy across the 15-nation EU to encourage conservation and reduce pollution.

EU finance ministers tried last month to pass it, but failed when Italy insisted on an "extended derogation" to apply a lower tax rate on diesel fuel to aid its truckers. It claims its truckers are cut off by the periodic closing of Alpine tunnels and must drive longer distances to deliver goods. France also is seeking an extension of the lower rates first adopted in response to protests over soaring fuel prices in late 2000, but only for two more years. Germany, where the Greens are in government, has refused to accept the Italian demand, blocking passage of the entire package since tax measures require unanimity. EU officials said little

had changed. Chances for an agreement were "unfortunately rather slim," said Jonathan Todd, a spokesman for EU Internal Market Commissioner Frits Bolkestein.

Complicating the picture, EU diplomats said, was Italy's suggestion that it would not sign off on final approval for a separate savings tax deal, which won preliminary agreement last month, unless it gets concessions on diesel. The French budget deficit was discussed at a meeting of the 12 euro-zone finance ministers Thursday night. Mer said that France's 2003 budget deficit will be 3.4 percent of gross domestic product, breaking the E.U.'s 3 percent limit. This comes after the French deficit already came slightly above the threshold last year. EU Monetary Affairs Commissioner Pedro Solbes said France will have one year to bring its deficit below the limit or face the possibility of hefty fines, which could theoretically reach 0.5 percent of GDP. Germany, which also broke the 3 percent limit last year and could do so again this year, will also have until 2004 to get its fiscal house in order. But unlike Berlin, which is working hard to respect the limit this year through austerity measures, Paris has been pushing ahead with promised tax cuts to stimulate growth. "The planned tax cuts in the 2003 budget will be carried out," Mer told RTL radio. But he also said the government would impose stricter controls on public spending and make savings to cut the deficit to below 3 percent next year.

#### **4) EU, US SIGN HYDROGEN, NUCLEAR ENERGY RESEARCH PACT**

Reuters

March 6, 2003

Internet: <http://www.alertnet.org/thenews/newsdesk/L06593959>

BRUSSELS, March 6 (Reuters) - The United States and the European Union sought to find common ground over global warming on Thursday by signing a pact to cooperate on research on new and potentially cleaner forms of power generation. The agreement aims to link research projects on both sides of the Atlantic on hydrogen, nuclear fission and fusion and the removal of carbon dioxide -- the main gas blamed for climate change -- from the atmosphere. U.S. Energy Secretary Spencer Abraham, who signed the pact at the offices of EU Research Commissioner Philippe Busquin, said technology was the only way to tackle global warming. "You can't accomplish any of these (climate change) goals...unless you improve your technology or dramatically reduce your technology. I think everybody across the board thinks that technology is the key," he told reporters.

The United States infuriated the EU in 2001 when it pulled out of the Kyoto Protocol, the global treaty which requires developed countries to cut the greenhouse gas emissions blamed for trapping heat in the atmosphere and causing climate change. President George W. Bush said it would harm the economy of his country, which alone produces one quarter of global man-made greenhouse emissions. The EU believes it can reduce its emissions at acceptable cost and plans to stick with Kyoto. The research pact does not specify how much money each side would spend, but opens the way for joint projects on thorny issues like nuclear safety and waste disposal. Nuclear power, although loathed by the main environmental groups, is seen by some politicians as an attractive alternative to fossil fuels as it does not emit carbon dioxide and does not require supply from unstable regions like the Middle East. Both the EU and the United States have expressed ambitions to move to a "hydrogen economy" where the gas is used in fuel cells to create electricity that one day could replace oil as the main propellant for cars.

#### **5) FORESTERS PUSH CARBON CREDIT CASE**

RNZ

March 6, 2003

Internet: [http://onebusiness.nzzoom.com/onebusiness\\_detail/0,1245,172909-3-397,00.html](http://onebusiness.nzzoom.com/onebusiness_detail/0,1245,172909-3-397,00.html)

Farm foresters are hoping a government wind farming initiative will reinforce their case for special consideration over greenhouse gas emissions. The government has agreed to allocate carbon credits, issued under the Kyoto Protocol, to help offset the cost of two new wind farming ventures. It is proposing to issue promissory notes to TrustPower, for extending its Tararua wind farm and to Meridian, which is also

planning a wind farm. Energy Minister Pete Hodgson says electricity from the wind farms would reduce the need for gas or coal-fired generation, which produces carbon dioxide, a green-house gas. Farm foresters want to be able to claim carbon credits from their woodlots, to offset the cost of methane emissions from livestock. The Forest Industry Association's climate change spokesman Mike Halliday thinks the Government's move on wind-farming backs up its case. Halliday says farm foresters put their case to the Government for carbon credit recognition early last month, but have not heard back yet.

## **6) MUNICH RE DRAWS WORLD'S ATTENTION TO CLIMATE CHANGE RISKS**

Vanguard

March 05, 2003

Internet: <http://www.vanguardngr.com/articles/2002/business/b105032003.html>

WORLD's leading reinsurer, Munich Re of Germany will be partnering with Deutsche Museum in an exhibition tagged 'Climate: The experiment with planet Earth,' to draw mankind's attention to the dangers faced by humans as well as property in the unfolding climatic changes. The exhibition which will be staged in Munich until June 15 would thereafter go on tour. "Its aim is to draw attention to the subject of climate change and to underline the significance of this phenomena, which harbours considerable risk for human life and property," the reinsurer stated in a release. After nearly three decades of research into global changes in the earth's environment and climate, Munich Re's head of Geo Risks Research Department, Dr. Gerhard Berz said "Catastrophe loses are mostly caused by extreme weather events," adding that the case applied to 2002 as well.

The research which focuses on the effects of weather changes on the insurance industry and loss prevention had also revealed that "buildings and infrastructure are usually not sufficiently designed to cope with the high strains of extreme weather events," Berz said. According to him, "evidence points to critical extreme wind speeds and precipitation being exceeded with increasing frequency; so that for this reason alone there will inevitably be a stark increase in the loss burdens as well." Compared with 1998 regarded as the warmest year since the temperature reading began, 2002 has also maintained the unbroken record of global warming, the risk expert stated.

The concentration of events and its intensity throughout the earth also confirms the reinsurer's fears that there may not be an end in sight to the catastrophes describing as "disastrous and alarming" the severe earthquakes that occurred in Afghanistan killing more than 2000 people in the Hindu Kush mountains. The report also cited the earthquake in central Italy that left 26 school children dead. The strongest earthquake of the past year happened in Alaska, United States late last year and is said to have aroused deep concern among experts. "It magnitude reached the unusual reading of 7.9 on the Richter Scale" the Munich Re report stated, adding that extensive losses were averted because the epicentral area was in scarcely populated region.

Altogether, there were "about 70 loss producing earthquakes, generating economic losses of about US\$1bn , out of which only US\$11 million was insured. Nevertheless, the year started with increased natural catastrophes, particularly earthquakes. There has been reported cases of flood and technological disaster, foremost among them is plane crashes. Predictably, insurance industry say they are excluding some items in some covers while re-wording others to remove liabilities in areas that expertise in terms of loss forecast is difficult.

## **7) NZ GOVT TO BACK WIND FARMS WITH CARBON CREDITS**

Planet Ark

March 5, 2003

Internet: <http://www.planetark.org/dailynewsstory.cfm/newsid/20032/story.htm>

WELLINGTON - The New Zealand government said yesterday it will support the development of two proposed wind farms by giving them Kyoto Protocol climate change credits for the clean energy they will

produce. The two wind farm projects - a 36 megawatt (MW) extension of TrustPower's (TPW.NZ) Tararua wind farm and a 40-80 MW project proposed by state-owned Meridian Energy - will be allocated Kyoto Protocol "carbon credits". "Electricity from these wind farms would avoid some gas or coal-fired generation, with its associated greenhouse gas emissions," Energy Minister Pete Hodgson said. "That is clearly in New Zealand's interests but the initial costs mean that the wind farms would probably not proceed without the credits the government is offering." New Zealand ratified the Kyoto accord on global warming last December.

TrustPower said it had received consents to enlarge its wind farm more than two years ago but it had not been economically viable to begin the expansion. "This will, I think, tip the balance between viability and the project stagnating," a spokesman said, adding that the project was expected to be completed within two years. A Meridian spokesman said several North Island sites were being investigated for its proposed wind farm, expected to be commissioned in 2005. He declined to comment on the value of the carbon credits, saying it was commercially sensitive. New Zealand generates around 63 percent of its electricity needs from hydro power stations, with gas providing around 22 percent, geothermal around seven percent and coal about four percent.

Under the deal, promissory notes for Kyoto Protocol emission units will be allocated to the power companies depending on the final amount of generation from the wind farms. Hodgson said the wind farms could deliver emission reductions of up to one million tonnes of carbon dioxide over the Protocol's first commitment period 2008-2012. It has been previously estimated that the global price of carbon is between NZ\$10 and NZ\$20 per tonne. The Kyoto pact aims to reduce greenhouse gas emissions from the developed world, which account for the overwhelming bulk of the gases, by 2012 to around five percent below 1990 levels. Around 100 countries have ratified the controversial protocol but New Zealand's major trading partners Australia and the United States have remained outside the agreement. The New Zealand government has announced plans for a carbon tax some time after 2007 which will raise energy prices between six and 19 percent. New Zealand produces between 70 and 90 million tonnes of carbon dioxide a year but expects to earn as much as NZ\$1.4 billion (\$784 million) from carbon sink credits generated by its big commercial forests.

## **8) EU MINISTERS URGE RUSSIA TO RATIFY CLIMATE PROTOCOL**

ENS

March 5, 2003

Internet: <http://ens-news.com/ens/mar2003/2003-03-05-01.asp>

MOSCOW, Russia, March 5, 2003 (ENS) – Three top level European environment officials arrived in Moscow today for a three day attempt to persuade Russia to complete ratification of the Kyoto Protocol, and to discuss a strengthening of cooperation in the fight against climate change. The European Union member states have all ratified the climate treaty, and now Russia's ratification is necessary to enable the protocol to enter into force. EU Environment Commissioner Margot Wallstrom, together with environment ministers Altero Matteoli of Italy and Vasso Papandreou of Greece, which currently occupies the six month EU Presidency, are in Moscow through Friday.

Their schedule includes meetings with the Ministry for Economic Development and Trade, Energy Minister Igor Yusufov, representatives of the Duma, and nongovernmental organizations. This visit to Russia is the latest initiative in the European Union's ongoing efforts to secure the entry into force of the Kyoto Protocol and effective multilateral action to combat climate change. In February 2002, Yusufov announced Russia's intention to ratify the Kyoto Protocol. He stressed that Russia is making maximum efforts to reduce the level of greenhouse gas emissions into the atmosphere. Under the protocol, an addition to the United Nations Framework Convention on Climate Change, 37 industrialized nations have agreed to cut their emissions of six greenhouse gases linked to global warming. Thirty-nine countries were to have been governed by the original agreement signed in Kyoto, Japan in December 1997, but the Bush administration in March 2001 said that the United States would not ratify the protocol, and Australia has followed suit. The protocol will

not take effect until it is ratified by 55 percent of the nations responsible for at least 55 percent of the total carbon dioxide emissions in 1990.

Commissioner Wallstrom said, “The world is waiting for Russia to demonstrate that it is ready and willing to become a major player in the multilateral efforts to combat climate change. I trust that Russia will live up to its responsibilities and political commitments. The EU is looking forward to cooperating even closer with Russia to fight this global challenge.” As of February 6, the latest date for which figures are available, 105 countries responsible for 43.9 percent of the carbon dioxide emissions in 1990 have ratified or acceded to the Kyoto Protocol. Ratification by Russia is essential, as Russia is responsible for 17.4 percent of the 1990 emissions. Russian ratification would push the total percentage of the greenhouse gas over the 55 percent that triggers the protocol’s entry into force.

The countries that ratify the agreement must reduce emissions of carbon dioxide to an average of 5.2 percent below 1990 levels during the five year period 2008 to 2012. But the Russian Federation would not have to reduce its carbon dioxide emissions below 1990 levels. The terms of the protocol allow Russian emissions to remain at 100 percent of 1990 levels. Environment Minister Papandreou said, “Russia has the honor of running the anchor leg of this relay race for ratification. We hope that Russia will cross the finish line so that the applause from around the world starts.” “All of us,” said Papandreou, “15 Member States in the EU as well as all the acceding countries who have already ratified it – view the entry into force of the Kyoto Protocol as an important step in addressing climate change and starting to reduce its impacts. We believe that the Kyoto Protocol is good for Russia, and most importantly it is good for the world.” Minister Matteoli observed, “The ratification of the protocol will allow Russia to create an important channel for technological cooperation with Europe in the energy sector and in forest management.”

The European environment officials will attempt to persuade Russia to ratify by emphasizing the economic advantages the country would gain by ratification such as participation in the so-called “flexible mechanisms” that the protocol permits. The international emissions trading regime established by the Kyoto Protocol allows industrialized countries to buy and sell emissions credits amongst themselves. They will also be able to acquire “emission reduction units” by financing projects reducing greenhouse gas emissions in other developed countries through a mechanism under the protocol known as Joint Implementation. By creating a framework for emissions trading, Russia will be able to monetize the surplus of emission rights that it is likely to have given that its emissions in the first commitment period under the protocol – 2008 through 2012 – will probably be lower than its emissions stabilization target under the protocol, the European officials say.

Russian companies will have access to Joint Implementation projects that could be developed with partners from other developed countries. Through these projects, Russian companies will have access to new technologies and management systems. Russia will benefit from measures implemented worldwide to fight climate change, the European officials say, measures that will diminish the adverse effects that climate change already has had, and will have, on Russia. The thawing of permafrost in particular, which is foreseen to be one of the effects of climate change in Russia, carries with it considerable economic costs in terms of damage to infrastructure such as buildings and railways. If climate change is reduced, through strict control of emissions, costs for Russia will be lessened. The European environment officials say that Russia’s concerns such as taking into account the carbon absorption of its forests and conditions for access to the Kyoto flexible mechanisms “have been taken into consideration throughout the international climate change negotiations,” and Russian ratification will be “an important recognition of the spirit of compromise in which the negotiations took place.”

See Also:

E.U. officials head for Moscow to urge action on ratifying Kyoto accord, ENN, March 6, 2003  
[http://www.enn.com/news/2003-03-06/s\\_3212.asp](http://www.enn.com/news/2003-03-06/s_3212.asp)

## **9) KYOTO GIVES HOPE TO WIND POWER**

ONE News

March 5, 2003

Internet: [http://onenews.nzoom.com/onenews\\_detail/0,1227,172903-1-7,00.html](http://onenews.nzoom.com/onenews_detail/0,1227,172903-1-7,00.html)

The first significant impact of New Zealand signing the Kyoto protocol is being felt with two new wind farms coming a step closer to producing electricity. The government has made its first use of the tradeable carbon credits under the Kyoto Protocol, giving them to Meridian Energy and TrustPower in recognition of the benefits of their proposed wind farms. Carbon trading allows a heavily-polluting country to offset some of its carbon dioxide emissions so it can still meet the obligations it signed up to under the Kyoto Protocol. The power companies say the projects would not be economically viable if it was not for the credits which will eventually be sold on the international market.

The wind farms will add up to 115 megawatts of electricity to New Zealand's generating capacity - enough to supply roughly 50,000 homes. They will treble the current amount of electricity generated by wind turbines and could start producing power by late next year. The Energy Minister Pete Hodgson says the allocation of carbon credits to TrustPower and Meridian is a significant milestone, because it is the first time it has happened since the government ratified the Kyoto Protocol on climate change. It is difficult to put a dollar value on the tradeable credits being given to the power companies because an international market is yet to be established, as other Kyoto nations wait for Russia to ratify the agreement. But best estimates involve an international price of around \$US5 per tonne of CO2 emissions with the wind farms in line for credits of up to one million tonnes.

A potential buyer of the credits could be a company that needs to mitigate large amounts of carbon dioxide pollution such as an oil or coal fired power station in Japan. TrustPower spokesperson Graeme Purches says the credits help the company clear a financial hurdle in the way of the projects. Graeme Purches says the 55 new turbines will be added to the 48 turbines at TrustPower's existing Tararua Windfarm near Palmerston North for which it already has resource consent. However, Meridian is still to gain consent for its windfarm and will not yet reveal its location, believed to also be in the North Island. Green Party co-leader Jeanette Fitzsimons says the two power companies are boosting their reputation for being clean power producers by using renewable energy. But Fitzsimons believes the government could be doing more to encourage such activities.

But the Energy Minister Pete Hodgson says the government has already announced disincentives for dirty energy because under the Kyoto protocol there will be emission charges on coal, gas and petrol from 2008. Hodgson says further tradeable carbon credits will be allocated by the government later this year when it invites all sectors of the economy to put in bids. But in the short term, the new windfarms will not be enough to resolve Hodgson's concerns about power shortages expected this winter due to low hydro-lake levels. He says there will be increased use of coal and oil fired power stations - and consequently more CO2 emissions.

## **10) RESEARCHERS HOPE TO ANTICIPATE EFFECTS OF GLOBAL WARMING**

Dallas Morning News

March 5, 2003

Internet: <http://www.centredaily.com/mld/centredaily/news/5320540.htm>

(KRT) - Global warming may sound like a good idea after recent winter storms across the nation. But as temperatures rise over the next century, such freakish weather events could actually become more common, scientists say. The main question is how common. What climate will be like over the next 100 years depends on how people act now to stop the buildup of heat-trapping gases in the atmosphere, researchers reported last month. At a meeting in Denver of the American Association for the Advancement of Science, two top climate specialists sketched a future that ranged from grim to disastrous. One scientist argued that humans may have already disrupted climate enough to qualify as "dangerous interference."

The other, who is chairman of the National Science Board that advises President Bush, said the United States lags behind other countries - notably Japan - in its efforts to study future climate and its effects on society. Last week, the National Academy of Sciences released a report criticizing the Bush administration's draft plan for studying climate change. Climate researchers don't yet know how global warming will affect the United States - and the rest of the planet - over the next century. But now is the time, they say, to figure out how wacky the weather might get. "The further we move into unknown territory, the more likely it is that things we haven't anticipated are going to happen," said Tom Wigley, a climate expert at the National Center for Atmospheric Research in Boulder, Colo.

Scientists know this much: Temperatures worldwide have risen an average of nearly 1.3 degrees Fahrenheit since the 1870s. Two-thirds of that increase has occurred during the past 25 years. Most experts now agree that people are having a discernible effect on climate. Through the burning of fossil fuels and other industrial activities, humans are pumping out more heat-trapping gases than nature does. Since 1959, for instance, scientists have monitored how the concentration of one of those gases - carbon dioxide - has crept from 316 parts per million in the air to 371 parts per million. In preindustrial times, that number is thought to have stood at about 280 parts per million. Over the next century, carbon dioxide concentrations could rise to 500 parts per million or even above 1,000 parts per million, Wigley said. "We're talking four times what it was," he said at the Denver meeting.

And all that carbon dioxide will conspire to raise global temperatures, he said. Sea level might rise, threatening coastal cities; animals may shift their habitats north; and spring may come earlier in the higher latitudes. Computer models differ on exactly how hot temperatures will get, but most predict an increase between about 4 and 7 degrees Fahrenheit, said Warren Washington, chairman of the National Science Board. Society needs to decide what level of warming it can live with, he said. The 1997 Kyoto Protocol set initial limits on how much carbon dioxide and other greenhouse gases industrial nations should put out. President Bush has rejected the international treaty, saying compliance would cost too much.

The United Nations has also drawn up a convention on climate change, which calls for stabilizing levels of such gases before they reach a point of dangerous interference with the climate. "There is some possibility that we may already have reached dangerous interference," Wigley said at the Denver meeting. Climate change will become more dramatic in the future, he said, as greenhouse gases continue to build up in the atmosphere. Changes might include more frequent storms in the mid-latitudes, melting polar ice caps, and a rapidly rising sea level. Scientists anticipate all these changes, but cannot say when they might happen, how severe they may be, or how society might react. Even if carbon-dioxide emissions were stabilized immediately, Wigley said, the gas would continue to build up in the atmosphere for centuries. "We may have a really daunting task," he said. The best way to tackle it, said Washington, is to improve U.S. science. Researchers need more-powerful computers to get better models of how climate might behave in the future, he said.

One such computer already exists, in Japan - the \$360 million Earth Simulator, built specifically to study climate change. On the Earth Simulator, Japanese scientists crunch some serious numbers on the climate change problem. The more variables a computer model can include, the more realistic its conclusions should be. A good model, for instance, must take into account the effects of clouds, evaporation and rainfall; input including greenhouse gases, the sun and volcanoes; feedbacks from ice and plants covering large swaths of the globe; plus much more. "Climate models are a manifestation of basic physics," said Washington, also of the National Center for Atmospheric Research. "The real test is, can we reproduce what's really happening?" he asked. In recent years, computer models have gotten much better at explaining current climate. That gives scientists confidence, Washington said, that their predictions will be more on target in the future. Still, major questions remain, including how sensitive the climate is when it responds to these many factors. Only a long-term investment in research can help, said Washington. President Bush's draft plan for studying climate change calls for some answers within two to four years - information that decision-makers can use in their planning. But Washington said that might not be possible. "We will not have at the end of three years answers to these questions," he said. Still, he added, "there's a lot of incentive to start taking some steps at this point."

## **11) WIND-POWER BODIES SAY 2002 GLOBAL USE GREW 28 PCT**

Planet Ark

March 5, 2003

Internet: <http://www.planetark.org/dailynewsstory.cfm/newsid/20030/story.htm>

COPENHAGEN – Global installed wind-power capacity grew in 2002 by 28 percent, the American Wind Energy Association (AWEA) and European Wind Energy Association (EWEA) said this week in a joint statement. In total a record 6,868 megawatts (MW) was installed worldwide in 2002, taking total wind power to over 31,000 MW, enough to power 7.5 million average American homes or 16 million European homes, they said. Wind energy is a fast-growing power sector worldwide as countries try to bring down greenhouse gas emissions, which scientists say cause global warming.

Installed generating capacity has increased by an average 32 percent annually for the last five years, giving a tailwind to wind turbine manufacturers. Denmark is home to two of the world's leaders, Vestas Wind Systems (VEST.CO) and NEG Micon (NEG.CO). Germany is by far the largest wind-power market in the world, with a total of 12,001 MW installed. With around 4,830 MW installed, Spain is now the second-biggest market ahead of the U.S. The U.S. market has slowed due to the uncertain status of the wind energy production tax credit (PTC), a key federal tax incentive to promote windpower. Today wind power supplies approximately 0.4 percent of the world's electricity demand. According to EWEA analysis, there is no reason, either technical or economic, why wind power should not supply 12 percent of global electricity consumption in 2020.

## **12) NUCLEAR PROMISE SOURS BUT JAPAN'S CHOICES LIMITED**

Planet Ark

March 4, 2003

Internet: <http://www.planetark.org/dailynewsstory.cfm/newsid/20022/story.htm>

TOKYO - Scandals, cover-ups and accidents - it sounds like the plot of a soap opera. Instead, it is the recent history of Japan's nuclear power industry, a pillar of the government's energy policy and source of some 30 percent of the power consumed by the world's second-largest economy. Opponents speak of lax management and argue that a nation as prone to earthquakes as Japan should seek other energy sources. Others say that with virtually no energy resources of its own, Japan simply has few choices. "For a country like ours, nuclear power is one option for energy, along with oil and natural gas," said Masahiro Onodera, senior researcher at Japan's Institute of Energy Economics, an industry-backed think tank. "But to throw out one of these and replace it with another? Japan doesn't have that luxury."

Dependence on nuclear power has been starkly illustrated by warnings of an electricity crunch in Tokyo this summer if the reactors it relies on are not back on line by then. Thirteen of 17 reactors operated by Tokyo Electric Power Co Inc (TEPCO) have been shut down temporarily due to lapses in inspections, including falsified safety reports. A 14th is due to shut down on March 1, and the rest could follow by April. No dates have been set for any of them to resume. "From the point of view of a stable power supply, nuclear energy is essential," said Yoichi Sekizawa at the Trade Ministry's Agency for Natural Resources and Energy.

### **HIGH ANXIETY**

Essential as it may be, a string of accidents and scandals over the past decade has eroded public trust in the nuclear industry and its 52 commercial reactors. The worst accident was in September 1999, when an uncontrolled nuclear chain reaction was triggered at a uranium processing plant in Tokaimura, 140 km (90 miles) northeast of Tokyo. Two workers died. Fears were fanned last year by a scandal over TEPCO's falsification of nuclear safety records in the 1980s and 1990s, revelations that led to the current shutdown of its reactors. Given these problems, Japan's insistence on nuclear power may appear hard to understand. However, the fact Japan is forced to rely mainly on imported energy - 52 percent of it oil, of which more than 80 percent comes from the volatile Middle East - makes policy framers edgy. "It's true that Japanese

have become anxious about nuclear energy," Trade Minister Takeo Hiranuma said recently. "But securing steady energy resources is an issue we must take up extremely seriously." One aspect of this is reducing use of Middle East oil, a desire behind Prime Minister Junichiro Koizumi's visit in January to the Russian Far East - a region of vast energy resources. Even more important, planners say, is reducing Japan's reliance on imported energy at all.

## **ENVIRONMENTAL BANDWAGON**

"One of the big problems is keeping a steady oil supply, and depending only on fossil fuels is dangerous too," said Sekizawa. "There's no worry about imports stopping with nuclear power." And despite numerous news stories about mishaps, statistics compiled by the Trade Ministry from International Atomic Energy Agency data show there were 15 unplanned stoppages of 50 Japanese reactors in operation in 2000, compared with 166 unplanned stoppages of 55 French reactors. This may be partly because Japanese reactors operate on a shorter cycle - 13 months on, then three months off-line for inspection - than in other nations, reducing unplanned stoppages. "There's always trouble with reactors," said Haruki Madarame, professor of nuclear energy at a Tokyo University research centre. "The media plays it up here. It only seems there's more."

Ordinary Japanese, however, are increasingly sceptical. To woo them, the government is emphasising environmental benefits of nuclear power, which it says cuts greenhouse gases and is needed for Japan to meet Kyoto Protocol deadlines. Environmentalists counter that this is meaningless. "Japan needs to meet its Kyoto deadlines quite soon, but it takes decades to build a reactor," said Kazue Suzuki, at Greenpeace Japan. "Besides, you can't call it 'clean' energy when you consider the chance of radiation leaks." Although Japan is working on alternate sources of energy, geography often makes this difficult and inefficient. The few places in this mountainous nation where the wind is steady enough for wind power, for example, tend to be so remote that transporting power where needed is prohibitively expensive. Crucial for the industry now is regaining trust, an essential step since approval from residents near any reactor is needed before it can be restarted, as TEPCO hopes to do soon. Industry experts say that, dire as the company's falsified reports may seem, the problem may have been provoked by vague and unrealistic government inspection rules requiring reactors to be in pristine condition even after years of use.

## **REGAINING TRUST**

"There's inevitably degradation, but in Japan the plants have been managed as if this didn't take place," Madarame at Tokyo University said. "That's clearly nonsense. "What we've been seeing is nothing more than this, and if it's repaired, that'd be fine. But to report anything created a huge problem - so of course, they didn't want to." Japan has taken steps to correct this by adopting inspection standards similar to those in the United States, which take wear and tear into account, late last year. Still more steps, such as adopting a system of inspection by a third-party group, are needed, industry experts say. But some in the field say a change of attitude by those in charge may be what matters most. "Years ago, I was told nuclear power is something that basically always comes with danger, but if this is properly understood, it can be used," said Manabu Hattori, formerly with the Atomic Energy Research Centre at Tokyo's Rikkyo University. "But people who believe that it's completely safe - totally believe this - are the ones you really can't trust. And Japan seems to have left the industry to people like this. "Of course, I don't think this is only true of Japan."

## **13) ONTARIO POWER AND SIEMENS WESTINGHOUSE TO INSTALL WORLD'S LARGEST SOLID OXIDE FUEL CELL**

Fuel Cell Today

March 4, 2003

Internet:

<http://www.fuelcelltoday.com/FuelCellToday/IndustryInformation/IndustryInformationExternal/NewsDisplayArticle/0,1471,2597,00.html>

TORONTO, Mar 04, 2003 (Canada NewsWire via COMTEX) -- Ontario Power Generation and Siemens Westinghouse today announced that the University of Toronto at Mississauga (UTM) will be the location for the first pre-commercial demonstration of the world's largest solid oxide fuel cell (SOFC) power plant. The unit will be incorporated into the existing physical plant at (UTM) in the fall of 2003, following extensive testing at Kinectrics Inc., the key engineering and system integrator on the project. According to Tapan Bose, Director of the Hydrogen Research Institute at the University of Quebec at Trois Rivieres and President of the Canadian Hydrogen Association, this will mark the first time anywhere that this leading-edge R&D technology will be tested on a commercial platform. Advantages of this technology include high rates of energy efficiency and virtually no emissions.

"Moving from the laboratory to real life conditions is an exciting milestone on the road to more sustainable, Kyoto-compatible, energy solutions for electricity customers," said Ron Osborne, Ontario Power Generation's President and Chief Executive Officer. "We are pleased to play a role in testing the commercial viability of this fuel cell system as fuel cells represent an important alternative energy technology for the future." The unit is capable of producing about 8 per cent of the campus' current electricity needs as well as hot water--the equivalent of meeting the electricity and hot water needs on an annual basis for more than 200 households. "Ontario is clearly a leader in the development of alternative energy and this is another great example of the progress being made in this area," said Energy Minister John Baird. "This groundbreaking demonstration project will help us ensure there's a reliable supply of clean and affordable electricity for future generations."

"UTM is uniquely positioned to provide a high-profile platform upon which we can showcase this exciting technology," said UTM vice-president and principal Ian Orchard. "The development of alternative energy technologies is a theme that resonates with many of our programs." "In Mississauga we are committed to making our city an environmentally healthy community," said Mississauga Mayor Hazel McCallion. "I am delighted that Ontario Power Generation and Siemens Westinghouse have chosen the University of Toronto at Mississauga as their testing ground for a project that will not only benefit us locally, but in time, the global community." The successful operation of the power plant on a commercial platform at UTM would represent an important step toward commercial readiness of this fuel cell technology. When commercially proven, such a fuel cell system could be located directly where the energy is consumed, such as small industrial sites, universities, hospitals, or even small neighbourhoods. Siemens Westinghouse is developing manufacturing processes and is building a plant near Pittsburgh to house its fuel cells business. The company plans to come to market as early as 2006 with the unit that will be tested at UTM.

In 2000 OPG, a commercial company wholly owned by the Province of Ontario, partnered with the Government of Canada, the U.S. Department of Energy, Siemens Westinghouse Power Corporation, and Kinectrics Inc. to develop the world's largest atmospheric solid oxide combined heat and power fuel cell system. Government of Canada funding for the prototype was provided through the Climate Change Action Fund/Technology Early Action Measures, Natural Resources Canada, and the National Research Council

#### **14) JAPAN, RUSSIA EYE PACT OVER CO2 EMISSIONS REDUCTION**

Kyodo News

March 3, 2003

Internet: <http://quotes.freerealtime.com/dl/frt/N?art=C2003030300062x5637&SA=Latest%20News>

MOSCOW, Mar 03, 2003 (Kyodo via COMTEX) -- Japan and Russia have reached an accord over the need to conclude an intergovernmental agreement to reduce carbon dioxide (CO2) emissions as part of efforts to curb global warming, Russian government sources said Monday. The sources said the two sides concurred on the need for such an agreement, in line with the 1997 Kyoto Protocol on global warming, during talks held in Moscow in late January between Japan's Economy, Trade and Industry Ministry and Russia's Ministry of Energy.

Should the agreement be formally concluded, it will mark the first full-fledged transaction on emissions reduction on a national level, the sources said. To work toward this goal, the two nations will set up a task force of experts and conduct feasibility studies, according to the sources. Japan and Russia have been

engaged in preliminary consultations since the Russian authorities initiated the move in June last year, they said. The initiative will be under the framework of "joint implementation," which is one of three flexible mechanisms built into the protocol as a way for nations to meet their reduction pledges by means of transactions abroad.

Joint implementation is a scheme applied to cooperative projects conducted between developed countries. The two other mechanisms are the clean development mechanism and emissions trading. Under the joint initiative between Japan and Russia, Japan is envisioned to take responsibility for construction projects at coal-fired power plants in Russia's Sakhalin and Khabarovsk for converting fuel into natural gas, the sources said. As a trade-off, Japan would get all the credits for CO<sub>2</sub> emissions reductions produced from these projects, they said, adding the project in Khabarovsk alone is expected to reduce CO<sub>2</sub> emissions by 1 million tons annually. Under the protocol, Japan is required to cut greenhouse-gas emissions by 6% from 1990 levels between 2008 and 2012. Russia, for its part, will help Japan operate the projects smoothly through such steps as tax reduction and exemption clauses, the sources said. The Japanese government, however, maintains that Russia's ratification of the protocol is a prerequisite for the conclusion of such an intergovernmental agreement.

## **15) EUROPE AT THE FOREFRONT OF ARTIC POLAR RESEARCH**

CORDIS

March 3, 2003

Internet: [http://dbs.cordis.lu/cgi-](http://dbs.cordis.lu/cgi-bin/srchidadb?CALLER=NHP_EN_NEWS&ACTION=D&SESSION=&RCN=EN_RCN_ID:19808)

[bin/srchidadb?CALLER=NHP\\_EN\\_NEWS&ACTION=D&SESSION=&RCN=EN\\_RCN\\_ID:19808](http://dbs.cordis.lu/cgi-bin/srchidadb?CALLER=NHP_EN_NEWS&ACTION=D&SESSION=&RCN=EN_RCN_ID:19808)

Europe is providing insights into climate history and is at the cutting edge of polar research. This was the consensus as the European Commission showcased EU polar projects on 28 February in Bremerhaven, Germany. The presentation of the EU polar research projects coincided with the departing of scientists from these projects for another research expedition, aboard Polarstern, a double-hulled icebreaker research vessel. 'Europe is at the forefront of international efforts in polar research. The North and South Poles are unique indicators of climate change processes and therefore polar research is a key element in our overall research effort on global climate change,' said EU Research Commissioner, Philippe Busquin. An example of European prominence in this area is the project for ice coring in Antarctica (EPICA), which has recovered ice near bedrock from a depth of over 3,000 metres. This ice is approximately 800,000 years old. It is believed that information about how our climate worked in the past is locked in the ice.

EPICA involves 13 partners from eight EU countries as well as Norway and Switzerland, and has a total budget of 7.06 million euro. It is coordinated by the European science foundation (ESF) and funded by the EU under the Fifth Framework programme's Energy, environment and sustainable development programme (EESD). While other ice coring research initiatives have taken place around the world EPICA provides the oldest ice ever retrieved in Antarctica. Such a retrieval is a 'milestone' for scientific research in this area and is expected to enhance scientists understanding of current global climate change and predict future changes, Heinz Miller, coordinator of EPICA, told CORDIS News. Mr Miller said that the final outcome of the discovery is expected to help shape environmental policy in Europe.

The EPICA team also works closely with other polar research projects, such as the EU Arctic ice cover simulation experiment (AICSEX) project, which uses a century scale perspective to assess the changes in the arctic climate system. Also funded under FP5's EESD programme, AICSEX involves seven partners from the EU and Norway and has a total budget of 2.42 million euro. AICSEX scientists have recently analysed the ice cover in the Arctic Ocean and suggested that significant changes have occurred in the latter part of the last century. These changes have resulted in the average thickness of ice decreasing by 8 per cent, which is a comparable to the surface area of France. However, while previous cooling periods in the Arctic were caused by natural fluctuations in the climate system, 'we believe there are strong indications that the warming trend and decrease in the ice extent in the last 20 years cannot be explained by natural processes alone,' said Mr Ola Johannessen, coordinator of AICSEX.

Speaking to CORDIS News, Mr Johannessen added that it was essential to assess all available ice thickness observations from the Arctic Ocean during the last century as 'extrapolating the ice thickness decrease [...] indicates that the Arctic Ocean could be ice-free 50 years from now, causing a dramatic change in the albedo, with significant effects on the global climate system.' The project findings suggest that such developments could have both a positive and negative impact on the climate. For instance, replacing ice cover with cold water, which has high capacity for carbon dioxide (CO<sub>2</sub>) absorption, could create a new sink for atmospheric CO<sub>2</sub>. This could help decrease global warming. Similarly, decreasing ice cover would benefit marine transportation and provide easier and safer logistics for offshore oil activities in the Arctic region. Increased fisheries in new previously ice-covered regions would contribute positively to the global food supplies. However, melting ice would also result in less plankton and thus have a negative effect on the marine biodiversity in the area. Furthermore, drastically decreasing ice would affect the transport of heat by the Gulf Stream and North Atlantic current, which, it is believed, would have significant consequences on the climate in Europe.

For further information, please visit:

<http://www.awi-bremerhaven.de/GPH/EPICA/index.html#top>

<http://www.nersc.no/AICSEX/>

## **16) ANTARCTIC TIME CAPSULES REVEAL CLIMATE SECRETS FROM 800,000BC**

Independent

March 3, 2003

Internet: <http://news.independent.co.uk/world/environment/story.jsp?story=383314>

Scientists are preparing to study tiny bubbles of air trapped inside the Antarctic ice sheet for more than 800,000 years as part of an ambitious research programme to investigate the history of the Earth's climate using the frozen time capsules of the north and south poles. The air bubbles will provide critical information on temperature and atmospheric composition at the time when the ice formed. The findings could shed light on the sudden changes in the global climate that have in the past threatened the vital ecosystems of the planet. Polar scientists from 10 European nations announced over the weekend that they had now drilled the deepest hole into the oldest ice of the Antarctic. At 3,201 metres, more than two miles, the ice core is twice as deep and old as the previous record.

Professor Heinz Miller, a researcher at the Alfred Wegener Institute in Bremerhaven, Germany, and spokesman for the European Project for Ice Coring in Antarctica (Epica), said that the drill still had another 100 metres to go before it hits the bedrock. When completed, the project should be bringing ice more than a million years old to the surface, he said. "We need to learn from the past. We need to learn from our climate history. Ice cores tell us about temperature, precipitation and atmospheric composition at a time long ago," he said. The ice had shown, for instance, that the world was 20C cooler 11,000 years ago. Epica, which has cost the European Union about €10m (£6.8m), has been running since 1995 and involves drilling at two sites in Antarctica so that the analysis of one core can be cross-checked with a second core to calibrate the dating procedure.

The deepest hole is at a site called Dome C, where the ice sheet is at one of its thickest points on the continent. Five years were spent drilling into ice that was 70,000 years old, but in only two more years ice that is more than 800,000 years old was reached – at that depth the ice is far more compacted and each metre of drilling penetrates many more seasons of snow fall. When the ice is brought to the surface, it has to be stored for several months at sub-zero temperatures so that it can "relax" enough to allow the trapped air to move out from the ice crystals to the spaces in between, where it forms minute bubbles. Similar ice cores taken from the Greenland ice sheet have shown that the Earth has experienced rapid periods of warming and cooling, where average global temperatures have changed by as much as 10C in less than 30 years. "That's very fast even by human standards," said Professor Nicholas Shackleton of Cambridge University, who is comparing the ice core data with another set of findings from cores drilled into the muddy sediments on the seabed of the North Atlantic.

Although these cores do not go back as far as those from the Antarctic, they can tell scientists, with greater accuracy, about global temperatures and atmospheric composition, such as the amount of methane given off by the decomposition of organic matter in the tropical wetlands. High levels of methane in the sediment indicated a warm, wet climate and low levels a dry, cold period. Sediment cores drilled off Florida and Greenland both indicated rapid periods of cooling and warming in support of the ice core data – indicating that such periods were a global rather than a regional phenomenon, Professor Shackleton said. "Greenland and Florida both experienced periods of warming and cooling in parallel. Occasionally we see material melted out from icebergs, which gives an indication of how significant these events were," he said. A consensus is emerging that these periods of dramatic change in the global climate were brought about by sudden shifts in ocean currents. The fear is that such changes could also be triggered by man-made global warming. One theory was that the heat "conveyor belt" of the North Atlantic, which brings warm water from the Mexican Gulf to north-west Europe, had in the past slowed down or even stopped, Professor Shackleton said. "Computer models suggest that it can spontaneously shut down. It may not be the result of an external cause at all. This may be relevant for the future because many events could trigger such a shut down," he said. "Clearly a significant reduction in northward movement of the Gulf Stream would have a significant impact on our climate."

## **17) UK MAY HAVE TROUBLE REACHING KYOTO TARGET**

CNSNews.com

March 3, 2003

Internet:

<http://www.cnsnews.com/ViewForeignBureaus.asp?Page=%5CForeignBureaus%5Carchive%5C200303%5CFOR20030303e.html>

London (CNSNews.com) - Britain will have difficulty meeting its long-term domestic targets for reduction of "greenhouse gases" and might even have trouble complying with the Kyoto Protocol, according to a report by an independent research group. In a report released last week, researchers with Cambridge Econometrics (CE) said the U.K. government will be able to abide by the Kyoto treaty only if it takes Britain into a Europe-wide emissions trading plan. The Kyoto Protocol will come into effect if developing nations responsible for the output of 55 percent of the world's greenhouse gases, such as carbon dioxide, sign up to the treaty.

Although the United States and Australia have declined to be bound by the treaty's terms, ratification by Russia would cause the treaty to go into effect and require nations to reduce their gas outputs from 1990 levels. But Britain's domestic reduction targets are more ambitious than those set out in the treaty. Earlier this week, Prime Minister Tony Blair unveiled a new energy policy that will aim to reduce carbon emissions by 20 percent by 2010. Paul Ekins, co-editor of the CE report, said there were "formidable obstacles" facing the British government's energy plan. "Our forecasts of energy demand and carbon emissions are a timely warning signal to policy makers of the challenges of reducing carbon emissions," he said.

The report stated that the 20 percent reduction goal "appears to be out of reach without significant policy measures." Sudhir Junankar, manager of the UK Energy-Environment Service for Cambridge Econometrics, said that such policy measures include higher taxes. "To reach these goals, the government might have to consider higher energy taxes, perhaps compensated by a decrease in other forms of taxation such as payroll taxes." Increased payroll taxes will hit British businesses next month as part of government spending plans on health and education. Junankar said that without plans to keep the country's nuclear power industry running at current output levels, more carbon-emitting fossil fuel energy would need to be generated. "The decommissioning of nuclear power stations means that more coal-fired plants will be needed," he said.

Missing the 2010 goal would jeopardize other, longer-term goals in the government's strategy. By 2050, the government aims to cut carbon dioxide emissions by 60 percent, a push that Prime Minister Tony Blair said would "break the relationship between economic growth and ever-rising pollution." "Essentially, they would be off track for the future if they fail to hit their targets for 2010," Junankar said. The report, which is the result of combined energy, environmental and economic research published by Cambridge Economics every

six months, also contained a warning about Britain's Kyoto obligations. The treaty, of which Britain has been one of the key supporters, gives the U.K. a 12.5 percent greenhouse gas reduction target. The CE report said that emissions will only decline by 9.5 percent by 2010, however, unless Britain joins the E.U. mandatory emissions trading program.

The Department of Trade and Industry stood by its energy projections Monday. A spokesman said although officials had not had a chance to look at the CE report, the energy plan or "white paper" unveiled by the government was "the most comprehensive study of the energy industry in the U.K. in 20 years." "It's not apparent that the Cambridge Econometrics report takes into account the new programs" outlined in the government's plan, the spokesman said. Those measures, including incentives totaling more than \$1.5 billion, will result in an overall 23 percent drop in greenhouse gas emissions from 1990 to 2010, according to government statistics. The spokesman also said the government already plans to sign up to the EU's emissions trading scheme. "It's also possible that the way the report calibrated its figures, that may have put a relatively high emphasis on recent statistics," the spokesman said. "That would tend to shift the focus towards the short term -- and the use of coal went up in the past two years -- and away from the long term

## **18) INTERVIEW: AUSTRALIAN BUSINESSES GRAPPLE WITH KYOTO**

Dow Jones Newswires

March 3, 2003

Internet: <http://sg.biz.yahoo.com/030228/15/38dgo.html>

CANBERRA (Dow Jones)—Meredith Hellicar is philosophical about the reasons behind the Business Council of Australia's failure to reach consensus on Kyoto ratification. Having chaired many meetings of the council's greenhouse taskforce over recent months, Hellicar is only too aware of the confusion and complexities inherent in what remains a politically sensitive topic in Australia. Encouraging for Hellicar, who instigated debate on the environmental accord in November, is that many of the organization's 102 members remain perched on the fence, choosing neutrality until research and evidence can convince them one way or the other. "There are a large number of members who are very consciously not taking a position because the arguments are pretty difficult," Hellicar told Dow Jones Newswires in an interview Friday. "I'm pleased we've had an extremely healthy debate and we've got more people engaged in the issue," she said.

"Also the views do not fall along sectorial lines. This isn't a winners versus losers debate based along sectorial lines," Hellicar adds.

Earlier Friday, the business council declared it couldn't reach a common position on Kyoto, citing differences of opinion and a lack of definitive research about the business impacts and benefits of the protocol. The result avoids embarrassment for Prime Minister John Howard's conservative government, which has resisted ratifying the treaty, putting it at odds with much of the developed world. Energy heavyweight BP PLC (BP) and billionaire Richard Pratt's Visy Industries took a prominent role in pushing for Kyoto endorsement, warning Australia risked discrimination from trading partners in future years if it failed to become a signatory. More specifically, Australia could find itself excluded from new energy trading arrangements and miss out on opportunities in greenhouse technology development. Resistance though came from some heavy-hitters in the resources industry, namely Rio Tinto PLC (RTP), BHP Billiton Ltd. (BHP) Esso Australia (XOM), Alcoa Inc. (AA), and Woodside Petroleum Ltd. (A.WPL).

Hellicar said the council's near-term priority will be ensuring Australia meets its 2012 target in greenhouse gas emissions, while further educating members on the competing scenarios of ratification and nonratification. "The focus will be on developing the agenda to ensure Australia's economic performance is optimized in a greenhouse-constrained world," she said. But the question of ratification isn't likely to disappear, with Hellicar expecting it to linger in the background. Prime Minister Howard has repeatedly said Australia won't sign the protocol unless the U.S. and developing nations also agree to join. Howard regards the treaty as flawed because it doesn't require developing countries to contribute to a cut in the emission of greenhouse gases, leaving Australian industry at a disadvantage.

The 1997 protocol commits industrialized nations to rolling back emissions of greenhouse gases – such as carbon dioxide, nitrous oxide and methane gases – to 1990 levels. Industrialized countries were directed to reduce their emissions by an average of 5.2% below 1990 levels. Australia extracted a special deal that allows it to limit emissions to 108% of 1990 levels by 2012. An audit last year found Australia would miss that target, with emissions projected to be 111% above the 1990 levels by 2010.

## **19) ARCTIC DATA CAST DOUBT ON CLIMATE CHANGE THEORY**

Canadian Press

March 2, 2003

Internet: [http://www.ctv.ca/servlet/ArticleNews/story/CTVNews/1046647333160\\_76/?hub=SciTech](http://www.ctv.ca/servlet/ArticleNews/story/CTVNews/1046647333160_76/?hub=SciTech)

OTTAWA — Data compiled from the journals of early Arctic explorers casts doubt on the assumption that recent thinning of Arctic ice is the result of human-induced climate change. A Norwegian study using the explorers' ancient logbooks suggests that dramatic shrinkage of sea ice, widely cited as evidence for global warming in recent years, has occurred before. That doesn't necessarily prove that recent disappearance of sea ice is natural, but raises the possibility that it could be, researchers say.

Adventurers of the 1700s, who took meticulous notes on their voyages, encountered ice conditions similar to those seen today, researcher Chad Dick said in an interview from Norway. "If you go back to the early 1700s you find that sea ice extent was about the same then as it is now," said Dick of the Arctic Climate Systems Study, an international research program. In Canada there has been alarm at reduced ice cover in Hudson's Bay which is causing problems for polar bears. There's also been debate about disappearing ice in the Northwest Passage, which could result in challenges to Canadian sovereignty over the passage. Those phenomena have been cited as evidence that humans are causing the global climate to warm.

But similar shrinkage has occurred before, according to the Norwegian researchers who have drawn up Arctic ice charts covering 500 years. The charts show sea ice has declined by about 33 per cent over the past 135 years, but much of that thinning occurred in the early part of that period, before the industrial revolution unleashed greenhouse pollution on a large scale. In the more distant past, ice conditions were similar to those seen today. That raises the possibility - but does not prove - that recent ice shrinkage could be part of a natural cycle, rather than the result of human-caused greenhouse emissions, Dick said. "The evidence at the moment is fairly inconclusive." "The fact is there are natural cycles in sea ice extent and we're not outside the range of those natural cycles at the moment."

He said natural climate cycles like ice ages are driven by the way the earth orbits and wobbles in its orbit and resulting changes in the amount of solar radiation reaching Earth. If the current reduction in ice cover is part of a natural cycle, ice cover should soon start to grow again, said Dick. "We've definitely lost a lot of sea ice over the past 20 years or so. "If this is a natural cycle, then things should start returning to a more average condition, so we should see sea ice thickening up and extending further south. "If we don't see that, if we see it continuing to thin and disappear, then in 10 years time we're pretty well going to be beyond the range of natural cycles we've seen up to now." He emphasized that the study doesn't refute the theory of global warming, but points to the inadequacy of current climate models. "Just to say, it was the same in the 1700s and therefore it's natural, doesn't follow. It's not necessarily wrong but it doesn't follow. "What we need to understand is what these natural cycles are about and why they occur and if we could do that we could tell where in the natural cycle we were meant to be." The World Wildlife Fund is publishing the sea-ice charts on CD-ROM for researchers around the world to use. "I would say that in about 10 years time we'll know whether this is a human effect or not," said Dick.

## **20) REPUBLICANS AIM FOR SOFTER, GREENER ENVIRONMENTAL TALK**

The New York Times

March 2, 2003

Internet:

[http://www2.ocregister.com/ocrweb/ocr/article.do?id=27925&section=NEWS&subsection=FOCUS\\_GOVEMENT&year=2003&month=3&day=2](http://www2.ocregister.com/ocrweb/ocr/article.do?id=27925&section=NEWS&subsection=FOCUS_GOVEMENT&year=2003&month=3&day=2)

WASHINGTON – Over the last six months, the Republican Party has subtly refocused its message on the environment, an issue that a party strategist called "the single biggest vulnerability for the Republicans and especially for George Bush" in a memorandum encouraging the new approach. The Republicans, as the memorandum advised them, have softened their language to appeal to suburban voters, speaking out for protecting national parks and forests, advocating investment in environmental technologies, and shifting emphasis to the future rather than the present. In interviews, Republican politicians and their aides said they agreed with the strategist, Frank Luntz, that it was important to pay attention to what his memorandum, written before the November elections, called "the environmental communications battle." In his memorandum, Luntz urges that the term "climate change" be used instead of "global warming," because "while 'global warming' has catastrophic communications attached to it, 'climate change' sounds a more controllable and less emotional challenge." Also, he wrote, "conservationist" conveys a "moderate, reasoned, common-sense position" while "environmentalist" has the "connotation of extremism."

President George W. Bush's speeches on the environment show that the terms "global warming" and "environmentalist" had largely disappeared by late last summer. The terms appeared in a number of Bush's speeches in 2001, but now the White House fairly consistently uses "climate change" and "conservationist." National environmental groups say the shift has blunted the edge of Republican attacks. "They are not playing defense anymore," said Kim Haddow, a consultant for the Sierra Club who has helped counter some Republican advertisements. "It's like a tennis game. The ball is back in our court, and we need to spend time and energy educating voters." Many new Republican communication strategies match the recommendations of the 16-page environmental memorandum put together by the Luntz Research Cos., the consulting firm run by Luntz, who was also one of the drafters of Contract with America, the manifesto of House Republicans under Newt Gingrich, the former speaker.

The memorandum was given to The New York Times by the Environmental Working Group, an advocacy group critical of Bush administration policies. "They are showing the message discipline they need to get these anti-environmental policies past suburban voters," said Ken Cook, president of the organization. One section of the memorandum, "Winning the Global Warming Debate," asserts that many voters believe there is a lack of consensus about global warming among scientists. "Should the public come to believe that the scientific issues are settled, their views about global warming will change accordingly," it says. "Therefore you need to continue to make the lack of scientific certainty a primary issue." Among the ways to "challenge the science," the memorandum says, is to "be even more active in recruiting experts who are sympathetic to your view and much more active in making them part of your message" because "people are more willing to trust scientists than politicians."

Each party says Luntz's advice played a role in elections last fall, including the Senate race in Colorado, where the Republican incumbent, Wayne Allard, ran advertisements promoting his work with the Great Sand Dunes National Park and cleaning up nuclear weapons plants. "The thrust of the memorandum is consistent with what we tried to do with our campaign, to take issues that have real impact on people in Colorado and work on those problems," said Dick Wadhams, a spokesman for Allard. "The Sierra Club and League of Conservation Voters spent millions of dollars attacking Senator Allard and it didn't work." That kind of success will encourage more Republicans to embrace these strategies, party officials say. "We have not engaged in the discussion as enthusiastically as we should on occasion - there are so many governors around the country that have sterling environmental records," said Marc Racicot, chairman of the Republican National Committee. "We are going to talk about these issues a lot over the next election cycle."

## **21) GOVT TO SET UP CO2 CREDIT FINANCE FUND**

Daily Yomiuri

March 2, 2003

Internet: <http://www.yomiuri.co.jp/newse/20030302wo41.htm>

The Economic, Trade and Industry Ministry plans to establish within this year a fund with the Development Bank of Japan and other financial institutions to finance Japanese companies that carry out projects abroad to cut carbon dioxide (CO2) emissions to prevent global warming, sources close to the ministry said Saturday. The fund for the Kyoto mechanism, which will be set up in line with the Kyoto Protocol rules, will provide financial assistance to projects designed by electric power plants to renovate thermal power plants in underdeveloped countries to reduce CO2 emissions, the sources said. It will not offer funds in the form of loans or investments, but will finance such projects through a partial purchase of CO2 credits companies will acquire via reduction projects, the sources said.

The fund will be capitalized in the billions of yen. In addition to the Development Bank of Japan, the ministry will also invite private companies and financial institutions to contribute to the fund, the sources said. Fund providers will be given CO2 credits proportionate to the amount of their contributions. They can use the credits to meet requirements of CO2 reductions imposed on them or sell them on the market, the sources said. The Kyoto Protocol requires Japan to reduce greenhouse-effect gases, including CO2 emissions, by an average of 6 percent of 1990 levels between 2008 and 2012. However, as Japan will have difficulty reducing global warming gases by such a high percentage, it will need to acquire 1.6 percent of its CO2 credits through overseas reduction projects, the sources said

## **22) BUSINESS SHIFTS TACK ON KYOTO**

The Age

March 1, 2003

Internet:

<http://www.theage.com.au/articles/2003/02/28/1046407750553.html><http://www.theage.com.au/articles/2003/02/28/1046407750553.html>

Business support for the Federal Government's hardline position on climate change is crumbling, with the Business Council yesterday scrapping its outright opposition to the Kyoto Protocol. Despite the move, the Government is adamant it will not officially endorse the protocol and its raft of measures to combat global warming. After "passionate" debate that cut across industry sectors, yesterday's Business Council of Australia meeting endorsed a "neutral" stance on Kyoto. The council's early opposition to Kyoto is said to have influenced the Government's stance.

But in an earlier speech to a conference on climate change, Environment Minister David Kemp confirmed the Government would stand with the US on climate change against Europe, Canada, Japan and other developed countries. "The truth is that Kyoto itself will achieve little . . . the Government has decided it is not in Australia's interests to ratify the Kyoto treaty at the present time," he said. It is not clear if Dr Kemp was told of the imminent change in the Business Council's position.

The council's neutral position sent an important signal to the Government, Australian Conservation Foundation executive director Don Henry said. "The only opposition to ratification of the Kyoto Protocol in Australia has been business opposition," he said. "If the Business Council is neutral, and given that we all know the huge impact of climate change, this is a very clear signal to the Federal Government that they should move ahead and ratify the Kyoto Protocol." Greenpeace's climate campaigner, Frances MacGuire, said: "The business community is now clearly at an impasse on the issue of Kyoto ratification. All members of the BCA know that ratification . . . is inevitable." Dr MacGuire said a small number of businesses were holding the council and the Government back from a position that would be in the nation's interest - ratifying the Kyoto Protocol.

The Kyoto Protocol requires signatories to limit greenhouse gas emissions to a target 5 per cent below 1990 levels by 2010. Australia has been granted leniency to account for its high concentration of energy-dependent industry and as a reward for improvements in land clearing. While Dr Kemp claims to be on target to meet Australia's special target of 108 per cent of 1990 emissions, other assessments show emissions are already 31 per cent above 1990 levels. Business Council chief executive Katie Lahey said the

organisation had previously opposed ratifying Kyoto because China, Japan and other major polluters had declined to commit. But after an acrimonious four-month debate between members, more businesses now supported signing Kyoto than opposed it. "Until October, the BCA position was, we shouldn't ratify it because the countries that were pumping out the biggest amount of greenhouse gases weren't part of the protocol," Ms Lahey said.

The international dynamics changed at the Earth Summit last year. "Members went to Johannesburg and said, this is real and it's going to happen next year . . . The view of some people is that you can be more influential in the camp than outside." She expects Kyoto to become international law when, or if, Russia signs later this year. While businesses remained divided by Kyoto, she said, the challenge had shifted to grappling with its practical challenges such as lifting greenhouse efficiency and starting carbon trading systems. The Government agrees with supporters of Kyoto that global warming is harmful and caused by rising carbon and methane emissions. But it disagrees on whether the Kyoto Protocol is the best solution

See Also: Business moves to middle ground on Kyoto, Sydney Morning Herald, March 1 2003, <http://www.smh.com.au/articles/2003/02/28/1046407749965.html>

Kyoto Stance 'Costing Nation', Herald Sun, February 17, 2003  
[http://www.heraldsun.news.com.au/common/story\\_page/0,5478,5998046%255E421,00.html](http://www.heraldsun.news.com.au/common/story_page/0,5478,5998046%255E421,00.html)

### **23) POTENTIAL SAVINGS IN ENERGY USE**

The Star

March 1, 2003

Internet: <http://thestar.com.my/news/story.asp?file=/2003/3/1/nation/jqenergy&sec=nation>

PETALING JAYA: A Malaysia Energy Centre audit conducted last year in 24 Malaysian-based factories has revealed the potential for reductions in energy costs and carbon dioxide (CO<sub>2</sub>) emissions. The audits showed that the factories - from the energy-intensive sectors of cement, wood, pulp and paper, rubber, food, glass, iron and steel, and ceramic - alone consumed 5.5 million Megawatt hour per year (MWh/yr) of energy last year. This amounted to 4.75% of the final energy demand by the industrial sector in 2001 and cost almost RM1.1bil, the Malaysia Energy Centre or Pusat Tenaga Malaysia (PTM) said in a press release yesterday.

The audit found that if cement factories - which consume the most energy among the eight sectors - implemented no-cost measures such as fixing leakages, optimising compressed air pressure, and improving fuel to air ratio for burners, their combined energy consumption could be reduced by 17%. PTM said an additional 12.7% could be slashed if high cost measures such as the installation of energy efficient equipment and ancillary works to recover waste heat for productive use. It said the rubber sector, consumed a total of 30,200 MWh/yr, could cut down its energy consumption by 20% merely by improving housekeeping and maintenance.

"The audits reflect the minimum cost required to make a significant change in the savings enjoyed by the factories," PTM chief executive officer Dr Hassan Ibrahim said, adding that a number of audited factories had successfully implemented the proposed cost-saving measures. Hassan said the audit was also aimed at identifying ways to encourage industries to cut down on CO<sub>2</sub> emissions, which largely originate from fuel combustion for energy production. The audit found that 24 factories alone emit 1.8 million tonnes of CO<sub>2</sub> a year but this could be slashed by 28% if the factories adopted energy management. Hassan said the reduction in emission of a green house gas like CO<sub>2</sub> coincided with Malaysia's commitment to the UN Framework Convention on Climate Change. The audit is part of RM80mil Malaysian Industrial Energy Efficiency Improvement Project co-funded by the UN Development Fund, the Global Environment Facility, the Government and the private sector

### **24) RUSSIAN STALLING COULD KILL KYOTO CONSENSUS**

Globe and Mail

March 1, 2003

Internet:

<http://www.globeandmail.com/servlet/story/RTGAM.20030301.wxkyot0301/BNStory/International>

Moscow — Russia has delayed ratification of the international Kyoto Protocol on climate change, and two of its top scientists have begun to question the science underpinning it, developments that environmentalists say could kill the painstakingly crafted deal. Although Russian Prime Minister Mikhail Kasyanov said last year that the Russian parliament would ratify the accord, a bill to begin that process has not yet been put to the Duma. The original schedule was to have the accord ratified by the end of last year. One cabinet minister said recently that Russia no longer has a set timetable for ratification, a stall that could put the entire deal in jeopardy. Under a series of complex mechanisms, the accord will come into force only when countries representing 55 per cent of global emissions sign the pact.

The 100-plus countries that have ratified account for just 44 per cent. Russia, with 17.4 per cent of the global total, is the only remaining country that could make the pact binding on its own, since the United States has dropped out of negotiations. The wait may be long. At a recent climate-change conference in India, two members of the Russian parliament told their international colleagues that only about half the Duma backs ratification of the Kyoto accord, and that its passage is by no means certain. More troubling to some environmentalists, the two leading Russian scientists on the file, Alexander Bedritsky and Yuri Israel, have been questioning whether the deal is scientifically sound, even suggesting Russia might benefit if global warming makes its colder regions more productive. Mr. Israel, vice-chairman of the Intergovernmental Panel on Climate Change — the body that oversees the entire Kyoto process — said recently that the treaty did nothing to mitigate the long-term effects of climate change, words that were likely music to the ears of U.S. President George W. Bush, who noisily pulled his country out of the treaty in 2001.

Some are worried that the United States may be putting pressure on Russia to follow its lead on Kyoto, perhaps in exchange for U.S. support of Russia's application to join the World Trade Organization. "There's some funny business, as always, going on within the politics of Russia right now," said Gerry Scott, climate-change campaigner for the David Suzuki Foundation. "There's always the concern that there would be linkage between Kyoto and other issues that are of concern to Russia and the U.S." After a recent meeting in Moscow with his American counterparts, deputy foreign minister Georgy Mamedov refused to say whether Russia will ratify the treaty and said only that the United States and Russia will work together to fight climate change. Russian President Vladimir Putin, who will have the final say on the matter, has not backed away from his public commitment to push the accord through to ratification. Most scientists worldwide believe that signing the accord could prove greatly beneficial to the Russian economy, since the collapse of industry at the end of the Soviet era means Russia has already met its target of reducing emissions to 1990 levels by 2010. Russia will likely be well below those levels, meaning it could make billions of dollars selling emission "credits" to countries that exceed their allotted amounts.

## **25) RESEARCH PANEL CRITICIZES US GOVERNMENT'S CLIMATE PLAN**

Voice of America

March 1, 2003

Internet: <http://www.voanews.com/article.cfm?objectID=82888F88-A383-4E31-89A54875DCCEA0FB>

An independent federal research panel has strongly criticized the U.S. Government's strategic plan to combat global warming. The new report by the National Research Council prepared at the request of the Bush administration - calls the White House plan "a good first step" but says it falls short of the needed response to global climate change. Eight months after the Bush Administration rejected the United Nations-sponsored Kyoto Protocol on Climate Change, back in June 2001, the White House established its own Climate Change Science Program. Its purpose was to coordinate climate change research across more than a dozen federal agencies. The White House then submitted its draft plan for review by a National Research Council committee, made up of experts from the academic, business and the environmental communities. And that group has now offered its analysis of the Bush Administration's plan to combat global warming.

Thomas Graedel Committee Chairman and Yale University professor Thomas Graedel says the plan provides a solid foundation for future research. He commends the plan in particular for its emphasis on the use of science to guide policymaking in this complex field. "So while we have the underlying Global Change Research Program moving forward to take the in-depth looks at the science that one needs to understand increasingly well the complex interactions dealing with climate, we also have a shorter term initiative to take those results and make them available to a wide variety of stakeholders, rather more quickly," he said. The committee also supports the plan's call for cutting edge research to better understand the science of climate change and to develop computer models that would offer more reliable forecasts of climate change.

While the study says the plan could build on these initiatives, Committee Chairman Thomas Graedel says it lacks most of the elements of a strategic plan. Notably absent the report says, are "executable goals, clear timetables, criteria for measuring progress, an assessment of whether existing programs are capable meeting these goals, and a management plan." "Even though the goals are scattered here and there throughout the plan, or things that could be goals, we don't find a clear vision and strategic plan structure that would support a measured progress toward meeting what is outlined as the things that the plan would like to achieve," said Mr. Graedel. Chairman Thomas Graedel says it is also not clear how the lead agencies working on climate change issues will coordinate their efforts, nor how other agencies like the Federal Emergency Management Agency or agricultural extension services would fit into the program. "This is particularly important to think about because this program is a new start, and it has the opportunity to redefine how the interagency activities are better integrated, certainly important for areas like decision support science that have not essentially been a part of the old program and it is not clear how you make them go forward vigorously unless you have some way to assign responsibility for getting that job done," he said. The National Research Council report says the plan has serious gaps when it comes to studying the effects of climate change on human societies and ecosystems. Also missing, it says, are key global climate observation systems, which the report notes are currently a "patchwork of observational networks, not particularly well-integrated."

Thomas Graedel says another critical weakness in the Bush Administration proposal is the absence of a system for delivering information to decision makers. "In particular it is not clear from the draft plan who will use climate research results and what it is they need to know," he said. "And, we are thinking fairly broadly here, yes, watershed managers, yes urban planners, also people like corporations who in one way or another might be influenced by changes in climate or evolving changes in one or more of the perimeters driven by climate." The committee did not include details of the proposed U.S. budget for the next fiscal year, but noted that the goals of the Climate Change Science Program could not be realized without more money than the White House is seeking for climate research. In response to the Council's strong criticisms, James Mahoney, director of the Bush Administration's Climate Change Science Program, told the New York Times newspaper that he welcomed the comments, "even though they may sound like they're fairly harsh. It is like getting a ship into motion," he noted. "Let's make a solid start, and then we've got something to critique and build on." Committee Chairman Thomas Graedel applauds the White House openness to suggestions from a wide group of critics. And he says he is "cautiously optimistic" that the final version of the plan, due in April, will incorporate at least some of the committee's recommendations.

## **26) BUSH CLIMATE CHANGE PLAN A SHAMBLES, SAY SCIENTISTS**

SRI Media

March 1, 2003

Internet: [http://www.srimedia.com/artman/publish/article\\_416.shtml](http://www.srimedia.com/artman/publish/article_416.shtml)

The seventeen strong National Academy of Sciences panel, who were responding to a query from the White House, also said that after a decade of climate change we already have a good picture of the phenomenon & what to expect in the future. The panel has also attacked the plan for having questionable funding. The Climate Change Strategic Program for research into the effects of what the Bush Administration call, "So-Called" greenhouse gasses was thought up by the Bush Administration after it withdrew the United States from the Kyoto Protocol this summer. The Bush Administration has made clear that it wants to call upon US

industry to make voluntary reductions in CO2 emissions. The Climate Change Strategic Program, will facilitate research by 13 federal agencies.

"The draft plan lacks most of the basic elements of a strategic plan," the National Academy of Sciences panel wrote. It said there was no "guiding vision," set of executable goals, clear timetables, criteria for measuring progress, or priorities for work. The panel's recommendations continued, "The revised strategic plan should articulate a clear, concise vision statement for the program in the context of national needs. The vision should be specific, ambitious, and apply to the entire CCSP." However there were some positive statements made by the report. The panel said the draft plan identified "some exciting new directions" for research such as reliable methods for forecasting climate change and "cutting-edge" research into aerosols and the carbon cycle. The panel also recognised the attempts of the Bush Administration to make "genuine overtures" to researchers and interested parties on how to improve the draft.

Thomas Graedel, professor of industrial ecology at Yale University and chairman of the panel, said while research in the past tried to gauge how the climate was changing and its effects on nature, "future science must also focus on more applied research that can directly support decision-making." The panel brought together to critique the plan was drawn from the academic world, businesses including Honeywell and BP, utilities and environmental organizations. The experts credited the administration for undertaking the effort in the first place. A broad government plan for climate research is required under a 1990 law, the Global Change Research Act, but was never completed during the administration of Mr. Bush's father or in the Clinton administration. As a result, many experts say, climate research has suffered. The names of the panel members, and the text of the report, are online at [www.nas.edu](http://www.nas.edu)

See Also:

Advisers Tell Bush Climate Plan is Useless, the Guardian , February 27, 2003  
Internet: <http://www.guardian.co.uk/climatechange/story/0,12374,903609,00.html>

## **27) DJERBA TO HOST WTO INTERNATIONAL CONFERENCE**

Tunisia Online (Tunis)  
March 1, 2003  
Internet: <http://allafrica.com/stories/200303020019.html>

The World Travel Organization (WTO) has chosen Djerba to host an international conference on April 10 and 11 on climate change and tourism, a choice of venue that reconfirms the respect for Tunisia's approach to sustainable tourism and its active role within the WTO. Tourism has witnessed a progressive development over the last few decades, a trend that the WTO forecasts will continue, with major changes already observed both in offer and demand. In order to maintain this dynamic, the world's tourist industry needs to meet several challenges, amongst them climate change. The causes and effects of climate are many and complex and its repercussions already visible in a number of tourist resorts, particularly in coastal areas and islands and areas effected by drought and floods.

The problems facing tourist resorts and their perspectives for the future will be examined in greater detail in the WTO conference, the principal aim of which is to increase awareness amongst governments, tourism professionals and operators to the problems of climatic change. The conference seeks to make an assessment, define an approach for overcoming the problems and finding appropriate solutions. The conference will be bringing together 120 international experts and a large number of WTO members and representatives and international bodies such as the United Nations Framework Convention on Climate Change, World Meteorological Organization United Nations Convention to Combat Desertification and the Intergovernmental Oceanographic Committee. Amongst the themes to be dealt with in greater detail are Tourism and Hydraulic resources, Tourism and small islands and coastal zones, Tourism and mountains regions and the scope for action and the effects of climate change.

## **28) LIGNITE MINE PLAN SLAMMED BY GREEN BODY**

Belfast Telegraph

February 28, 2003

Internet: <http://www.belfasttelegraph.co.uk/news/story.jsp?story=382502>

CONTROVERSIAL plans to mine lignite in North Antrim go against recommendations in the Kyoto Protocol on carbon dioxide emissions, an environmentalist warned today. Ballymoney Power, a subsidiary of Australian company, AuIron Energy, have submitted a controversial planning application to build a £500m lignite mine and power station north of Ballymoney. But the plan has encountered massive local opposition from residents, environmentalists and politicians who are demanding a full public inquiry. The WWF warned that the increased carbon dioxide emissions from the proposed plant could put the UK in violation of its commitments under the Kyoto Treaty, if the treaty becomes legally binding.

The Managing Director of AuIron Energy, Jon Parker, admitted to shareholders at a speech in Sydney late last year that Kyoto may have to be taken into account. He said: "The Ballymoney project has the potential to add to shareholder wealth and deserves continued financial support. "However, the potential is not guaranteed and key determinants of the project's success will include future gas and electricity prices in Ireland and Kyoto environmental considerations." Malachy Campbell from the WWF said: "The UK signed up to Kyoto which called for a reduction in greenhouse emissions. The treaty is not yet in operation but as more countries ratify it, it will hopefully become binding. "Moreover, the government has set a national target of reducing carbon dioxide emissions in the UK by 20% by 2010 and the suspended Stormont executive had a commitment to work towards wind power and reduce carbon dioxide."

Mr Campbell added: "This is an international agreement, a UK domestic target and a local government target and it is impossible to see how any of them are compatible with a lignite mine. "Lignite has higher emissions than any other fossil fuel and we should be looking to move away from dependence on fossil fuels." A spokesman for Ballymoney Power said: "This plan will go to a planning inquiry which will take into consideration the environmental aspect. "Any plans will have to conform with the latest EU regulations."

## **29) EMISSION CREDITS TO CURB DENMARK'S CO2 POLLUTION**

Planet Ark

February 28, 2003

Internet: <http://www.planetark.org/dailynewsstory.cfm/newsid/19988/story.htm>

COPENHAGEN - Denmark said this week it would reach its target for cutting greenhouse gas emissions by buying emission credits from central and eastern Europe. Denmark expects to spend 5-25 billion crowns (\$0.7-3.6 billion) to reach its commitments to the Kyoto protocol to cut carbon dioxide emissions (CO2) by 21 percent by 2012. "We want the most improvement for the environment we can get for as little money as possible," Danish Finance Minister Thor Pedersen said at a news conference. "Buying credits is the cheapest way of improving our environment while only taking national measures would be the most expensive."

Denmark ratified the Kyoto protocol in May last year, and set the ambitious target of reducing its emissions of carbon dioxide, thought to contribute to global warming, by 21 percent by 2012 compared to 1990's level. But since 1990 Denmark's emissions have barely decreased at all, and if no measures are taken, the carbon dioxide emission would be 20-25 million tonnes above the target by 2012, corresponding to 25-30 percent of Denmark's total greenhouse gas emissions. "We have to reduce our emissions much more than we initially thought. Therefore it will also cost more than expected," Pedersen said. Under its commitment to the Kyoto protocol, Denmark has to cut its CO2 emissions by 25 million metric tonnes to 55 million tonnes per year by 2012.

By buying emission credits from other countries which are below their target, Denmark hopes to reduce the cost of its commitment. Emissions trading schemes are planned worldwide as countries look for ways to

meet their Kyoto protocol commitments to curb emissions of greenhouse gases. Under the terms of the European protocol, if countries find it too difficult to cut their pollution to reach the targets, they can buy the right to pollute from others whose emissions are below their target. Such mechanisms can also be used within states by companies, meaning firms which produce renewable energy such as wind energy can sell credits to those unable to meet the required reductions. Britain said on Monday it could reach its target to cut greenhouse emissions through more renewable power and greater energy efficiency.

### **30) BILL TAKES AIM AT GREENHOUSE GAS EMISSIONS**

Puget Sound Business Journal

February 28, 2003

Internet: <http://seattle.bizjournals.com/seattle/stories/2003/03/03/story4.html>

A bill proposed this week in the state Legislature could inch Washington closer to creating a commodities-style market for greenhouse gas emissions. If House Bill 2119 and Senate Bill 5945 pass, carbon dioxide and other greenhouse gas emissions could someday be bought and sold like hog futures or wheat. The bill would create the Washington Climate Action Registry, a voluntary program that would catalog the amount of greenhouse gas emissions and the mitigation programs used by power plants and heavy industry. It would be the first step in potentially setting up a market that would allow companies to trade emission credits like commodities. A company with heavy carbon emissions could buy emission credits by investing in a renewable energy project or buying a large swath of forest - called sequestering - thus reducing its countable emissions level. Like most attempts to regulate or mitigate greenhouse gas emissions in the state, it's likely to be vigorously opposed.

But pressure is mounting on the federal government to create a national market for emission trading, and advocates of the registry say getting ahead of any national climate exchange program could give Washington state businesses an advantage. "The point of the registry is that we believe everybody is going to be faced with mandatory registry by the end of the decade," said Mike Ruby, a consultant with Envriometrics Inc., a Seattle-based environmental engineering firm. Ruby helped draft the legislation, which is being sponsored by a host of Democrats in the House and several Republicans in the Senate. "The federal government is moving in this direction, and if we move now, Washington companies will be mature-market participants while the rest of the country will be green novices," he said.

Attempts to regulate emissions of carbon dioxide - or other so-called greenhouse gases such as methane, nitrous oxide, and engineered chemicals, including hydrofluorocarbons, which are believed to cause global warming - have been opposed by the Association of Washington Business, the largest business lobby in the state. "We think any regulation on greenhouse gas emissions should come at the federal level," said Kristen Sawin, government affairs director for environmental policy at the Olympia-based Association of Washington Business. "It's important to have the same rules in place in each state, not a piecemeal approach." While the Legislature debates the merits of the registry, the state Energy Facility Site Evaluation Council is wrestling with setting mitigation standards for greenhouse gas emissions on new power plants. Earlier this month, state Attorney General Christine Gregoire announced that Washington would join six other states in suing the Bush administration over its failure to regulate greenhouse gas emissions from the nation's power plants.

Power plants in the United States account for 10 percent of the world's total of man-made carbon dioxide emissions, according to a study done last year by a host of public interest groups and released by Congress. In Washington, 100 million tons of carbon dioxide are released each year into the atmosphere. Roughly 54 percent of those emissions come from tailpipes of cars and trucks. Power plants and heavy industry, like refineries, account for 32 percent of the state's emissions, according to a study done in 2000 by Energy Division of the state Department of Community, Trade and Economic Development. In 2001, the Environmental Protection Agency estimates that the United States emitted roughly 6.13 billion tons of carbon dioxide.

The state Energy Facilities Site Evaluation Council is expected to release its new set of mitigation rules this summer for power plants that generate more than 350 megawatts of electricity. Mitigation rules for power plants that generate fewer than 350 megawatts are done by local air quality control boards. Over the years, attempts to codify mitigation rules for smaller power generators have failed. If the facilities council sets limits on greenhouse gas emissions on new power plants, a fleet of older power plants in the state would still be unregulated. Many business groups think that would be unfair. "We all know something in respect to CO2 mitigation is coming. The question is what form will it take?" said Robert Kahn, director of Northwest Independent Power Producers Coalition. "Is it sensible to penalize the newest, cleanest and most efficient technologies? I think that is kind of goofy." Carbon dioxide is widely believed to be one of the chief culprits behind global warming. The Bush administration, however, does not believe carbon dioxide is a pollutant as defined by the Clean Air Act

The White House has also renounced the United Nations' Kyoto Protocol - a worldwide agreement signed by 100 countries to lower greenhouse gas emissions - on the grounds it would be too costly for American business. Because of the federal government's lack of a cohesive policy on greenhouse gases, several voluntary emission trading markets, as called for in the Kyoto Protocol, have started. The proposed Washington Climate Action Registry bill calls for power plants and heavy industries to calculate how many tons of carbon dioxide they emit. The companies would then need to pay for an outside audit of their numbers and have the total published once a year. To create an exchange or market for emission credits would probably require additional legislation. A cap on total emissions would probably be needed, but the creation of the registry could foster bilateral trades between companies.

Carbon markets are operating in Great Britain and Denmark, and have been suggested as a way of curtailing greenhouse gas emissions in the Kyoto Protocol. Several Canadian companies are said to be searching for mitigation projects in the United States. Canada has ratified the Kyoto Protocol and is expected to begin a formal climate exchange program. The United States has not ratified the protocol. In the absence of a national policy, a voluntary market started this year in Chicago. Prior to the opening of the Chicago Climate Exchange, which includes 30 companies, voluntary bilateral trades of carbon credits between companies have passed \$100 million, according to the exchange.

### **31) REPUBLICAN CLEAR SKIES ARE TOXIC CLOUDS TO DEMOCRATS**

ENS

February 28, 2003

Internet: <http://ens-news.com/ens/feb2003/2003-02-28-11.asp>

WASHINGTON, DC, February 28, 2003 (ENS) - The Clear Skies initiative, an air quality plan architected by President George W. Bush, was reintroduced in Congress Thursday. It drew immediate criticism from Democrats who vowed to fight the administration's market centered approach to reducing air pollution from power plants. Environmentalists and public health advocates say an analysis with data from the Environmental Protection Agency (EPA) indicates Clear Skies could mean more than 100,000 unnecessary premature deaths between now and 2020, deaths that would be avoided if the current Clean Air Act was enforced. "I will do everything in my power to stop a bill that puts polluters ahead of people," said North Carolina Senator John Edwards, a Democrat and a declared 2004 candidate for President.

A cap and trade program for pollutants, Clear Skies is modeled on the 1990 Clean Air Act's acid rain program, the nation's first such effort. It is intended to reduce emissions of sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>) and mercury more quickly and efficiently than the current law, the administration says. "Clear Skies represents cost effective pollution reductions that make sense for the environment and the economy," said President Bush in a prepared statement. Passage of the Clear Skies bill is "a top environmental priority of this administration," said EPA Administrator Christie Whitman. "It is also an essential component of our goal to dramatically improve the environment while promoting energy security and independence," she said. "Almost immediately following its passage into law, Clear Skies would generate health and environmental benefits from reduced air pollution."

But key Congressional Democrats counter nearly every claim the administration makes about its plan. Clear Skies, say Democrats, environmentalists and public health advocates, will do far less to reduce pollution than the enforcement of the current Clean Air Act, and it does not address the emissions of carbon dioxide (CO<sub>2</sub>), the most abundant heat trapping greenhouse gas. The bill is a "legislative nonstarter" said Senator Joe Lieberman, a Democrat from Connecticut who has thrown his hat in the 2004 presidential ring. The legislation was introduced Thursday in the Senate by Senators James Inhofe of Oklahoma and George Voinovich of Ohio, both Republicans. Representatives Joe Barton of Texas and Billy Tauzin of Louisiana, also Republicans, introduced the legislation in the House. Clear Skies is the "most aggressive presidential initiative in history to reduce power plant emissions," said Inhofe, who chairs the Senate Committee on Environment and Public Works.

The President's plan implements a cap and trade system for reducing emissions of the three pollutants. Companies that meet emissions caps early, or exceed required reductions, earn credits they can sell to others that have not meet emissions requirements. The initiative's supporters say that imposing caps for emissions of the three pollutants will give companies incentives to begin reducing emissions immediately to generate credits. Implementation of Clear Skies, Whitman said, will "dramatically reduce harmful emissions from power plants by 70 percent from current levels." Still, analysis of mandates in the current Clean Air Act for reductions to SO<sub>2</sub>, NO<sub>x</sub> and mercury, indicate that enforcing those requirements would reduce pollution emissions more quickly than the cap and trade plan in the Clear Skies legislation. For example, current annual emissions of SO<sub>2</sub>, a major cause of acid rain, are some 11 million tons. Clear Skies caps emissions of SO<sub>2</sub> at 4.5 million tons by 2010, and three million tons by 2018. Enforcing the Clean Air Act, according to the EPA, would result in SO<sub>2</sub> emissions of two million tons annually by 2010.

Some five million tons of NO<sub>x</sub>, a component of smog, are emitted annually from power plants. Clear Skies caps these emissions at 2.1 million tons in 2008 and 1.7 million tons in 2018. EPA estimates that the Clean Air Act would reduce NO<sub>x</sub> emissions to two million tons by 2012. Power plants emit roughly 48 tons of mercury each year, emissions that Clear Skies caps at 26 tons in 2010 and 15 tons in 2018. But provisions of the Clean Air Act could mandate a 90 percent reduction in mercury emissions by 2007. "Mercury is the poster child for what is wrong with the President's plan," said Frank O'Donnell, executive director of Clean Air Trust, a nonprofit environmental group. Eight percent of U.S. women of childbearing age have unsafe levels of mercury in their bodies, according to government data. Coal fired power plants are the largest industrial source of mercury, emitting some 33 percent of the nation's total. Critics further complain that Clear Skies repeals deadlines for state compliance with federal air standards, adds loopholes for power plants to ignore mandated technology upgrades, and prohibits downwind states from pursuing any pollution reductions from power plants in upwind states before 2012.

It will gut the Clean Air Act, said John Kirkwood, president and CEO of the American Lung Association, a public health advocacy group. "The administration is currently focused on attempts to avoid implementation of existing clean air regulations," Kirkwood said. "The administration bill threatens public health by delaying pollution cleanup required by simply enforcing the current law." "The Clear Skies Act is wrongly named, because this legislation is full of dark clouds," Lieberman said. "Every time we see the administration's plan to clean our air, it gets weaker." Lieberman said he will seek to compromise with supporters of the legislation, but said he would not budge on the need to include reductions of CO<sub>2</sub> emissions or the principle that the final plan should move beyond the Clean Air Act requirements. Power plants are responsible for 40 percent of U.S. CO<sub>2</sub> emissions. Lieberman and others have introduced legislation that would set limits on power plant emissions of this greenhouse gas, as well as tighter limits for the three pollutants addressed by Clear Skies.

The administration has rejected moves to mandate emissions reductions for CO<sub>2</sub>, preferring to call for industries to voluntarily reduce emissions. Industry groups hailed the reintroduction of the plan, which they believe is a more sensible and efficient approach to emissions reductions than the system presently in place. The current regulatory approach is plagued with problems that threaten the reliability and affordability of the nation's electric supply, said Thomas Kuhn, president of the Edison Electric Institute, which represents companies that collectively produce some 70 percent of electricity generated in the United States.

"This is our chance to break the litigation logjam by adopting a more rational approach to regulation," Kuhn said, but he warned that Clear Skies is still a "very aggressive proposal." "While our industry supports the overall scope and framework of the initiative," said Kuhn, "it must be pointed out that these requirements would be extremely difficult for some companies to meet."

### **32) U.S. ANNOUNCES INTERNATIONAL FORUM TO ADDRESS CLIMATE CHANGE (PLANS FOR WORLD'S FIRST POLLUTION-FREE POWER PLANT ALSO UNVEILED)**

Washington File

February 28, 2003

Internet: [http://usinfo.state.gov/cgi-](http://usinfo.state.gov/cgi-bin/washfile/display.pl?p=/products/washfile/latest&f=03022802.glt&t=/products/washfile/newsitem.shtml)

[bin/washfile/display.pl?p=/products/washfile/latest&f=03022802.glt&t=/products/washfile/newsitem.shtml](http://usinfo.state.gov/cgi-bin/washfile/display.pl?p=/products/washfile/latest&f=03022802.glt&t=/products/washfile/newsitem.shtml)

Washington - U.S. officials have announced a public-private effort to construct a prototype electric and hydrogen production plant and the formation of a new international forum to advance carbon capture and storage technologies as ways to reduce the world's heat-trapping greenhouse gas emissions. Energy Secretary Spencer Abraham and Under Secretary of State for Global Affairs Paula Dobriansky, joined at the Department of Energy (DOE) February 27 by representatives from several countries, said a government-industry partnership is being set up to design, build and operate the world's first pollution-free, coal-fired power plant. The facility will cost an estimated \$1,000 million over the next 10 years.

The 275-megawatt plant, to be known as FutureGen, will serve as a large-scale engineering laboratory for testing new clean power, carbon capture and coal-to-hydrogen technologies. According to DOE press material, the goal is to build the cleanest fossil fuel-fired power plant in the world. "FutureGen will be one of the boldest steps our nation has taken toward a pollution-free energy future," Abraham said. He added that virtually every aspect of the prototype plant will be based on cutting-edge technology and "will serve as the test bed for demonstrating the best technologies the world has to offer." "This creative initiative offers the hope not only of clean coal, but of even cleaner hydrogen made from clean coal," Dobriansky said.

The plant will be based on coal gasification, in which the coal's carbon is converted into a hydrogen-rich gas, rather than burning it directly. The hydrogen would then be extracted for use as a clean fuel in powering turbines or fuel cells to generate electricity. It could also be used in a refinery to help upgrade petroleum products. The plant could also serve as the model for future hydrogen-production facilities to provide fuel for a new fleet of hydrogen-powered cars and trucks. President Bush's Hydrogen Fuel Initiative, announced on January 28, envisions the transformation of the nation's transportation fleet from reliance on petroleum to the use of clean-burning hydrogen by 2020. Common air pollutants such as sulfur dioxide and nitrogen oxides created in FutureGen's coal gasification process would be cleaned from the coal gases and converted to useable byproducts such as fertilizers and soil enhancers. Carbon dioxide, one of the most potent of greenhouse gases, would be captured and permanently sequestered in deep geologic formations such as depleted oil and gas reservoirs and unmineable coal seams. The plant is expected to be capable of producing commercially competitive electricity by 2020.

In addition to the FutureGen announcement, Dobriansky outlined plans for creating the Carbon Sequestration Leadership Forum – an international body that will bring together ministerial-level representatives to discuss the latest research and emerging technologies for capturing and storing carbon dioxide. Dobriansky said the forum, which will hold its first meeting near Washington, D.C. in June, would also provide an international venue for planning future, multilateral carbon sequestration projects, such as FutureGen. Dobriansky said the United States has so far invited Australia, Brazil, Canada, China, Colombia, India, Italy, Japan, Mexico, Norway, Russia, South Africa, the United Kingdom and the European Union to join the forum, adding that foreign partners are essential to achieving the ultimate goal of stabilizing greenhouse gas concentrations in the atmosphere. "If we are to succeed in addressing the challenge of global climate change, we need the sustained effort of many nations," she said. "We need a collective effort. Science holds the key to much needed breakthroughs to develop and deploy new clean energy technologies."

Dobriansky said the forum provides a way for the United States and its international partners to collaborate on carbon capture and storage activities, and to mobilize international resources. "Through such collaboration, we can develop technologies that are universally applicable and not previously thought possible." Global cooperation is already underway in some areas of carbon sequestration. One of the most notable projects is the Weyburn oil recovery project in Saskatchewan, Canada, where carbon dioxide from the Great Plains Coal Gasification Plant in the U.S. state of North Dakota is being injected into an active oil field. Scientists from 18 nations are monitoring the project to determine if the carbon dioxide remains entrapped in the field. Dobriansky said such carbon sequestration projects, as well as other approaches to address the problem of climate change, are needed because fossil fuels account for about 85 percent of energy use today and will remain a dominant source of global energy for at least the next three decades.

"The world holds abundant coal resources, and this coal is in many cases the cheapest and most available source of energy for developing countries," she said. "As a result, we expect world use of coal to increase by half over the next 30 years, and by two-thirds for power generation uses. That's why we must invest in new technologies for clean fossil fuels, including coal."

See Also:

U.S. Seeking Cleaner Model of Coal Plant, The New York Times, February 28, 2003

<http://www.nytimes.com/2003/02/28/science/28COAL.html?ex=1047013200&en=60af0306f98a1ac3&ei=5062&partner=GOOGLE>

### **33) THE COST OF CLEAN AIR**

Chicago Sun-times

February 28, 2003

Internet: <http://www.suntimes.com/output/business/cst-fin-global28.html>

A study from the Heartland Institute warns that new efforts to curb greenhouse gas emissions that contribute to global warming could cost the Illinois government as much as \$1.1 billion annually to implement, and sock businesses and consumers with as much as \$46.1 billion in lost wages and higher energy costs.

The study comes as environmental activists mount a state-by-state campaign to implement provisions of the Kyoto Protocol, a 1997 treaty that called for scaling back business activity to reduce emissions to pre-1990 levels. The Bush administration repudiated the treaty at the national level, but the state-by-state strategy is gaining traction in Illinois' new Democrat-controlled General Assembly, which has shifted to a more liberal attitude on environmental regulation.

A state-by-state approach is estimated to cost consumers and business 10 times as much as a federal program because it is less efficient, said the study. "Our intention is to warn state legislators not to squander large parts of state budgets on programs like this," said Joe Bast, president of the libertarian-oriented Heartland Institute. "A lot of legislators are being told such programs are costless, and that's not true." The estimate of a future state program's impact on businesses and Illinois consumers assumes that it is likely that factories would be forced to install new pollution-control technology, some businesses would have to close certain plants to meet emission standards, and that consumer energy prices would soar as producers passed along the expense of converting to higher-priced cleaner fuels such as solar or wind power. Implementing a state program also would be a costly state budget item as it would require the establishment of a new regulatory agency to oversee compliance as well as financial incentives to encourage emission reduction by businesses and residents, Bast said. It would also trim state tax revenue.

The study, authored by Bast and James M. Taylor and Jay Lehr, suggests that the science of global warming is too uncertain to justify such expenditures. It also says that global warming, if indeed it is occurring, could actually have a small positive effect on the U.S. economy by extending the growing season for farmers, expanding areas that can be used for agriculture, and reducing snow removal costs. Illinois is not the only state facing higher costs should new legislation mandating emission reductions be approved, the study said.

The cost of a national state-by-state program to consumers and businesses would range from a low of \$149 million in Vermont up to \$8.2 billion for California, the study said. A typical state program would likely cost consumers and businesses in Vermont \$1.5 billion while California would pay \$82.4 billion.

Howard Learner, executive director of the activist Environmental Law & Policy Center in Chicago, said Heartland doesn't address the many economic benefits that are expected to come from state regulation that supports renewable energy. The center supports a bill introduced by Sen. Patrick Welch (D-Peru) that would set state standards to require that at least 5 percent of the state's total energy supply come from renewable energy by 2010 and at least 15 percent by 2020. The state set these levels as goals in 2001. Besides Welch, an assistant majority leader in the Senate, the Senate Bill 25 is co-sponsored by heavyweights Barack Obama (D-Chicago) and majority caucus chair Debbie Halvorson (D-Chicago Heights), and was assigned to the Senate Rules Committee, under the direct control of Majority Leader Emil Jones (D-Chicago). "It's widely viewed as a win-win situation," Learner said. An economic study by an arm of the University of Illinois estimated that the renewable requirements could create 8,580 net new jobs and \$950 million of net economic growth by 2010. Farmers would be among those who benefit economically as they gain new income sources such as leasing land for wind turbines.

The study also comes at a time of increased pressure on the Bush administration regarding its energy policies. Last week seven Northeastern states announced they planned to sue the U.S. Environmental Protection Agency for its failure to regulate power plant emissions of carbon dioxide, a major global warming gas. State Sen. Steve Rauschenberger (R-Elgin), a member of the Energy and Environment Committee, said legislation calling for stricter regulation of greenhouse gases has been submitted routinely in recent years with no success but has a better chance of passing this year, despite the financial constraints the state faces, given that Democrats now control Springfield. However, he fears that such legislation could put the state in a difficult economic position without reducing overall pollution levels because it could drive businesses to locate in other neighboring states. Uniform federal standards would be more effective, he said. "The goal is laudable, but for states to inject themselves is a clumsy way to do it," Rauschenberger said. "It ought to be national policy set by scientists at the EPA." Welch, who introduced the legislation supporting a state standard on renewable energy, said the Heartland study's economic analysis is self-serving. He said it did not look at the many hidden costs related to the country and state's current dependence on scarce fossil fuels from other countries, such as the expense of going to war periodically to protect our oil supply. "It sticks in my craw," Welch said of the study. "Let us plant some trees and see if they grow."

#### **34) UK ENERGY POLICY COULD HURT BRITISH INDUSTRY-EIUG**

Planet Ark

February 28, 2003

Internet: <http://www.planetark.org/dailynewsstory.cfm/newsid/19995/story.htm>

LONDON - Britain's big industrial energy users said this week higher gas and power prices, resulting from government measures to curb greenhouse gas emissions, could hit their ability to compete in world markets. Lobby group Energy Intensive Users Group (EIUG) said that unless other countries followed similar policies to those outlined by the UK government in a white paper earlier this week, the impact on British industry could be devastating. "We must not neglect the potential impact on industrial competitiveness," said Jeremy Nicholson, director of the EIUG, which lobbies on behalf of industries including steel, chemicals and paper. "The big dilemma for energy policy remains how to achieve a low carbon economy without damaging competitiveness," he said. The government, which aims to cut carbon emissions by 60 percent over the next 50 years, said its policies might add 10-25 percent to industrial power prices and 15-30 percent to industrial gas prices over the next 17 years. But it said the price increases would not push up energy costs to consumers because increased efficiency should lead to them using less energy.

#### **35) SUSTAINABLE ENERGY PROVIDES ECONOMIC BENEFITS**

Edie weekly summaries

February 28, 2003

Internet: [http://www.edie.net/gf.cfm?L=left\\_frame.html&R=http://www.edie.net/news/Archive/6710.cfm](http://www.edie.net/gf.cfm?L=left_frame.html&R=http://www.edie.net/news/Archive/6710.cfm)

Promotion of renewable energy and energy efficiency could provide economic benefits as well as the expected environmental bonuses, according to researchers in Australia. Economic activity in New South Wales, Australia could increase by more than AU\$500 million (over US\$300 million) per year, with the creation of up to 4,000 new jobs, only a quarter of which would be in the sustainable energy industry, the remainder in the wider economy, according to a study commissioned by the Sustainable Energy Development Authority, a state government body based in Sydney. However, the benefits depend on the adoption of multi-pronged approaches, rather than individual measures taken in isolation, according to the study, so that the savings from improved energy efficiency can offset the added cost of increasing the share of renewable energy. For New South Wales in particular, an ongoing effort will be required so that the state keeps pace with global trends and maintains a healthy slice of the global market in greenhouse friendly technologies and services. The state currently has sufficient green power for 55,000 households, offsetting 400,000 tonnes of greenhouse gas emissions, says SEDA.

### **36) OFFSETTING GLOBAL WARMING**

The New York Times

February 28, 2003

Internet: <http://www.iht.com/articles/88101.html>

Do you feel guilty about global warming every time you get behind the wheel of your car? If you are a frequent flier, start feeling more guilty. On a round trip from New York to London, according to the calculations of the Edinburgh Center for Carbon Management in Scotland, a Boeing 747 spews out about 440 tons of carbon dioxide, the main greenhouse gas. That is about the same amount that 80 SUVs emit in a full year of hard driving. But short of swimming to London or jogging to Los Angeles, what is the concerned business traveler to do? The airline industry, busy trying to avoid bankruptcy, is not offering tips on how to limit the environmental damage. And chances are your travel agent has not given the matter much thought.

But a few organizations, among them the Better World Club and American Forests in the United States and Future Forests in Britain, have stepped into the breach. They have devised ways for the environmentally concerned to mitigate their role in the collective output of carbon dioxide. For a contribution, they will plant trees in Siberia or Texas; replace inefficient oil-burning boilers in Portland, Oregon; supply energy-saving light bulbs in Jamaica, or take some other conservation measure aimed at offsetting the harm of an individual's commercial flight. Take that Boeing 747's round trip to London. It will discharge a total of 880,000 pounds (400,000 kilograms) of carbon dioxide, or 126 pounds for each mile flown. At an occupancy rate of 78 percent, each of the 317 passengers will be responsible for 2,776 pounds of the pollutant.

Future Forests, which is based in London, allows a traveler to help offset those emissions by planting two trees or installing two energy-saving light bulbs in a developing country for each round trip to London. At Future Forests you cannot save the world on the cheap: Each tree or light bulb will set you back about \$12. Its Web site, [www.futureforests.com](http://www.futureforests.com), offers a wealth of information about the environmental impact of lifestyles and travels and about the steps that can be taken to soften that impact. It also features an impressive database with thousands of airports worldwide. That once-in-a-lifetime round trip from Akiachak Seaplane Base in Alaska to the always exciting city of Barrow-in-Furness, Cumbria, England? Chalk up 3,430 pounds of carbon dioxide on the debit side of your environmental account, but still just two trees or bulbs on the credit side.

Future Forests offers a no-frills menu of one tree or bulb for each short-haul flight, two trees or bulbs for each medium-distance trip and five of either for each long-range odyssey. Each transaction will net you a free luggage tag made of recycled leather. Future Forests is not the only game in town. The Better World Club ([www.betterworldclub.com](http://www.betterworldclub.com)), the self-declared environmentally friendly alternative to the AAA, offers a simple alternative. Suggested donations of \$11 for every domestic flight and \$22 for every international

flight will be invested in new energy-efficient heating systems in schools in its hometown, Portland, Oregon. On trips booked through its travel agency, Better World Travel, the club will pay part or all of the fees itself. The group has rejected tree planting as a solution, however, exposing a rift in the nascent movement. "It is very difficult to calculate the carbon dioxide absorption by trees," said Mitchell Rofsky, president of the Better World Club. "It is easy to cheat, and besides, as young trees absorb more CO<sup>2</sup> than old ones, carbon dioxide offsets may inspire the clear-cutting of forests to plant new trees."

American Forests, a century-old nonprofit organization in Washington, offers the cheapest option: It will plant a tree for every dollar donated, and the donor can choose from programs like Memorial Trees, which honors those killed in the Sept. 11 attacks, and Trees for Tigers, which is aimed at restoring the habitat of the threatened Siberian Tiger. The minimum donation is \$15. At its Web site, [www.americanforests.org](http://www.americanforests.org), you can calculate the carbon dioxide you produce in such activities as driving your car or mowing your lawn. So far, the number of Americans who pay to undo the damage their flights inflict is negligible. The Better World Club says it handles 1,500 to 2,000 requests a year. American Forests says it receives more than 25,000 donations, though not all are related to air travel. Future Forests says the majority of the 40,000 individuals who have paid for environmentally friendly measures since it was founded in 1997 are Europeans.

Should the public become more uneasy about global warming, though, these figures could explode. In European countries like the Netherlands, Britain and Germany, the practice has become much more common. And it is not limited to flying. Avis Europe, for example, offers clients who book a car online the opportunity to pay a small extra fee to have trees planted. In the United States, Avis said it had no immediate plans to follow suit. There may be cause for more concern in the years ahead. Despite today's lull in air travel, according to figures provided by the Edinburgh Center, an independent consulting group, worldwide carbon dioxide emissions from civil aviation will double from 1999 to 2015, to 900 million tons a year. This is despite a 20 percent increase in fuel efficiency by the airline industry over the period. By 2015, airplanes' share of human-generated carbon dioxide emissions will rise to 3 percent, from 2 percent in 1999.

While few in number, the American business travelers who have signed onto the environmental campaign have strong views. "The fact that the U.S. government hasn't ratified the Kyoto treaty against global warming was a big reason for me," said Martha Delaney, a lawyer in Minneapolis and a regular flier to San Diego, who joined the Better World Club last summer. Shannon St. John, president of a nonprofit concern in Durham, North Carolina, who makes around 20 business trips a year, says the airlines should pitch in. "It would be marvelous if they gave you the option to pay a bit extra to offset the negative environmental impact of flying," said St. John, who in December began paying Future Forests to plant trees. It might take a while for the airlines to come on board. "We are extremely focused on financial survival," said Tim Doke, a spokesman for American Airlines. "CO<sup>2</sup> emissions are not something we have time for to think about."

Jonathan Shopley, Future Forests' chief executive, says his appeals to the airline industry have fallen on deaf ears. "They act toward this environmental problem like the chemical industry 20 years ago: 'If we ignore it, maybe it will go away,'" he said. "But it won't." Big business is not thinking a lot about the issue, either, but here and there the movement has won a corporate convert. Companies that offset the business air miles traveled by their employees include Nike; Interface, a carpet maker in Atlanta, and the American subsidiary of Tetra Pack, the Swedish packaging concern. Interface pays American Forests to plant a tree for every 1,500 passenger miles its employees fly. "It's part of our program to minimize our impact on the environment," said Ray Anderson, Interface's chairman. "The cost is minimal, and we create enormous good will."

### **37) ENERGY WHITE PAPER – GOOD IN THEORY, BUT WHERE ARE THE TARGETS?**

Eddie weekly summaries

February 28, 2003

Internet: [http://www.edie.net/gf.cfm?L=left\\_frame.html&R=http://www.edie.net/news/Archive/6699.cfm](http://www.edie.net/gf.cfm?L=left_frame.html&R=http://www.edie.net/news/Archive/6699.cfm)

The Government's new energy white paper, published on 24 February calls for a 60% reduction in carbon dioxide emissions, and for increased use of renewables and energy efficiency, but it has been criticised for being high on spin and much lower on firm targets. According to the white paper, the goals for the Government's energy policy are to put the UK on a path to cut CO<sub>2</sub> emissions by 60%, in line with the opinion of the Royal Commission on Environmental Pollution. The Government has also published its response to the Royal Commission's opinion, but although this agrees with the Commission, it talks about 'goals' rather than the 'firm targets' called for.

The white paper also outlines the importance of maintaining the reliability of energy supplies, promoting competitive markets and ensuring that every home is adequately and affordably heated. This includes promoting renewable energy and energy efficiency, such as through pushing for higher energy efficiency standards in tradable goods in Europe, and lowering carbon fuels in transport. The renewable energy industry is dismayed by the white paper. Renewables firm Green Energy UK has described the paper as a missed opportunity. Ramsay Dunning, the company's Finance Director, is disappointed at the lack of targets. "Consumers will only go so far without the carrot and stick," he warns. "The Government provides no stick, and the carrots are woefully small."

Dale Vince, Managing Director of energy provider Ecotricity, agrees. "The move from targets to aspirations is not a positive step and weakens the Government's commitment," he says. One of the biggest problems for renewables is the planning system, with eight out of 10 wind development applications failing. This week, Ecotricity has joined with carbon offset firm Future Forests to launch a campaign of renewable energy to potential customers. The partnership will create a one-stop-shop where customers will be able to directly reduce their individual carbon emissions by both using green energy, and offsetting their remaining emissions by either planting indigenous trees, or paying for new renewable energy projects. The left-wing think tank, the Institute of Public Policy Research, sides with the renewables industry, stating that the white paper could put investment in renewable energy at risk. Whilst it welcomes the ambitious target to cut CO<sub>2</sub>, it notes that the strategy for delivery was "chronically short on detail".

"It is frustrating that the government doesn't have the nerve to commit to formal 2020 targets for renewable energy and energy efficiency," said Alex Evans, research fellow at the IPPR. This will send a negative message to financial institutions considering whether to invest in renewable energy, he added.

In a speech on sustainable development timed to coincide with the launch of the white paper, UK Prime Minister Tony Blair made what could be interpreted as a veiled attack on US President George W Bush for his stance on the Kyoto Protocol. He stated the importance of the Protocol, saying that it is a myth that reducing emissions will make us poorer. Over the last six years the UK economy has grown 17%, whilst emissions have dropped 5%, he said, but added: "Of course, there is little point in the UK acting alone." Calling for international co-operation on sustainable development issues, Blair noted the sadness of seeing African leaders decrying attempts to isolate Robert Mugabe as neo-colonialism when his rule is impoverishing millions of black Zimbabweans. This occurs because the West wants it, so African believes that it should be resisted. "The only answer is to construct a common agenda that recognises both sets of issues have to be confronted for the world's security and prosperity to be guaranteed," he said. "There will be no lasting peace whilst there is appalling injustice and poverty."

However, Liberal Democrat Shadow Environment Secretary Norman Baker is unimpressed. "Every few years the Prime Minister feels the need to give a speech on the environment which is followed by inaction," he said. Although the Prime Minister admitted that even with the current threat of war, climate change is the greatest threat long term, the Government is spending £3 billion on the war and £200 million a year on old nuclear power stations just to maintain the status quo, says Vince. "By comparison the renewables industry is being given £100 million," he points out.

Green group Airportwatch has noted the Government's apparent double standards. Just two days after Blair pledged to cut the UK's greenhouse gas emissions, the Government launched a consultation on the expansion of British airports, when air travel is the fastest rising cause of man-induced climate change. Last year, the Royal Commission on Environmental Pollution warned that air traffic will become a major contributor to climate change. "Ministers must stop conning the public into believing that more airports are

inevitable," said John Stewart of pressure group Haca ClearSkies. "Take away aviation's privileged tax free status and the demand to fly drops to a reasonable level which could be coped with using existing airport space."

### **38) POLLUTERS MAY BE SUED FOR FUTURE CLIMATE CHANGE**

Daily Telegraph  
February 27, 2003  
Internet:

<http://www.dailytelegraph.co.uk/news/main.jhtml?xml=/news/2003/02/27/ngreen27.xml&sSheet=/news/2003/02/27/ixhome.html>

One day it may be possible to sue a greenhouse-gas polluter for causing floods or reducing a farmer's yield of crops, according to a study by a climate expert. Scientists say the greenhouse effect will trigger more extreme weather, and have predicted that Britain will experience drier summers punctuated by torrential downpours. Although the Meteorological Office says it is impossible at present to link specific floods with past emissions of greenhouse gases, the widely held assumption that this will always be the case is challenged today by Dr Myles Allen of Oxford University, a leading climate expert. In the journal Nature, Dr Allen suggests a possible method by which the amount of extra risk of adverse weather conditions can be attributed to a particular cause - car emissions contributing to the risk of local flooding, for example. This could lead to the culprits being penalised by compensating homeowners.

He decided to tackle the issue last month when the swollen Thames was rising and flooding his neighbourhood in Oxford. Dr Allen said: "The issue is important as it touches on a question that is far closer to many of our hearts than global sustainability or planetary survival: who to sue when the house price falls? "We will never be able to say, at any confidence level, that human influence has contributed X per cent to an actual weather event. What we can say is that past greenhouse gas emissions are likely to have increased the risk of that event over its pre-industrial value. "This does not preclude compensation settlements - juries have not been perturbed by the possibility that an individual smoker might in any event have contracted cancer," he said. One day, people driving up the local hill in their big four-wheel drives might be contributing to the cost of replacing flood-damaged homes nearby. "By the time we finish paying off our home loans in the early 2020s," he added, "almost two-thirds of greenhouse gases in the atmosphere will have been emitted post-1990." He believes that a market may emerge in insurance cover against climate-related lawsuits. This would reflect concern over climate change, without involving politicians and international accords. "Even the most impassioned eco-warrior has nothing on a homeowner faced with negative equity," he added.

### **39) WHITE HOUSE ANNOUNCES MULTITRACK CLIMATE CHANGE INITIATIVES**

US Bureau of Oceans and International Environmental and Scientific Affairs  
February 27, 2003

Internet: <http://usinfo.state.gov/cgi-bin/washfile/display.pl?p=/products/washfile/latest&f=03022803.glt&t=/products/washfile/newsitem.shtml>

On February 14, 2002, President Bush committed the United States to an ambitious climate change strategy that will reduce domestic greenhouse gas (GHG) emissions relative to the size of the American economy. The United States will achieve this goal by cutting its GHG intensity -- how much it emits per unit of economic activity -- by 18% over the next 10 years. This strategy will set America on a path to slow the growth of greenhouse gas emissions, and -- as the science justifies -- to stop, and then reverse that growth. The President's policy also continues the United States leadership role in supporting vital climate change research, laying the groundwork for future action by investing in science, technology, and institutions. In addition, the United States strategy emphasizes international cooperation and promotes working with other nations to develop an efficient and coordinated response to global climate change. In taking prudent environmental action at home and abroad, the United States is advancing a pro-growth, pro-development approach to addressing this important global challenge.

## **WORKING WITH OTHER NATIONS TO DEVELOP AN EFFICIENT AND EFFECTIVE GLOBAL RESPONSE**

Enhanced support in the developing world. The President's FY2004 budget supports significant funding for climate change-related science and technology research, development, and transfer in the developing world, including:

- \$155 million for the United States Agency for International Development (USAID), which continues to be a major source of climate technology assistance to developing countries.
- \$70 million for the Global Environment Facility (GEF), to help developing countries better measure and reduce emissions, and invest in clean and renewable energy technologies. The United States has requested a total of \$185 million for GEF in FY 2004, \$107.5 million to cover the second of four payments under the third replenishment of the GEF (GEF-3) and \$77.5 million to clear a portion of U.S. arrears. As part of the GEF-3 replenishment agreement, the United States has pledged \$500 million to the GEF over the next 4 years to help developing countries address environmental problems with potential global impact. This commitment represents a 16% increase over the U.S. contribution to the previous replenishment.
- A significant share of the overall funding required to meet the President's commitment of \$25 million for climate observation systems in developing countries.
- \$50 million for tropical forest conservation, including \$20 million under the Tropical Forest Conservation Act to help countries redirect debt payments toward protecting tropical forests, which store millions of tons of carbon.

Multilateral partnerships. The President's FY 2004 budget also supports significant funding for Department of Energy (DOE) multilateral climate change-related technology research and development (R&D), including:

- \$9.7 million for the Generation IV Nuclear Energy Systems Initiative, which is developing the next-generation nuclear systems to produce electricity to drive our 21st century economy and to generate vast quantities of economical hydrogen for transportation use without emitting greenhouse gases. In this effort, the U.S. leads multi-national R&D projects through the Generation IV International Forum, comprised of Argentina, Brazil, Canada, France, Japan, the Republic of Korea, the Republic of South Africa, Switzerland, the United Kingdom, and the U.S. This international approach seeks to develop technologies that are widely acceptable, enables DOE to access the best expertise in the world to develop complex new technologies, and helps leverage scarce nuclear R&D resources.
- \$62 million for carbon sequestration research and development, which is developing a portfolio of technologies that hold great promise to reduce greenhouse gas emissions from fossil fuel plants through carbon separation, capture, transport and storage. The U.S. is also inviting international partners to participate in a Carbon Sequestration Leadership Forum that provides a way for the U.S. and other governments to take effective action in a number of ways – by partnering with the private sector on carbon capture and storage activities already underway; by strengthening international multilateral efforts in research and development of carbon sequestration technologies; and by mobilizing international resources.
- \$12 million to support U.S. preparations for negotiations with the United Kingdom, other European Union nations, Russia, China, Japan and Canada on the creation of the International Thermonuclear Experimental Reactor (ITER), an ambitious international research project to harness the promise of fusion energy. In the longer term, the results of ITER will advance the effort to produce clean, safe, renewable, and commercially-available fusion energy by the middle of this century. Commercialization of fusion has the potential to dramatically improve America's energy security while significantly reducing air pollution and emissions of greenhouse gases.

Bilateral partnerships. The United States is committed to working with other nations, especially developing countries, to build future prosperity along a cleaner and better path. The President's strategy promotes cooperative relationships with other countries, so that our objectives and activities complement each other in addressing climate change effectively. Since June 2001, the United States has engaged in bilateral

partnerships with Australia, Canada, China, seven Central American countries (Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama), the European Union, India, Italy, Japan, New Zealand, Republic of Korea, and the Russian Federation on issues ranging from climate change science to energy and sequestration technologies to policy approaches.

#### **40) REPORT: EXTREME WEATHER ON THE RISE, LIKELY TO GET WORSE**

Associated Press

February 27, 2003

Internet: [http://www.sfgate.com/cgi-](http://www.sfgate.com/cgi-bin/article.cgi?file=/news/archive/2003/02/27/international1427EST0686.DTL)

[bin/article.cgi?file=/news/archive/2003/02/27/international1427EST0686.DTL](http://www.sfgate.com/cgi-bin/article.cgi?file=/news/archive/2003/02/27/international1427EST0686.DTL)

The world has experienced unusually extreme weather in recent decades and economic losses from storms and other catastrophes have increased tenfold, an independent research group reported. The World Water Council said Thursday that more intense rainy seasons, longer dry seasons, stronger storms, and rising sea levels had helped cause an increasing number of disastrous floods and droughts. Global warming is causing the changes in weather patterns, while growing populations and migration to vulnerable areas is increasing the cost of each disaster, said William Cosgrove, vice president of the World Water Council. "The forecast is that it's going to continue to get worse unless we start to take actions to mitigate global warming," he said.

Between 1971 and 1995, the group reported, floods affected more than 1.5 billion people around the world. About 318,000 people died because of floods and more than 81 million were made homeless, the council said. The figures were culled from research done by scientists at the Dialogue on Water and Climate, as well as papers by researchers from other groups. The findings will be presented in greater detail at the World Water Forum, scheduled to be held next month in Kyoto, Japan, site of negotiations for the global warming protocol that was rejected by President Bush. The council quoted climate experts as predicting changes in the next century would lead to shorter and more intense rainy seasons in some areas and longer droughts in others, endangering some crops and species and causing a drop in global food production. Rising sea levels pose a serious threat to small island nations, low-lying countries like Bangladesh and the Netherlands and major cities like New York, Tokyo, Buenos Aires, Argentina, and Lagos, Nigeria, the group warned. Sea levels are expected to rise by 19 inches between 1990 and 2100, the scientists estimated. "Even if we were to stop all carbon dioxide emissions today, global warming is going to continue," Cosgrove said. "As a consequence, the sea is going to continue expanding and rising." Carbon dioxide is among the "greenhouse gases" blamed for warming the earth. While most climate experts agree pollution is responsible, a few remain skeptical. The White House says humans clearly are agents of environmental change but says it is unclear to what degree. Bush has called for more research on warming, a stance criticized this week by a National Academy of Sciences panel. While scientists could not say exactly how much the incidence of extreme weather had increased, Cosgrove said records for storms, floods and droughts were being broken every year, killing thousands and causing serious economic disruption. "Most countries aren't ready to deal adequately with the severe natural disasters that we get now, a situation that will become much worse," he said.

The council said there were 26 "major flood disasters" worldwide in the 1990s, compared to 18 in the 1980s, eight in the 1970s, seven in the 1960s and six in the 1950s. The largest number of severe floods occurred in Asia, the council said. Overall, precipitation worldwide has increased by about 2 percent since 1900, the group said. Poor nations tend to suffer far more than wealthier ones when hit by weather disasters, both in terms of human casualties and economic loss, the council said. While 2000 flooding in Mozambique cut the southern African country's gross domestic product by 45 percent, severe floods last year in Germany were blamed for just a one percent decline in GDP, the group said, citing World Bank figures. Hurricane Mitch had a devastating impact when it walloped Central America in 1998, killing thousands and causing billions of dollars in damage.

Cosgrove blamed the difference in impacts partly on growing populations in poor countries and migration to risky or environmentally damaged areas such as flood plains or bare mountainsides at risk of mudslides.

In drought-prone regions, growing populations put more pressure on food and water supplies and mean shortages happen faster when rains stop, he said. The group also said droughts were growing more severe and widespread, accounting for up to 45 percent of reported deaths from natural disasters between 1992 and 2001.

On the Net:

Dialogue on Water and Climate report, [www.waterandclimate.org](http://www.waterandclimate.org)

World Water Council, [www.worldwatercouncil.org](http://www.worldwatercouncil.org)

World Water Forum, [www.worldwaterforum.org](http://www.worldwaterforum.org)

#### **41) RUSSIA URGED TO RESCUE KYOTO PACT**

The Guardian

February 26, 2003

Internet: <http://www.guardian.co.uk/climatechange/story/0,12374,903094,00.html>

Pressure on Russia to ratify the Kyoto protocol is intensifying amid fears in the European Union that Moscow may scupper the agreement to combat climate change by refusing to sanction it. Vladimir Putin, Russia's president, promised last year that the ratification process would be under way by now in the duma, the lower house of the country's parliament, but no progress has been made. The United States and Australia have already withdrawn their support, putting Russia in a crucial position. Its support will make or break the pact. Gerhard Schröder, the German chancellor, and Tony Blair have separately written to Mr Putin in the past two months asking him to act, so far without success. So concerned is the EU about the lack of progress that a delegation of the leaders of three countries will be sent to see Mr Putin in March.

Russian doubters about the value of ratifying the Kyoto protocol have organised a world climate conference for September 29 in Moscow. This conference is to "re-examine" the science on the issue, seen as casting doubt upon it, a position that will delight President George Bush, who wants to destroy the protocol. Behind the conference are the two scientists who lead for Russia in the climate talks, Alexander Bedritski and Yuri Israel. Both are respected members of the Russian Academy of Sciences, but they apparently believe that climate change might be good for their country. They believe global warming might pep up cold regions and allow more grain and potatoes to be grown, making the country wealthier. They argue that from the Russian perspective nothing needs to be done to stop climate change.

The EU hopes that Mr Putin, having promised that the protocol would be ratified this spring, will bring his reluctant scientists into line. The energy and economic ministries are said to still be in favour of the treaty because they expect to make money out of it. Under the complex rules Russia's support is essential if the protocol is to succeed. This is because developed countries that are responsible for 55% of the world's greenhouse gas emissions must ratify it for it to come into force. With the US and Australia refusing to sign, Russia's cooperation is needed to reach the required figure. All the other necessary countries have already ratified the pact or are doing so. Currently there are 104 parties, representing over 44% of eligible emissions - Russia's emissions would automatically bring the protocol into legal force.

All the developed countries have a target to reduce emissions on 1990 levels by 2010 based on the protocol becoming law this year. If a country fails to reach its target by domestic measures, it is entitled to buy surplus carbon from any country that has already exceeded its target. This provision could make Russia a lot of money because it already has more than reached its reduction target because of the collapse of the economy in the 1990s. Several countries not expected to reach their targets would be offering hard cash for Russian surpluses. A second scheme under the protocol allows clean energy projects and carbon saving schemes inside Russian borders to be financed by other countries which can gain carbon credits as a result. To try to counter establishment scientists who believe climate change could be good for Russia, a report on how the country will suffer will be circulated in the coming weeks. The report, produced jointly by scientists from Kassel University in Germany, Moscow State University and the centre for ecology and forest production of the Russian Academy of Sciences, contradicts the establishment view.

It says that previous calculations that more warmth and rain will bring more crops for Russia fail to take into account regional variations. It says that only 15 out of the 89 administrative regions of Russia provide the rest of the country with much of its food. Under the most likely climate change calculations these 15 areas in the south and west will suffer summer heat and droughts. The number of people affected by these droughts is 58 million. It will rise to 77 million by the 2020s and 141 million by 2070. "The possibility of more frequent bad harvests is a threat to Russia's food security that should be taken seriously," the report says. Although rainfall is set to increase in much of Russia, increasing river flows and groundwater levels, and incidentally the risk of flooding, the southwest will suffer the opposite. There is already pressure on water supplies because of large withdrawals for cities and irrigation. Lack of rain will reduce river flows even further.

The report concludes: "Our findings challenge the belief that climate change will generally benefit Russian agriculture and water resources. Instead they point out how extreme events such as droughts may become more frequent in key areas of Russia and may pose a threat to the food and water security of its people." Dr Paul Jefferiss, head of environment policy at Britain's Royal Society for the Protection of Birds, said: "Russia's ratification is vitally important. If she doesn't go ahead, years of hard-won agreements will be placed in jeopardy, and meanwhile the climate continues to change."

#### **42) DENMARK TO INVEST ABROAD TO MEET KYOTO CLIMATE OBLIGATIONS**

Space Daily

February 26, 2003

Internet: <http://www.spacedaily.com/2003/030226160702.rrjafir6.html>

The Danish government Wednesday announced plans to invest in environmental protection abroad, in particular in eastern Europe, in order to meet its international climate obligations. According to forecasts published in December by the European Environment Agency, Denmark is among the European Union member states that will have a hard time meeting its obligations if it only takes national measures to reduce greenhouse gas emissions. The Liberal-Conservative coalition government acknowledged on Wednesday that it would take Denmark longer than expected to reach its Kyoto Protocol obligation to cut greenhouse gas emissions by 21 percent from 1990 levels in the period 2008-2012. It also said it would be more expensive than initially expected.

The government said it therefore intended to take advantage of Kyoto regulations allowing a country some flexibility in reducing its own carbon-dioxide emissions if it helps another country to pollute less. Copenhagen stressed that it would not abandon its own national plans to reduce emissions. "It is much cheaper to reduce carbon-dioxide emissions abroad than in Denmark, and the effect on the climate is the same since pollution knows no borders," the Danish ministers of finance, trade and industry and environment wrote in a joint statement. Environmental investments outside Denmark will allow Copenhagen to save two to three billion kroner (269 to 403 million euros, 290 to 434 million dollars) per year. Last month, the government signed a framework agreement concerning cooperation with Romania, following a similar agreement signed with Slovakia last year. Copenhagen is also currently in negotiations with Russia, Ukraine, Poland, Estonia and Bulgaria

#### **43) METHANE ERUPTIONS COULD FUEL GLOBAL WARMING**

ENS

February 26, 2003

Internet: <http://ens-news.com/ens/feb2003/2003-02-26-09.asp>

WOODS HOLE, Massachusetts, February 26, 2003 (ENS) - New research suggests that warming oceans could cause "intense eruptions" of methane from the sea floor, leading to "catastrophic" global warming. Scientists have found new evidence indicating that during periods of rapid climate warming, methane gas has been released from the seafloor in intense eruptions. In a study published in the current issue of the

journal "Science," Kai-Uwe Hinrichs and colleagues Laura Hmelo and Sean Sylva of the Woods Hole Oceanographic Institution (WHOI) provide a direct link between methane reservoirs in coastal marine sediments and the global carbon cycle, an indicator of global warming and cooling.

Molecular fossils from methane consuming bacteria found in sediments in the Santa Barbara Basin off California deposited during the last glacial period - 70,000 to 12,000 years ago - indicate that large quantities of methane were emitted from the seafloor during warmer phases of the last ice age. Methane, one of the major greenhouse gases, is stored on the seafloor as an ice like solid known as methane hydrate. Previous evidence for such massive eruptions was based on isotopic properties of calcite shells of foraminifera, microscopic marine animals called forams. Because a variety of factors could lead to very similar signals in their shells, that evidence has remained controversial. The preserved molecular remnants found by the WHOI team result from bacteria that fed exclusively on methane and indicate that large quantities of this powerful greenhouse gas were present in coastal waters off California. The team studied samples that were deposited between 44,000 and 37,000 years ago. "For the first time, we are able to clearly establish a connection between distinct isotopic depletions in forams and high concentrations of methane in the fossil record," said Hinrichs, an assistant scientist in the Institution's Geology and Geophysics Department.

"The large amounts of methane presumably released during one event about 44,000 years ago suggest a mechanism different from those underlying the emissions at warmer periods, i.e. slow decomposition of methane hydrate triggered by warming of bottom waters," Hinrichs continued. "The sudden release of these enormous quantities of methane was probably caused by landslides and melting of the methane hydrate." Since there was already indirect evidence of methane eruptions in the Santa Barbara Basin area, Hinrichs and colleagues looked for fossil remnants of bacteria that would have flourished only under high concentrations of methane. In a 44,000 year old sediment sample, a distinct type of biomarker representing bacterial communities that oxidize methane in the absence of oxygen provided evidence for an abrupt, catastrophic release of methane, presumably trapped as hydrate below the sea floor.

The WHOI team's data, from sediment cores taken by the Ocean Drilling Program off southern California, show that substantial quantities of methane were released at least several times during the past 60,000 years, leading to periodic fluctuations in the levels of methane in deep waters in the Santa Barbara Basin. The researchers say increased bottom water temperatures could mobilize or release large amounts of methane hydrate in shallow waters. According to some current estimates, there are about 10,000 billion tons of methane stored beneath the ocean and on continents. In comparison, the contribution of humans to the atmosphere's inventory of greenhouse gases by fossil fuel burning amounts to about 200 billion tons of carbon in the form of carbon dioxide. If even a small portion of the stored methane were to escape into the atmosphere, the resulting greenhouse warming would be catastrophic.

"It was a surprise to find this sort of evidence," said Hinrichs, who was looking for evidence indicating mechanisms other than methane. "Although this research tells us something about the amount of methane consumed by bacteria in the ocean, it doesn't tell us anything about methane emissions into the atmosphere because neither forams nor methane biomarkers record the portion of methane that escaped out of the ocean." "But one thing is for sure," he said, "our results clearly show that relatively minor environmental changes can have a major impact on sensitive coastal regions with yet unknown consequences for climate and biota." Hinrichs plans to look for similar evidence elsewhere to determine whether this process, as a driver of climate variation, happened simultaneously at other locations around the world. This work, he said, is just the beginning of better understanding of the role of methane in the carbon cycle and ultimately on climate on geologic time scales. "We have a very poor understanding of the biogeochemical mechanisms that control production, destruction and accumulation of methane in sediments underlying the ocean," Hinrichs said. "We need to understand the big picture of what drives methane and the carbon cycle and the actual impact of methane emissions from hydrates on climate

#### **44) UK AND SWEDEN CALL ON EU TO FIGHT CLIMATE CHANGE**

EU Observer

February 25, 2003

Internet: <http://www.euobserver.com/index.phtml?aid=9488>

TONY BLAIR – the British prime minister said that Kyoto is not radical enough and urged his EU partners to join in a commitment to cut carbon dioxide emissions by 60 per cent by 2050. (Photo: EU Commission) British prime minister Tony Blair and Swedish prime minister Göran Persson urged yesterday their European partners to join them in a commitment to cut carbon dioxide emissions by 60 per cent by 2050. Mr Blair insisted that the targets set by the Kyoto treaty were not radical enough and also challenged US to do its part in the crucial fight. Mr Blair and Mr Persson sent a joint letter to the Greek Prime Minister, Costas Simitis, presently head of the EU presidency. In it they confirmed their ambitions to reduce emissions in the EU by 60 per cent by 2050, and their commitment to policies that can achieve this goal. "It is clear that Kyoto is not radical enough," Mr Blair said in his speech on sustainable development. We will continue to make the case, to the US and to others, that climate change is a serious threat that we must address together as an international community, the British prime minister added. The international community achieved a lot at the World Summit on Sustainable Development in South Africa last year, Mr Blair said. "But today, I want to argue that we have not yet been nearly bold enough." I am committed to putting us on a path towards that target, he added.

#### **45) SHOW ME THE CARBON**

Tidepool

February 25, 2003

Internet: [http://www.tidepool.org/original\\_content.cfm?articleid=67186](http://www.tidepool.org/original_content.cfm?articleid=67186)

Slick sayings from TV and movies repeatedly slip into society, uttered from coast to coast before fading into pop culture obscurity. But a few have surprising staying power, sticking around long after they've worn out their welcome. There's "where's the beef?" from 1980s-era Wendy's hamburgers commercial fame. Who could forget Arnold Schwarzenegger's "I'll be back" from the first Terminator movie. And of course, Tom Cruise yelling "show me the money!" in the sappy flick "Jerry Maguire." One can just imagine the multitude of investors and other financial-market types annoyingly demanding companies "show them the money" in the wake of that film. The saying still gets plenty of use today. But soon there could be a twist on this particular meme, as more investors tell business to "show me the carbon."

The Carbon Disclosure Project, a collaboration of more than 30 major institutional investors who collectively represent more than \$4 trillion in assets (as of May 2002), has released a report that says investors who fail to take account of climate change in their asset allocations and equity valuations face serious investment repercussions over time. The report is based on the largest survey yet to analyze a company's exposure to climate change, through the impacts of extreme weather events and the regulation of greenhouse gas emissions. Presenting those factors in terms of the value of shareholdings in corporations worldwide, the survey of the 500 largest global companies by market capitalization found that 80 percent of those who responded acknowledged the importance of climate change as a financial risk, yet only 40 percent at best were taking any action to address the risks and opportunities. Investors won't be pleased to hear that the financial impact of climate change extends well beyond the obvious, emissions-intensive sectors such as oil, gas and electrical utilities. Companies in a wide range of other sectors, including financial services, transportation, semiconductor, telecommunications and electronic equipment, will all be deeply affected as well.

"We face a monumental educational challenge because most institutional investors have a 'knowledge deficit' when it comes to obtaining systematic, portfolio-wide information about the risks companies face when it comes to climate change," said Tessa Tennant, CDP chairperson, in greenbiz.com. "The financial consequences of climate change are almost certain to grow, and the information deficit for investors will prove costly." That "knowledge deficit" spurred the motivation behind the CDP survey, brought about at the request of 35 institutional investors. Not surprisingly, the roster includes reinsurance giants Munich Re and Swiss Re, two firms that insure insurance companies and take big hits whenever extreme weather causes major damage. The reinsurance industry has led the way in recent years in pushing for more disclosure on

how companies are preparing to deal with climate change. Now other institutional investors, such as Credit Suisse Group, Merrill Lynch, and Domini Social Investments, have joined in.

The project is just one of recent efforts to get business to disclose environmental and social performance. The Global Reporting Initiative, as we saw last week, is gaining momentum as the de facto standard for corporations to report on a range of environmental, economic, and social factors. In that effort, the GRI was able to enlist the support of dozens of top global companies, similar to the high response rate the Carbon Disclosure Project received in its survey. Both cases illustrate what could be a growing willingness among companies to recognize the importance environmental factors play in financial performance. On a sector level, the Disclosure Project's survey revealed that different industries vary widely in their degree of risk exposure and how sophisticated they've developed their risk management response. For example, in the banking industry, climate change-induced loan impairment of 10 percent could result in a 29 percent drop in share prices for banks without adequate carbon risk management. And the rail industry illustrates how supply chains will also feel the impacts of climate change. The report concluded that a drought-induced reduction in U.S. agricultural commodity shipments of 5 percent would depress revenues between 7.5 percent and 10.5 percent of net income.

Perhaps the report's most important finding shows that companies who are getting ahead of the curve in managing the financial risks associated with climate change are sure to perform better in the future. They'll be better positioned to enact cost-effective risk management, able to adapt to changing future developments, and can exploit any unforeseen profit opportunities. And they'll stand to gain competitive advantage, both in cutting costs and risks. The report cited British Petroleum for cutting its annual carbon dioxide emissions at their plants by 10 million tons, which resulted in \$650 million of savings. "This survey confirms the importance of taking early action to reduce greenhouse gases, one of the most pressing environmental issues of our time," said Doug Bauer, Vice President of Rockefeller Philanthropy Advisors, in greenbiz.com. "We are pleased that we could play a role in helping institutional investors understand the direct connection between climate change, fiduciary responsibility and shareholder value."

While the CDP survey helps investors understand how companies will react to global warming, Clean Edge's new 'Clean Energy Trends in 2003' report gives investors a sweeping look at the future of the burgeoning clean energy industry. Reporting on this "exciting and confounding time for clean energy," Clean Edge, a San Francisco research and consulting firm, says that many small, start-up companies in the booming alternative energy field are suffering during the down economy. Despite a lot of interest in the sector, financial investors in publicly traded, clean-energy companies have fared poorly during the past year. Most clean-energy stocks are significantly off their previous highs, with many trading below their initial public offering prices. And "many early-stage companies will likely wither on the vine for want of consistent policies and sufficient capital" during the recent economic downturn. Still, despite the gloom and doom, Clean Edge reports that "market indicators demonstrate that many clean-energy technologies are on the rise, and a confluence of forces is making clean energy one of the few bright spots in an otherwise bleak economy."

While other industry sectors are experiencing either slow or negative growth, clean energy, including wind energy, solar power and fuel cells, are reporting double-digit annual growth rates. The firm predicts that solar photovoltaics will grow from a \$3.5 billion global industry in 2002 to more than \$27.5 billion by 2012. Wind power will expand from \$5.5 billion in 2002 to approximately \$49 billion in 2012. And fuel cells will grow from \$500 million to \$12.5 billion over the next decade. "Combined, these high-growth technologies will grow by nearly an order of magnitude -- from just under \$10 billion today to \$89 billion by 2012 -- offering significant economic opportunities for companies, investors, and governments pursuing clean-energy goals," concludes the report. The Clean Edge also rightly points out that the United States won't be reaping as much as it could from the upcoming growth in clean energy. With government leadership in fostering new growth for the alternative energy industry lacking from both the White House and Congress, other nations have stepped into the void. Japan is now the leading producer of solar photovoltaics, while Denmark and Germany hold the number one and two spots in the global wind turbine market. Here, the state and local level now leads the way, with much of that leadership coming from the Pacific Northwest.

A recent commentary in the Oregonian hyped that we "can turn the Northwest into the Saudi Arabia of hydrogen" by producing the revolutionary fuel cheaply and easily with our region's abundant hydropower, which makes up 40 percent of the nation's total. By using the low-cost electricity generated by the Columbia River's massive dam system, water could be electrolyzed into its two components -- hydrogen and oxygen. That hydrogen could then be stored in fuel tanks all around the region, fueling a "hydrogen highway" up and down the West Coast. "With the enormous power of the Columbia River, the Northwest enjoys a huge natural advantage in a hydrogen future," gushes the op-ed's author, Jack Robertson. "We can help lead the nation -- and the world -- away from the carbon-based economy of the past century and toward an energy revolution fueled by water. We need to unlock the river's powerful secret -- now."

While the region's wind energy growth has been well-documented, other sources are bubbling up too. The Northwest could soon see the first large-scale project to create electricity from a geothermal source, as the Raft River geothermal venture in Southern Idaho moves forward. The plant is slated to begin power generation in the range of 10 megawatts to 15 MW capacity, although it eventually could generate as much as 90 MW, reports the latest issue of ConWeb. Construction is scheduled to begin in 2004. Idaho is home to other geothermal operations, although none produce electricity. Oregon has been home to numerous geothermal power plans in the past, but none have reached fruition. In Washington, a Moses Lake facility that just opened late last year has recognized the growing need for a dedicated source of crystalline silicon for manufacturing solar photovoltaic cells. Formerly, hand-me-down silicon from the region's semiconductor industry supplied regional solar PV need, but not anymore.

The plant, run by Solar Grade Silicon LLC, plans to turn out 2,000 metric tons of solar-grade crystalline silicon every year, enough to support the manufacturing of about 130 peak megawatts of PV cells, equivalent to about one-third of global production in 2001, reported ConWeb. And industry observers note that demand will continue to rise. "At a 25 percent annual growth, the PV industry's demand for silicon will double every three years or so. In three years, you double and three years later you double again. Then it gets to the point where PV is a significant part of the silicon commodity market," said Tom Surek, PV researcher at the National Renewable Energy Laboratory.

#### **46) METI TO AUTHORIZE BIOMASS FUEL**

The Japan Times  
February 25, 2003

Internet: <http://www.japantimes.co.jp/cgi-bin/getarticle.pl5?nn20030225b5.htm>

The Ministry of Economy, Trade and Industry plans to revise a law so vehicles can use an environmentally friendly biomass fuel that would help Japan meet its obligations in cutting greenhouse gas emissions. METI wants to classify the mixture of gasoline and alcohol as a fuel to be controlled under the law governing the quality of gasoline, sources said Sunday. The fuel is made from biomass, or organic matter, including wood waste. The inclusion would mark the first time Japan has authorized a biomass fuel as an energy resource. The ministry will submit the proposed revision to the Diet during the current ordinary session, hoping it will be put into force three months after its enactment, they said. The 150-day Diet session ends in June.

Biomass fuel is considered an indispensable tool for industrialized nations to fulfill their obligations under the 1997 Kyoto Protocol. Carbon dioxide released during the combustion of alcohol from biomass fuel is not counted among greenhouse gas emissions each nation must cut. Gasoline containing 10 percent ethanol is already being sold in the United States. If the revision is enacted, METI will formulate an ordinance stipulating quality standards for biomass fuel. Only products meeting METI's standards of safety, effectiveness and environmental friendliness would be authorized for sale. Vehicles using gasoline mixed with an excessively high density of alcohol can catch on fire. Under the Kyoto pact, industrialized nations must slash their greenhouse-gas emissions from 1990 levels by an average of 5.2 percent between 2008 and 2012. Japan must cut them by 6 percent in the same time frame.

#### **47) CURBING CARBON DIOXIDE**

The New York Times

February 25, 2003

Internet: <http://www.iht.com/articles/87771.html>

The pressure on President George W. Bush to abandon his irresponsibly passive approach to global warming was ratcheted up last week. On Thursday the attorneys general of seven northeastern states announced their intention to sue the administration - in the person of Christie Whitman, administrator of the Environmental Protection Agency - for its failure to regulate power plant emissions of carbon dioxide, the main global warming gas, as required by the Clean Air Act.

These same states frequently pressured Whitman's Democratic predecessor, Carol Browner, to invoke various provisions of the act to reduce long-regulated pollutants like sulfur dioxide, which causes acid rain. The difference this time is that they are trying to get the federal government to pay attention to carbon dioxide, the one compound that remains completely unregulated despite mounting scientific evidence that it is likely to be the most dangerous pollutant of all. The Clean Air Act requires the environmental agency to review and update standards governing power plant emissions every eight years. The lawsuit says that for 20 years the agency has failed to do these reviews. Had it done so, the suit contends, it would long ago have added carbon dioxide to the list of power plant emissions deserving of regulation - especially since power plants account for nearly 40 percent of all the carbon dioxide emitted in America today.

The suit is thus a direct challenge to one of several reasons Bush had advanced for not moving more forcefully to control carbon dioxide. The reason he gave for renouncing the Kyoto Protocol, the agreement on climate change signed by the Clinton administration in 1997 and since ratified by about 100 countries, is that aggressively reducing emissions would be too expensive. He also insists that carbon dioxide is not a pollutant as defined by the Clean Air Act. That's the reason he gives for not including carbon dioxide in the clean air legislation he has sent to Congress.

The lawsuit says this is poppycock. One section of the act explicitly recognizes carbon dioxide as a pollutant, alongside more familiar culprits like sulfur dioxide. In addition, carbon dioxide plainly falls within the act's definition of what a pollutant is and, no less clearly, it meets criteria necessary for the agency administrator, in this case Whitman, to regulate it. The suit could fail. State challenges to federal policy are always iffy. But it may at least inspire honest discussion about how to control the largest single source of carbon dioxide in the world. And it may force the administration to explain a global warming strategy that is becoming increasingly indefensible.

#### **48) CLIMATE CHANGE THREATENS BIODIVERSITY**

Daily Times Monitor

February 24, 2003

Internet: [http://www.dailytimes.com.pk/default.asp?page=story\\_24-2-2003\\_pg6\\_8](http://www.dailytimes.com.pk/default.asp?page=story_24-2-2003_pg6_8)

DENVER: Climate change already is causing serious detrimental effects on biological systems in Africa, the Andes and the oceans worldwide, scientists studying these areas have warned. Thomas Lovejoy, president of the H. John Heinz III Center for Science, Economics and the Environment in Washington, D.C., said there will come a point at which carbon dioxide accumulating in the atmosphere will cause "serious biological disruption, and the emerging picture...suggests these disruptions will occur slightly this side of double pre-industrial CO<sub>2</sub> (carbon dioxide) levels." Speaking in Denver at the annual meeting of the American Association for the Advancement of Science, Lovejoy said that while deciphering the impacts of climate change was no simple matter, it appeared that ecosystems were among the most sensitive to its effects. "There needs to be debate about the acceptable levels of carbon dioxide in the atmosphere," he suggested. Lovejoy later said that acceptable levels should be set "at the rate at which ecosystems can adapt naturally.

#### **49) DROUGHT A SIGN WATER USE MUST CHANGE: LABOR**

Liberal Daily  
February 24, 2003  
Internet:

[http://dubbo.yourguide.com.au/detail.asp?class=news&subclass=local&category=general%20news&story\\_id=211278&y=2003&m=2](http://dubbo.yourguide.com.au/detail.asp?class=news&subclass=local&category=general%20news&story_id=211278&y=2003&m=2)

Australians had to change their water use practices to avoid even worse droughts, Labor has warned. Opposition environment spokesman Kelvin Thompson said last week's rain was a relief for many farmers, rural communities and wildlife. But he said the drought, and its extent, should be a warning of even worse circumstances in years to come. "It would be folly for us to fail to learn from the lessons of what has been a very difficult year for our land and water," he said in a statement. "Australia cannot afford to be complacent about climate change. "If we are, the next drought, and the next set of bushfires, will be even more serious than this year's have been."

Mr Thomson said water use in both rural and urban areas had to change, with better farming practices and more re-use of stormwater and sewage. "In rural areas, and particularly in the Murray-Darling basin, our agricultural practices are based on a rate of water use which is unsustainable," he said. "We must take less water from our river systems and use what we do take more wisely. "In the urban areas we must greatly increase our rate of water re-use, making more use of stormwater, treated sewage and rainwater tanks." Mr Thomson said the Government's failure to sign the Kyoto Protocol on climate change would only lead to further greenhouse gas creation in Australia. He said temperatures in Australia last year were 1.6 degrees Celcius above the long-term average.

## **50) FRANCE UPS GREENHOUSE GAS RESTRICTIONS**

AFP  
February 25, 2003  
Internet: [http://www.expatica.com/france.asp?pad=278.313.&item\\_id=29167](http://www.expatica.com/france.asp?pad=278.313.&item_id=29167)

PARIS, Feb 25 (AFP) - The French government on Tuesday unveiled additional measures aimed at curbing greenhouse gas emissions blamed for global warming. The goal of "Climate Plan 2003" is to ensure that France meets its commitments under the UN's Kyoto Protocol on climate change, which seeks to stabilise global emissions of greenhouse gases, as compared to their level in 1990, by a timeframe of 2012. The plan "reinforces" action taken under in January 2000 under the country's former Socialist-led government, a statement released by a coordinating body, the Interministerial Mission for the Greenhouse Effect (MIES), said. It notably focuses on the transport and construction sectors, where pollution emissions have far outstripped projections.

Greenhouse gas output from transport rose 22 percent from 1990, and there was an increase of 14 percent from the building sector, MIES said. The statement said the measures were expected to be adopted by the government in November this year, and there would be an assessment "every 18 to 24 months" to evaluate progress. MIES, which is part of Prime Minister Jean-Pierre Raffarin's office, said the measures "would be drawn up in line with consultation with socio-economic figures." The communique gave no details about what kind of action was envisaged or who would take part in the consultations. The announcement came only a day after British Prime Minister Tony Blair announced ambitious new targets for reducing CO2 emissions. He pledged to slash Britain's output of greenhouse gases by 60 percent by 2050, going far beyond the country's Kyoto target of a 12.5 percent reduction.

France has to keep its emissions stable compared with the 1990 levels. The Kyoto Protocol has been agreed by all industrialised countries except the United States, the world's biggest greenhouse gas polluter. The agreement cannot take effect, however, until it has been ratified by a sufficient number of industrialised signatories. Russia is the last major country still to ratify. In one of his first acts after taking office, US President George W. Bush announced in 2001 that he would ditch Kyoto. He questioned the scientific

evidence for global warming and said Kyoto was too costly for the American economy and unfair because only industrialised countries were required to make targeted emissions cuts.

## **51) SWISS URGED TO SHUN HIGH-EMISSION CARS**

Swissinfo

February 24, 2003

Internet: <http://www.swissinfo.org/sen/Swissinfo.html?siteSect=111&sid=1653553>

Swiss consumers are being challenged to buy environmentally friendly cars, as part of a new government push to stem the sale of gas-guzzlers. Car dealers are now required to rank new cars according to their fuel efficiency, as part of efforts to meet the country's commitments to the Kyoto Protocol. Moritz Leuenberger, the Swiss transport minister, on Monday said the measure was designed to help Switzerland reduce its annual carbon dioxide (CO<sub>2</sub>) emissions. Under the Kyoto Protocol on climate change, emissions must be cut below 1990 levels by 2010. Private vehicles, along with other forms of transport, account for more than 30 per cent of the country's yearly CO<sub>2</sub> emissions.

By 2008, the government wants to reduce the average fuel consumption of new cars by 24 per cent from 8.4 litres per 100 kilometres to 6.4 per 100km. Already common on electrical goods, the new energy stickers provide data about fuel consumption rates, CO<sub>2</sub> emissions and energy efficiency. Urban and environmentally friendly vehicles will be awarded an A ranking, while the least efficient will be condemned with a G ranking. Government regulations also require car dealers to display or mention the energy stickers whenever putting up a price list of new models, in advertisements and during a sales pitch. The authorities are also launching a series of TV and newspaper advertisements to explain the new scheme.

Leuenberger said the energy stickers were just the first step in tackling the environmental impact of Switzerland's 3.6 million vehicles. The government has not ruled out the possibility of imposing a CO<sub>2</sub> tax on fuel sales should Switzerland fall short of its reduction targets. Nevertheless, the Swiss approach is considerably gentler than that of the German government's, which has imposed a tax regime to reward consumers who opt for environmentally friendly cars and punish those who jump into big four-wheel drives. Leuenberger said he preferred to give consumers a chance to voluntarily choose efficient vehicles, and would not make a decision on the proposed tax before year's end. The government also wants to increase the sale of diesel-powered cars, which use less fuel than regular vehicles. Only 18 per cent of new cars sold in Switzerland run on diesel, compared with rates of almost 50 per cent in other European countries.

Worried by the potential impact of a CO<sub>2</sub> tax, which some analysts fear could be as high as SFr0.20 per litre, the Swiss petroleum association recently launched its own initiative to reduce CO<sub>2</sub> emissions. The plan centres on a fund, financed by an SFr0.01 fuel tax that would invest in emission-reduction schemes such as car-pooling or alternative fuel research. Sonya Studer, from the association, said the fund could also be spent on CO<sub>2</sub> reduction programmes abroad, enabling Switzerland to earn carbon credits if, and when, a global trading system is introduced. "The climate problem is something that should be tackled globally," Studer told swissinfo. Potential projects include wind farms in India, bio-fuel research and funding for so-called carbon sinks such as forests. "We have worked out a business plan and presented it to the government," Studer said.

The environmental group, WWF, has given "in principle" support to the new sticker system, but added that it needed to be carefully monitored. Tony Wohlgensinger, president of the Swiss importers association Auto Schweiz, believes the energy stickers will have a positive impact on consumers. "We are confident that there [will] be an influence on the buyer, and that he will consider the efficiency of a car more than he did before," Wohlgensinger told swissinfo.

## **52) BLAIR URGES 60 PERCENT GLOBAL GREENHOUSE GAS CUTS**

ENS

February 24, 2003

Internet: <http://ens-news.com/ens/feb2003/2003-02-24-01.asp>

LONDON, UK, February 24, 2003 (ENS) - To stop further damage to the global climate a 60 percent reduction in emissions by 2050 is required, UK Prime Minister Tony Blair said today in a major speech on sustainable development in which he committed Britain to the 60 percent cut. Speaking at an event organized by the United Nations Sustainable Development Commission, he set out the case for a new international consensus to tackle key issues of sustainable development like climate change. Today, Blair and Swedish Prime Minister Goran Persson wrote a joint letter to the Greek Prime Minister, Costas Simitis, in his capacity as President of the European Council. In it the two nations confirm their ambition to reduce emissions across the European Union by 60 percent by 2050, and their commitment to policies that will demonstrate how it can be achieved.

Climate change is a crucial long term global security issue comparable to the immediate security threat posed by weapons of mass destruction, Blair said. "The world is in danger of polarizing around two different agendas," warned Blair. "On the one hand there are the very clear and dangerous threats of unstable states developing or proliferating weapons of mass destruction and the evil of terrorism exemplified by September 11th. These are the issues, if you like, of immediate security. They are a threat we can see confronting us directly and now." "On the other hand, there are the issues that affect us over time. They are just as devastating in their potential impact, some more so, but they require reflection and strategy geared to the long term, often straddling many years and many governments," said the British Prime Minister, now in his second term.

Within the long term category, said Blair, are "issues of global poverty, relations between the Moslem world and the West, environmental degradation, most particularly climate change." Calling climate change "unquestionably the most urgent environmental challenge," Blair said the only answer is to construct "a common agenda that recognizes both sets of issues have to be confronted for the world's security and prosperity to be guaranteed." He said his government will continue to make the case, "to the U.S. and to others, that climate change is a serious threat that we must address together as an international community." Blair stressed the potential of technological development to achieving transition to "a truly low-carbon economy" without causing the sort of economic damage feared by countries like the United States.

Blair said Britain is "well on the way" to meeting its greenhouse gas reduction target of 12.5 percent under the United Nations Kyoto climate protocol, which U.S. President George W. Bush rejected. "But while the Kyoto Protocol was "an enormous achievement," Blair warned, "it is clear Kyoto is not radical enough." He acknowledged that it represents the most that is "politically achievable" at this time. Global emissions of greenhouse gases have risen 10 percent since 1990, with a 35 percent increase in developing countries, and Blair said even the Kyoto Protocol limits and deadlines will not be enough to avert global warming. "At best Kyoto will mean a reduction of two percent in emissions. That is better than emissions just continuing to rise and rise. But we know now, from further research and evidence, that to stop further damage to the climate we need a reduction in 60 percent reduction worldwide," the Prime Minister said, relying on the 2000 report of a Royal Commission on Environmental Protection.

Many, including the Bush administration, see the Kyoto Protocol as a threat to the pursuit of economic growth, but said Blair, "I believe this needn't be the case. If we harness new technology the evidence is mounting that we can achieve a target of 60 percent - and at reasonable cost." The solutions to climate change, such as hydrogen fueled vehicles, are not expensive "against the scale of the problem," said Blair. It is "a myth" that reducing emissions makes us poorer, he said. "The UK's economy has grown by nearly 17 percent since 1997," when the Blair government took office, he said. "In that time, emissions have fallen by five percent." There are "clear economic advantages" for Britain in taking the lead in combating climate change, Blair said. "We have enormous potential in this field - in our universities, our research institutes, our businesses." "Today I am pleased to announce its first large portfolio of projects - including fuel cells, wave power, photovoltaics and CHP [cogenerated heat and power] - which together will amount to £70 million in combined public-private investment," Blair said.

Britain's commitment on cutting carbon dioxide emissions was included in a long anticipated energy white paper, which puts an end to months of speculation over national policy on renewable energies and nuclear power. A new ambition of a 20 percent share of electricity from renewables by 2020 is included. The question of possible new nuclear power capacity is left open. Ensuring security of energy supply drives the white paper. Britain is set to become a net importer of energy in 2010 for the first time in 30 years. Under a business as usual scenario by 2020 around 75 percent of primary energy supplies will be imported. Better energy efficiency, establishment of the forthcoming EU carbon trading scheme and planning system changes to remove obstacles to new renewables infrastructure build are included. While Blair's speech seemed to place Britain in the vanguard of the battle against global warming, government environment adviser Sir Jonathon Porritt has warned that the UK would fall "well short" of its goal of cutting carbon dioxide emissions by 20 percent by 2010 unless major policy changes are made, particularly on reducing car use. Today Blair did not mention his government's previous commitment to cut carbon dioxide emissions by 20 percent over 1990 levels by 2010.

Blair did stress that his government is acting to clean up the environment, "not just globally, but locally," in towns and cities, where "the environment is overwhelmingly an issue of concern for the poorest citizens in our communities." "It is the poorest that live in the worst housing, and are the most affected by traffic pollution, live closest to landfill sites and have the worst graffiti and litter problems," the Prime Minister said. Friends of the Earth UK Director Tony Juniper commented, "Tony Blair's speech today contained important passages about the relationship between poverty, social exclusion and environmental damage. The need for environmental justice has been the central theme of Friends of the Earth's campaigning for a number of years. Mr Blair's clear understanding of this crucial issue is very welcome." But, said Juniper, many of the UK's environmental problems are getting worse, not better, under the Blair government. "Greenhouse gas emissions are not falling. Road traffic is rising. And so is the amount of household waste being sent to landfill." Juniper called for "specific and radical targets and timetables," backed with sufficient funding. "Otherwise we may simply return in a year or two to hear the same pledges and depressing realities all over again."

See Also:

Blair launches initiative to fight global warming, Faults Washington rejection of Kyoto, Associated Press, February 25, 2003

[http://www.boston.com/dailyglobe2/056/nation/Blair\\_launches\\_initiative\\_to\\_fight\\_global\\_warming+.shtml](http://www.boston.com/dailyglobe2/056/nation/Blair_launches_initiative_to_fight_global_warming+.shtml)

Blair Outlines Plans to Slash Emissions Over 50 Years, The New York Times, February 25, 2003

<http://www.nytimes.com/2003/02/25/international/europe/25BRIT.html?ex=1046754000&en=fba6048037f961b&ei=5062&partner=GOOGLE>

Climate Change is 'Urgent Challenge', CountryLife, February 24 2003

[http://www.countrylife.co.uk/CountrysideConcerns/News/blair\\_climatechange.htm](http://www.countrylife.co.uk/CountrysideConcerns/News/blair_climatechange.htm)

Blair lays out an ambitious emissions cut, The New York Times, February 26, 2003

<http://www.iht.com/articles/87917.html>

Blair accused of energy 'greenwash', The Guardian, February 24, 2003

<http://politics.guardian.co.uk/green/story/0,9061,901901,00.html>

Blair pushes US on climate change, Daily Times, March 3, 2003

[http://www.dailytimes.com.pk/default.asp?page=story\\_3-3-2003\\_pg6\\_8](http://www.dailytimes.com.pk/default.asp?page=story_3-3-2003_pg6_8)

Blair urges Europe to turn green with hope, Times on Line, February 25, 2003

<http://www.timesonline.co.uk/article/0,,2-590354,00.html>

### **53) DOWNING STREET TO CHALLENGE BUSH ON GREENHOUSE GAS EMISSIONS**

The Guardian

February 24, 2003

Internet: <http://www.guardian.co.uk/waste/story/0,12188,901719,00.html>

Britain will today implicitly challenge George Bush's anti-environment stance by demanding that the world go further than the stalled Kyoto protocol and commit itself to a 50% cut in carbon emissions by 2050.

Tony Blair, often accused of acting as Washington's poodle, will also mark a decisive shift towards a greener energy policy after months of Whitehall infighting when he announces an ambition to ensure that 20% of British energy is derived from renewable sources by 2020. In what is not quite the death knell of the nuclear industry, the Department of Trade and Industry will publish its energy white paper today suggesting that new nuclear stations should only be considered as a last resort. The paper has been prompted by the projection that Britain will be a net importer of energy by 2010, for the first time since the industrial revolution.

But Mr Blair will also challenge the US, the biggest energy consumer on earth, to do more to cut consumption. He will challenge claims that cuts in emissions threaten economic growth, pointing out that thanks to new technology Britain has seen emissions fall 5% since 1997 while the economy has grown by 17%. He will argue that the world's poor suffer most from environmental problems and will urge the world to take up a new covenant to protect the environment. In a clear challenge to Mr Bush, he will argue that the Kyoto protocol - rejected by the US - helped to focus minds but does not go far enough. Jonathan Porritt, an environmental campaigner and chairman of the government's sustainable development commission, called the white paper a major step forward. It was also backed by Friends of the Earth.

But the Liberal Democrats attacked it in advance as a fudge, and the left of centre thinktank the IPPR said the government's failure to back road congestion charging threatens its commitment to cut carbon emissions. A Cabinet Office paper last year suggested that the government set a target of 20% of electricity from renewable sources by 2020. The downgrading of the target to an ambition in the white paper reflects Whitehall nervousness that the 20% figure may not be achievable. The white paper will promise an annual report setting out progress towards the ambition, including a staging post of 10% of energy from renewable sources by 2010. In what is being billed as Green Monday, the white paper will be backed by a speech from the prime minister to the sustainable development commission and the first annual sustainability report from Margaret Beckett's Department for Environment, Food and Rural Affairs.

The energy minister, Brian Wilson, a backer of the nuclear industry, supports renewables but is sceptical that the 20% goal can be reached on the basis of the current slow progress. The Treasury has also been asking searching questions. The 20% ambition will be backed by three main measures - an extra £100m of investment in renewables, taking the total state commitment to £300m; tax breaks and exemptions worth £2bn annually to the renewables industry; and new planning rules designed to make it easier for onshore and offshore wind farms to gain planning permission. Licences for windfarms beyond territorial waters will also be introduced. The white paper, in line with last year's Cabinet Office review on security of energy supplies, will keep the option of building nuclear power stations, but no new stations will be proposed. It will point out that the problem of handling nuclear waste has not been resolved, making the true cost of nuclear energy difficult to measure.

The trade secretary, Patricia Hewitt, will suggest that such stations should only be built as a last resort if alternative energy sources, including gas, are proving inadequate. The nuclear industry denounced the white paper as "incompetent, irrelevant and frankly dangerous". Sir Bernard Ingham, secretary of the Supporters of Nuclear Energy group, said: "At a time when greenhouse emissions are rising in Britain, it proposes to continue to allow the nuclear industry, which emits no greenhouse gases, to run down."

#### **54) PM: 'CONCERTED INTERNATIONAL EFFORT' NECESSARY TO FIGHT CLIMATE CHANGE**

Number 10

February 24, 2003

Internet: <http://www.number-10.gov.uk/output/Page3072.asp>

Prime Minister Tony Blair has reiterated his commitment to placing sustainable development at the heart of government policy-making. Speaking at an event organised by the Sustainable Development Commission, he set out the case for a new international consensus to tackle key issues of sustainable development like climate change. "The international community achieved a lot at the World Summit on Sustainable

Development in South Africa last year," he said. "But today, I want to argue that we have not yet been nearly bold enough. To stop further damage to the climate we need a worldwide 60 per cent reduction in emissions by 2050. I am committed to putting us on a path towards that target."

Mr Blair said there is little point in the UK acting alone: "We need concerted international effort and we will continue to make the case that climate change is a serious threat." The government's third annual report on sustainable development updates progress on the 15 headline indicators making up a 'quality of life' barometer in the UK. It shows:

- continued progress on tackling poverty and social exclusion
- fewer households living in poor housing, and an increase in the percentage of new homes built on previously-developed land or through conversion of existing buildings
- a rise in recorded violent crime, particularly robberies, although there is strong evidence that levels of all crime have been falling
- increased road traffic volume, but a weakening of the link between economic growth and road traffic growth
- an increase in the levels of household waste produced, though some improvement in the amount recycled
- emissions of greenhouse gases and carbon dioxide increased slightly compared with the previous year, but are still much less than a decade ago

The UK is still on target to meet its Kyoto commitments and move towards the domestic goal to reduce carbon dioxide emissions by 20 per cent by 2010.

## **55) CHARTS OPEN THE BOOK ON ARCTIC CLIMATE RIDDLE**

Independent Online (South Africa)

February 23 2003

Internet: [http://www.iol.co.za/index.php?click\\_id=143&art\\_id=qw1046017981391B251&set\\_id=1](http://www.iol.co.za/index.php?click_id=143&art_id=qw1046017981391B251&set_id=1)

Oslo, Norway - Using 500-year-old logbooks and sea charts, scientists are examining the effects of global climate changes in the Arctic. Terje Loyning, an oceanographer with the project, said there is evidence of less ice. "Yes, we have seen climate change, but we don't know how much has been created by humans," he said on Friday. The Norwegian Polar Institute and the World Wide Fund for Nature compiled the Arctic Climate System Study Historical Ice Chart Archive to gauge global warming on the ice around the Arctic Sea. The Norwegian Meteorological Institute also took part. 'The climate change in the Arctic is caused by the burning of fossil fuel' The archive contains details of climate change in and around the Arctic from 1553 to 2002.

Loyning has been collecting sea charts covering an area from Greenland east to Novaya Zemlya, Russia, to compare the amount of ice explorers encountered hundreds of years ago. "Much has been made in recent years of the connection between global warming and sea ice extent," said Lynn Rosentrater, a scientist with the International Arctic Programme. "But prior to the development of satellites few direct observations of sea ice were made in any systematic manner." Rosentrater said: "We believe, along with two-thirds of scientists, that the climate change in the Arctic is caused by the burning of fossil fuel," she told The Associated Press. "It is very clear that there are natural cycles, but there is a clear human footprint."

Many scientists believe that the burning of fossil fuels is causing an increase in atmospheric carbon dioxide, triggering what is called the greenhouse effect. 'There has been a steady decrease of the ice starting long before the industrial age'. A higher concentration of carbon dioxide in the atmosphere would trap more of the sun's heat, possibly causing temperatures to rise. Other methods of tracking the effect of climate change in the Arctic have used drilling deep within the ice. Ice cores contain detailed, natural records of climate change. Using the charts of seagoing explorers, both groups said they created a massive database that extends 500 years back. "With the charts and logbooks we can compare the ice edge as it was. We have to be a bit careful about the assessment, but there has been a steady decrease of the ice starting long before the

industrial age," Loyning told the AP. "We have to assume that those who travelled without engine power sailed in areas where a third of the ocean was covered by ice." The oldest records are from 1553 when English explorer Hugh Willoughby sought to find a northeastern route to China. Willoughby and his crew perished when their ship got stuck in ice, but the voyage eventually resulted in trade between Britain and Russia. The ship's log and other documents were recovered by later explorers. - Sapa-AP

## **56) COMPANIES IGNORE WEATHER WARNINGS AT THEIR PERIL**

The Courier-Mail  
February 22, 2003  
Internet:

[http://finance.news.com.au/common/story\\_page/0,4057,6032082%255E14302,00.html](http://finance.news.com.au/common/story_page/0,4057,6032082%255E14302,00.html)

SEVERAL major industry sectors are in danger of losing a wide section of their investor base if they continue to avoid the issue of climate change, according to leading analysts. They say an increasing numbers of investors are now identifying those industries and companies that will lose from a warming climate and the resultant jump in climate variability. AMP Henderson Global Investors senior research analyst Ian Woods said companies that were potential losers must be doubly diligent in managing climate change risks. "Investors can get out far quicker, usually, than a company can correct bad decisions, including the mistake to ignore the issue until it's too late," he said. Obvious losers were businesses like the coal, aluminium and car industries that made, used, or were big consumers of non-renewable energy or non-renewable energy goods.

However, Queensland Mining Council chief executive Michael Pinnock said while many resource companies were being depicted as "bad boys", they were already taking very positive steps to cut greenhouse gas emissions. The money currently being spent on new technologies in industries like coal, steel and pulp and paper would eventually see the greatest cuts in greenhouse emissions, he said. But many industry sectors were still exposed to a potential investor backlash, Mr Woods said. Energy trading systems would punish energy retailers that relied on non-renewable energy for power while federal laws were forcing makers of whitegoods, air-conditioners, water heaters and other goods to label their products' energy use. The building industry could also expect similar pressure.

An AMP Henderson Global Investors survey of 119 of Australia's biggest companies showed that 51 per cent of 64 companies that responded were yet to address the risks of climate change at board level. Less than half had a risk-management strategy in place and only 56 per cent had considered how climate change might affect customers or suppliers. "Don't doubt that many businesses are at risk from warmer weather," Mr Woods said. Insurers and reinsurers were exposed to the heightened frequency of extreme weather while the agricultural sector was also vulnerable to changing weather patterns that cut water supply. "Wine, fruit and cotton industries will be damaged. Fertiliser, transport and agricultural industries will be indirectly harmed," he said. Tourism would also be hit if, as forecast, coral bleaching spread, snowfields shrank and natural heritage was destroyed. "If these potential losers don't tackle the risks, investors will obviously review their holdings in these companies," Mr Woods said. "Investors can direct their money to the many companies taking advantage of the opportunities sparked by climate change," he said.

AMP Henderson research had identified five "industry of the future" sectors that could provide sustainable development growth prospects for investors. These included companies involved in clean and renewable energy, education and training, environmental services, health and nutrition and public transport. AMP Henderson Global Investors' SRI business manager Angus Dennis said obvious winners included wind power generator group Pacific Hydro and Australian Magnesium whose products made cars lighter and therefore used less petrol. Other examples included Origin Energy that was moving away from carbon intensive emissions into coal seam methane, Simsmetal's extensive use of metal recycling as well as the international Shell group of companies that was spending millions of dollars on renewable energy initiatives, he said. There were other offshore stocks that were actively addressing the issue of climate change in their business models and were included in AMP Henderson Global Investors international SRI portfolio, Mr Dennis said. The Danish Vestas Wind Systems was the world's leading maker of wind turbines and was exploring the links between wind power and fuel cells as well as the development of offshore wind farms.

The RE power wind turbine maker in Germany and the UK's Johnson Matthey that made exhaust emission catalyst control and fuel cell systems were both actively addressing the issue of climate change, he said.

## **57) WIND TURBINES A GOOD CASH CROP**

Journal Pioneer

February 22, 2003

Internet: <http://www.journalpioneer.com/article.cfm?showid=3008>

The controversy over a J.D. Irving Ltd., proposal to build more than 40 300-foot-tall wind turbines in picturesque Malpeque has overshadowed the benefits wind-generated electricity can bring if wind turbines are welcomed with open arms. In the February issue of a publication called *The Furrow*, an article called *Selling the Wind* describes the benefits that farmers have reaped in states such as Iowa and Kansas from harvesting wind power. It has proven to be a guaranteed moneymaker for people willing to embrace the concept. One Iowa farmer earned as much as \$2,400 a year in land-use payments for allowing a wind turbine and monitoring equipment on his 160-acre field. That money is a godsend for many producers battered by low commodity prices, harsh weather, ravenous pests, and uncertain, volatile overseas markets. A farmer in Kansas was able to reap \$2,000 a year per turbine on his farm and he collects payments for 20 wind turbines.

Meanwhile, according to the article, growing numbers of households throughout the U.S. are receiving electricity generated from a clean, non-polluting source of energy that can never be exhausted. Over the past three decades as technology has improved the cost of electricity generated by wind turbines has been slashed, and by 2010 many experts are predicting it will cost less to produce wind-generated electricity than it does creating new plants that rely on fossil fuels. Tuesday, in Finance Minister John Manley's first budget, hundreds of millions of dollars a year worth of incentives were provided for research involved in developing and marketing alternative fuels, as part of Ottawa's commitment towards implementing the Kyoto Protocol and reducing the threat of global warming. There is an expanding market that companies such as J.D. Irving Ltd., are hoping to tap. Malpeque may not be the best place to pitch the virtues of wind energy even though the company has apparently had little trouble finding at least a half dozen property owners willing to provide land for wind turbines at up to \$5,000 a year per tower.

As Agriculture Minister Mitch Murphy stated in a recent presentation to Malpeque residents, the province doesn't currently have a framework policy on alternate sources of energy, including wind-generated power. The Binns government needs to consult Islanders and develop a comprehensive policy as soon as possible, or the province risks falling behind other provinces - North Cape notwithstanding. There are benefits to wind energy, provided the markets are properly developed and the appropriate incentives are in place. One of those benefits would involve offering an alternative to many growers currently struggling to make ends meet on razor-thin profit margins. Potato growers could convert more of their land to wind turbines and other sources of green power, and reduce their reliance on a type of agriculture that relies on massive applications of pesticides and soil practises that lead to erosion and runoff. According to the *Furrow* article, each wind turbine displaces 11,000 pounds of carbon dioxide, sulphur dioxide and nitrogen oxide per day - gases that contribute to global warming. What are we waiting for?

## **58) EMISSIONS TRADING COULD BE COUNTER-PRODUCTIVE TO KYOTO**

Eddie weekly summaries

February 21, 2003

Internet: [http://www.edie.net/gf.cfm?L=left\\_frame.html&R=http://www.edie.net/news/Archive/6679.cfm](http://www.edie.net/gf.cfm?L=left_frame.html&R=http://www.edie.net/news/Archive/6679.cfm)

The Kyoto Protocol is in danger of becoming a 'first step backwards' in environmental regulation, warns a new report from the research body Trans National Institute (TNI). Carbon trading, an integral part of the Kyoto Protocol, could allow countries to meet their targets through purchase of carbon credits without actually reducing any greenhouse gas emissions, says a report by Carbon Trade Watch – a new project set up by TNI. The study *The Sky is Not the Limit: The emerging market in greenhouse gases* says the credit

scheme allows some polluted areas to remain polluted, whilst countries declare their improved environmental record and big businesses profit in the free market system. Under the carbon trading schemes countries can buy and sell carbon credits. They are accumulated through the reduction of greenhouse gases, and if purchased they can substituted for emissions reduction measures – effectively contributing to reducing targets.

The US trades mainly in sulphur dioxide and nitrogen oxide, says the report. These gases contribute to smog, acid rain and cut short the lives of 30,000 Americans annually. Yet the problem is not alleviated, but allowed to continue under the trading scheme, states the report. The study also gives the example of plans by the World Bank to extract methane from a landfill site in Durban, South Africa and use it to generate electricity. The reduction in methane will be converted into emissions reduction credits, and then sold to other companies. However a by-product of the electricity generation will be methane production, which will continue to adversely affect the health of people living near the site.

Emissions trading has become 'big business', and corporate cost effectiveness and self-regulation is likely to undermine the Kyoto process, warns the report. It states: "Issues of human rights, public participation, community survival and ecological integrity become subordinated to a technocratic and corporatist agenda." In this its first publication, Carbon Trade Watch accuses the trading scheme of pandering to big business and allowing it to dodge their emissions reducing action. It criticises the regulation of the emissions market as 'inadequate' and says the free-market ideal cannot fulfill the goals of the Kyoto Protocol. "The only instance where an emissions trading scheme could work, for more than the free-market economic system, is if it were small, highly regulated, tightly defined, had no co-pollutant side effects, had rigorous independent monitoring and verification and vibrant community consultation, participation and assessment," says the study. A spokesperson from the UK Department for Environment, Food and Rural Affairs, which has masterminded the world's first nation-wide emissions trading programme, could not be contacted to comment on the report.

## **59) MOOSA WELCOMES THE LAUNCH OF ESKOM'S WIND ENERGY FARM**

SA Ministry of Environmental Affairs and Tourism  
February 21, 2003

Interment: [http://www.environment.gov.za/NewsMedia/MedStat/2003feb21\\_1/wind\\_210220031.html](http://www.environment.gov.za/NewsMedia/MedStat/2003feb21_1/wind_210220031.html)

FRIDAY, 21 FEBRUARY 2003: The Minister of Environmental Affairs and Tourism, Mohammed Valli Moosa, has welcomed today's launch of Eskom's experimental wind energy farm aimed at exploring the use of wind energy for bulk electricity generation. Wind energy is environmentally friendly and helps reduce global warming and greenhouse gases. The Eskom farm, the first of its kind in Africa, is located in Klipheuwel, Western Cape. Minister Moosa said the launch of the wind farm speaks to NEPAD's vision of sustainable development as it seeks to ensure sustainable energy use. He said the Department of Environmental Affairs and Tourism (DEAT) has initiated studies on the vulnerability and adaptation of South Africa to climate change, the findings of which will better equip the country to develop informed policies and strategies to react to global climate change.

Furthermore, DEAT has embarked on a joint initiative with the Department of Minerals and Energy (DME), to implement a public sector energy management programme to save energy and reduce the negative impacts of climate change. Global climate change includes the serious changes in weather and climate patterns. These changes affect rainfall, and can cause extreme weather events and rising sea levels. Climate changes mean that temperatures rise higher and faster than can be explained by the sun's activity.

"Reducing emissions of green house gasses could be achieved by reducing the demand for energy, altering the way that energy is used or changing the method of generating energy," he pointed out.

"Eskom's first wind energy project is an example of an alternative source of energy which is environmentally friendly and more importantly, does not produce any emissions".

In March last year, South Africa's Parliament acceded to the Kyoto Protocol on Climate Change, which seeks to implement legal and economic instruments whereby developed countries can reduce greenhouse gas

emissions whilst furthering sustainable development in developing countries. "Eskom, as one of the largest generators of electricity from coal, should be applauded for deviating from their usual way of generating energy to explore a new and sustainable pattern of energy production. Through this project, Eskom is demonstrating to the people and the world out there that South Africa is concerned about climate change and wants to do something about it. "This is a challenge to other industries to follow on Eskom's steps by engaging in energy efficient activities and strive to use green energy for the sake of this and future generations," concluded Moosa.

## **60) GERMANY UNLIKELY TO MEET CO2 REDUCTION TARGETS - DIW**

Planet Ark

February 21, 2003

Internet: <http://www.planetark.org/dailynewsstory.cfm/newsid/19897/story.htm>

FRANKFURT - Germany is unlikely to deliver on its pledges to curb emissions of carbon dioxide (CO<sub>2</sub>), despite a further reduction last year, the Berlin-based German Institute for Economic Research DIW said. In 2002, CO<sub>2</sub> emissions in Germany fell 1.5 percent to 834 million tonnes, as the weak economy and mild weather limited consumption of primary energy sources, the main factors generating greenhouse gases, it said. "In the period 1991-2002, emissions were, however, only reduced by an annual average of just about one percent. On the back of these figures, it seems hopeless that (Germany) will meet its targets set for 2005," DIW said in a statement. Germany aims to cut CO<sub>2</sub> emissions by a quarter by 2005 compared to 1990, but to deliver on its pledges the country would need to reduce CO<sub>2</sub> emissions by an annual 3.8 percent or around 30 million tonnes, it said. "Such a high reduction was so far only seen at the beginning of the 1990s as a result of the immense economic slump in the former Communist states of Eastern Germany," DIW said.

Germany might also fail to meet targets on total greenhouse gas emissions set out in the Kyoto Protocol, it said. Under Kyoto, Germany has committed itself to cutting total greenhouse gas emissions by 21 percent from 1990 levels over the period 2008-2012. The Kyoto Protocol, agreed by the United Nations in 1997, aims to reduce the developed world's output of the gases which trap heat in the atmosphere with potentially grave long-term consequences for the global environment.

## **61) INVESTORS INSIST COMPANIES PREPARE FOR CLIMATE CHANGE**

Edie weekly summaries

February 21, 2003

Internet: [http://www.edie.net/gf.cfm?L=left\\_frame.html&R=http://www.edie.net/news/Archive/6683.cfm](http://www.edie.net/gf.cfm?L=left_frame.html&R=http://www.edie.net/news/Archive/6683.cfm)

Climate change is recognised as a serious business threat by 80% the world's 500 largest companies. However less than half of these have taken preventative action according to a survey conducted by shareholders. The Carbon Disclosure Project (CDP) was set up to provide information to investors and funders. An acknowledged 'knowledge deficit' concerning the financial impact of climate change, left shareholders unable to demand company action in this area. CDP surveyed big businesses to make up the shortfall in information. Collectively CDP represents US\$4 trillion in assets; their report is sending a clear signal to business to take precautions against global warming and protect shareholders investments. As well as in the emission-intensive sectors, where greenhouse gas pollution will be regulated, the report also warns of climate change impacts on other industries from telecommunications to real estate. Extreme weather events affected the turnover for many companies in 2002, and the report predicts similar patterns for this year and advises business to protect themselves.

Last year edie reported on ExxonMobil's dismissal of a theor that it would lose long term investors due to its stance on climate change. "We're talking about shareholder value and 'carbon competitiveness'," said Tessa Tennant, Chairwoman of the CDP. "Companies failing to take the messages of this report seriously are likely to hear from their shareholders." There is also a threat that legal action may be taken against socially and environmentally unconscious industries. In January three US states announced a plan to sue the

Environment Protection Agency because it has not enforced CO2 regulation – such a case would doubtless have repercussions for business. Whilst some businesses are making alterations and investments against climate change many more have a long way to go, according to the survey. In response to the CDP survey, UK Prime Minister Tony Blair commented: “No industry can afford to ignore the issue.”

## **62) CLIMATE CHANGE SET TO IMPACT GLOBAL MARKETS - REPORT**

Planet Ark

February 19, 2003

Internet: <http://www.planetark.org/dailynewsstory.cfm/newsid/19868/story.htm>

LONDON - Global warming is set to have a big impact on financial markets as investors revalue companies based on their exposure to climate change risk, according to a report published. Businesses could face huge extra costs from increasingly frequent natural disasters and from new legislation aimed at reducing emissions of global warming gases, the report by the Carbon Disclosure Project says. Some could see their value slashed - by as much as 40 percent for some heavy carbon emitters, said the report, which was commissioned by a group of institutional investors overseeing around \$4.5 trillion of assets. Others that identify the risks and implement policies to reduce them will have a competitive advantage, boosting their share price. "It is almost certain that in the years ahead, a series of trends will continue to amplify the financial impacts of climate change," said Tessa Tennant, Carbon Disclosure Project chairperson. "This is about security of financial returns as well as about protecting the global environment." Despite the huge risks and rewards, however, many of the world's top companies are ignoring climate change. Although 80 percent of respondents in the survey of the world's 500 largest companies recognised climate change as a financial risk, only 35 percent to 40 percent have taken action to mitigate the dangers.

## **HEAVY WEATHER**

The business world faces threats from climate change on several fronts. Industries such as agriculture and tourism are vulnerable to increasingly extreme weather conditions. But the effects will be felt across most sectors. With economic losses from natural disasters doubling every 10 years, banks' and insurers' profits are at risk. Also, governments are increasingly looking at regulating carbon emissions. Industries such as oil, gas and manufacturing are obvious targets for regulatory action. The European Union, parts of the United States and Japan all plan new laws. Likely tax increases will push up the cost of energy, hitting all industries.

There are gains to be made as well. Reducing carbon emissions can make companies more efficient. Whole new industries and sectors will also develop, bringing big rewards for companies able to exploit them. For example, the renewable energy market will grow to around \$1.9 trillion by 2020 from between \$234 billion and \$625 billion in 2010, the report says. With the financial impacts of climate change becoming clearer, investors are beginning to push for change. Fund companies are increasingly channelling investment into companies that adopt high standards on environmental, social and ethical issues. The belief is that companies which manage these risks are likely to provide better long-term returns to shareholders. In Britain, parts of Europe and Australia, legislation is also pushing big investors such as pension funds to act, adding to the pressure on companies. "This report is required reading for directors, executives and investors everywhere," said Tennant. "Companies failing to take the messages of this report seriously are likely to hear from their shareholders."

## **63) EUROPE AHEAD OF U.S. IN RENEWABLE POWER**

ENS

February 19, 2003

Internet: <http://ens-news.com/ens/feb2003/2003-02-19-09.asp#anchor3>

DENVER, Colorado, February 19, 2003 (ENS) - Europeans have far outdone Americans in developing new sources of renewable energy and a sound environmental policy, argue researchers. As the world's only

remaining superpower, the United States is often at the cutting edge of science and technology. But according to researchers at the American Association for the Advancement of Science (AAAS) meeting this week, the Europeans are way ahead in renewable energy research and development. "Europe has made a major commitment to renewable energy and is leading the United States in deploying it," said Allan Hoffman, a renewable energy expert and senior advisor to the Clean Energy Group at Winrock International, a nonprofit group dedicated to sustainability and based in Arkansas. Of all the potential sources of renewable energy, wind is the most widely used. It is the world's fastest growing energy source, with the current worldwide capacity at around 30,000 megawatts. In less than five years, wind power capacity is expected to rise to around 60,000 megawatts, according to speakers at the AAAS meeting.

Citing a recent survey of renewable energy initiatives worldwide, L. Hunter Lovins of The Global Academy, an interdisciplinary think tank based in Florida, rejected the contention of U.S. President George Bush that U.S. adherence to the Kyoto protocol would place the United States at a competitive disadvantage. "It turns out that the U.S. will be at a competitive disadvantage by not signing" she said. As consumers begin to notice the benefits that renewable energy sources bring to the environment and their quality of life, Lovins said, companies in nations that have invested in the new sources of energy will gain a marketing edge. Lovins added that the investment community has also begun seeing an increase in "socially responsible investing," investments in companies that agree to practice environmentally and socially responsible policies.

As a result, such investment options have received the attention of the big institutional investors - pension funds with assets equal to 46 percent of U.S. gross domestic product. One of these, The California Public Employees' Retirement System, (CalPers), with \$130 billion in assets, has announced that it has begun screening investments. From such decisions, Lovins expects to see a ripple effect that will lead to changes in U.S. energy policy. "As Americans we are in a time of unprecedented opportunity and unprecedented peril. We have more choices than ever in terms of efficient energy and renewables," Lovins said. "At the moment, however, our administration's policies are going in the wrong direction."

#### **64) CONSERVATION GROUP CALLS ON GOVT TO SIGN KYOTO PROTOCOL**

February 17, 2003

Internet: <http://abc.net.au/news/newsitems/s786282.htm>

The Australian Conservation Foundation says Australia is blindly following the United States in not signing the Kyoto Protocol to reduce greenhouse gas emissions. The Australian Conservation Foundation says the release of a new report today has revealed the economic cost to Australia of not signing the protocol. The report, commissioned by the New South Wales, Victorian and South Australian Governments, claims business has changed its views on the treaty and wants opportunities for investment. However a spokeswoman for Federal Environment Minister David Kemp says the report will not influence the Government's stance. The Australian Conservation Foundation's executive director, Don Henry, says Australia and the US are the only two developed countries who have not signed. "I think now that this report clearly shows that it's in our economic and environmental interest to ratify," he said. "One just has to assume our Federal Government is blindly following the anti-Kyoto stance of President Bush in the US."

#### **65) SIGNING THE KYOTO PROTOCOL IS NOT A SIMPLE TASK: BEATTIE**

Abc.net

February 17, 2003.

Internet: <http://abc.net.au/news/newsitems/s786388.htm>

The Queensland Government has rebuffed renewed calls from three states for the Federal Government to sign the Kyoto Protocol. A new report sponsored by the New South Wales, Victorian and South Australian Governments has found Australia's economy will suffer if the Federal Government does not sign the agreement to reduce greenhouse gases. Last year Queensland Premier Peter Beattie said the situation was not that simple. Today he says nothing has changed. "It's easy to say sign up to Kyoto if you're not

disadvantaged and I know Bob Carr is a very committed environmentalist, and so am I, and so is Steve Bracks but the two states that suffer as a result of it are Queensland and Western Australia," he said. "All I've asked for is time, I believe in the long run we will comply with any Kyoto agreements."

## **66) WE'RE BETTER OFF IN KYOTO: CARR**

News.au.com

February 17, 2003

Internet: [http://www.news.com.au/common/story\\_page/0,4057,5996624%255E1702,00.html](http://www.news.com.au/common/story_page/0,4057,5996624%255E1702,00.html)

AUSTRALIA should split from the United States on greenhouse gas policy and become an environmental superpower, NSW Premier Bob Carr said today. Mr Carr released a report showing Australia would be economically better off ratifying the Kyoto Protocol rather than trying to reduce greenhouse gas emissions outside the treaty. The report, prepared by the Kyoto Ratification Advisory Group which Mr Carr established, found Australia could lose important investment in new clean, green technologies if it remained outside the treaty framework. It said Australia's GDP would be around 0.26 per cent or around \$2 billion a year worse off outside the Kyoto Protocol, compared with 0.11 per cent or \$875 million worse off if Australia ratified the agreement and met its targets. Companies investing in countries which have ratified the global agreement to reduce greenhouse gas emissions would receive credits in exchange for investing in carbon absorbing initiatives like plantations, Mr Carr said.

## **EDITORIALS**

### **67) SELLING SMOKE**

Time

March 10, 2003

Internet: <http://www.time.com/time/insidebiz/article/0,9171,1101030310-428067-1,00.html>

When Dawn Schrepel, an environmental and energy consultant in Washington, wanted to thank her 10 interns for a job well done, she bought each of them an unusual gift - a ton of carbon dioxide. "They were pretty surprised," she says, laughing. "And it took a little explanation." Schrepel, 33, bought the carbon dioxide not in giant tanks but on paper, through Natsource, an energy brokerage based in New York City. Natsource trades not only standard commodities like coal and natural gas but also a new currency known as greenhouse-gas credits. These credits represent, in effect, the right to emit a certain amount of carbon dioxide, methane or other gases thought to contribute to global warming. Such credits trade in earnest in nations like Britain and Denmark, which have capped emissions from such sources as factories and power plants. And the credits are trading on an experimental basis in the U.S., as industries anticipate the eventual imposition of similar emission limits here.

Natsource arranged for Schrepel to pay a retail price of \$17 a ton for carbon dioxide that is part of the natural chemistry of a 1,200-acre patch of Illinois grassland in a nature preserve. In return for part of that payment, the land's owner agreed not to burn, pave over or otherwise release that carbon dioxide. Schrepel wryly explained to her interns that buying the credits would help offset the carbon dioxide they emitted by, among other things, breathing. Schrepel's gift is but a tiny part of a global greenhouse-gas trading industry that is growing rapidly. Between 1996 and 2002, about \$500 million worth of carbon dioxide was traded among companies in the U.S. and Europe. The World Bank's Prototype Carbon Fund, which helps countries preserve forest and reduce CO2 emissions, says the number of greenhouse-gas trades and the volume of gas affected will double this year. Experts predict that the right to emit a ton of carbon dioxide, which costs between \$3.50 and \$6 if purchased in bulk today, will cost between \$7 and \$12 by 2005. That would make the global market for greenhouse-gas credits worth well over \$3 billion a year.

Two events drive this growth: the expectation that the Kyoto Protocol on Climate Change will go into effect this year and require many countries to reduce carbon dioxide emissions by 2008, and the emergence of government-backed emissions-trading schemes in Britain and Denmark. Despite President George W.

Bush's assertion two years ago that Kyoto would wither, 2003 looks to be the year the treaty will come to life. Canada ratified it in December, and if Russia joins this year, as its President has promised, the treaty will have enough support to go into effect. It would not bind the U.S., but it could induce U.S. multinationals to reduce emissions by their plants in signatory countries. Even in the U.S., there is a growing consensus that greenhouse-gas reductions are inevitable. In January, Senators John McCain of Arizona and Joseph Lieberman of Connecticut introduced legislation that would cap emissions and allow rights trading. Thirteen U.S. companies, including American Electrical Power, Dupont and Ford, have joined the new Chicago Climate Exchange. Members volunteer to reduce carbon dioxide emissions in a system that lets them practice trading greenhouse-gas credits while trying to deflect regulation and public criticism.

Jack Cogen, president of Natsource, couldn't be happier about this trend. Besides trading in energy and emissions credits, Natsource consults with firms that are weighing the idea of operating cleaner. Greenhouse-gas trading and consulting provide only 10% of Natsource's revenue, but the company expects that share to rise to 50% by 2007. "It's a fascinating business opportunity. Can you use market forces to effect environmental and societal goals?" asks Cogen, 46. "Can you put a cost on what was a free resource?" Cogen thinks you can, and he's not alone. In 1990 the Clean Air Act capped emissions of sulfur dioxide, a major contributor to acid rain, and ordered that they be gradually reduced. The government issued "allowances" to companies and let them trade polluting rights on the open market. A power company that cut its emissions at relatively low cost could sell its leftover emission rights to another utility facing higher costs for pollution control.

Robert Stavins, an economist at Harvard's Kennedy School of Government, estimates that this cap-and-trade system, vs. a system of rigid caps on each firm's emissions, saves U.S. companies about \$1 billion a year in compliance expenses. "It's the most cost-effective way to reduce emissions," he says, "and companies have an incentive to cut pollution so they can sell credits." The Environmental Protection Agency estimates that sulfur dioxide emissions have been halved since 1990 and that Americans save \$50 billion a year in health and environmental costs associated with acid rain.

Expecting that international support for Kyoto will grow despite U.S. government opposition, companies around the world - including U.S.-based multinationals - want to be prepared. Cogen says today's nascent trading of CO<sub>2</sub> credits forces executives to "sit in a room and figure out how to manage, market, verify and account for their emissions. We call it learning by doing." Some U.S. companies are not just experimenting; they are buying carbon dioxide credits today, at relatively low prices, as insurance against future regulations. World wholesale prices of carbon dioxide credits have jumped more than 600% since 1996, but prices differ from country to country. Kyoto allows credit trading only among signatory countries, and when it became clear in 2001 that the U.S. would not adopt Kyoto in the first round, the price of U.S. credits fell.

Michael Intrator, a managing director at Natsource, believes that the U.S. should have led the way. "America had a massive information advantage," he says. "We understood how cap-and-trade worked because we traded sulfur dioxide. Now we are left in a sea of uncertainty because we didn't ratify Kyoto. The overarching belief is that sometime we will. But by then, we might be at a competitive disadvantage." Melissa Carey, a climate-change analyst at the Environmental Defense Fund, says that despite all the greenhouse-gas trading under way, it won't reduce emissions until Kyoto takes effect. "Sulfur dioxide was successful," she says, "because there are huge penalties for failing to comply." One Kyoto provision lets industrialized countries fund carbon-reduction projects in developing countries that do not have emission caps. For example, a U.S. utility may find that cutting its emissions is more expensive than planting a carbon-trapping forest in Bolivia. But until Kyoto is ratified, there won't be any independent verification that the forest has been planted.

Another obstacle to wider trading of emissions is nature. Forests burn down. Hurricanes wash away fields. Then there are governments that ignore international agreements and change environmental policies in ways that can radically affect the value of existing emissions credits. Until financial instruments are developed to ensure credits against the ravages of politics and nature, trading greenhouse gases will be a risky business. But the traders at Natsource are betting that multinational firms are also learning about the risks of doing nothing in the face of regulations that they know are coming, sooner or later.

## **68) THE GROWING RELIGIOUS MISSION TO PROTECT GOD'S CREATION by Jim Motavalli**

ENN

March 7, 2003

Internet: [http://www.enn.com/news/2003-03-07/s\\_2770.asp](http://www.enn.com/news/2003-03-07/s_2770.asp)

*Jim Motavalli is editor of E/The Environmental Magazine*

### **STEWARDS OF THE EARTH**

Sally Bingham, the environmental minister at Grace Cathedral in San Francisco, cites the second chapter of Genesis as a motivation for her work: "God put Adam in the Garden to till it and to keep it. We haven't done a very good job of that. Christians are commanded to love their neighbors, and you can't do that by polluting their air and their water." Rev. Bingham isn't just talking. She formed a group aimed at persuading California's 50,000 congregations to buy green power, and when the state's energy crisis ended that option, she switched to convincing them to become more energy-conscious. Bingham, who was briefly jailed in Washington in a nonviolent protest against proposed oil drilling in the Alaska National Wildlife Refuge, now operates California Interfaith Power and Light, which has Jewish and Muslim congregations in its fold. Congregations are being asked to sign "covenants" committing them to improving the energy efficiency of their buildings, to creating global warming education campaigns, and to using renewable energy when possible. There are now solar panels on the roofs of Gloria Dei Lutheran Church in Sacramento and Congregation Shir Hadash in Los Gatos, for instance.

With volunteers like Oakland Mayor Jerry Brown, Bingham and her volunteers have replaced church lights with compact fluorescents and made many other energy-saving changes at more than 150 member parishes. Massachusetts has followed California's lead with the formation of the Massachusetts Interfaith Energy Conservation Group. Churches are clearly going beyond green rhetoric, and one powerful convincer is climate change. The religious community is part of a growing movement against global warming that, against a vacuum of leadership from the federal government, is building from the bottom up. As the Grist online magazine put it, "In dorm rooms and board rooms, in city halls and houses of worship - all across the country - a grassroots network of activists is implementing the best maxim the environmental movement ever coined: They are thinking about global climate change, and combating it locally." Meeting in Oxford, England last July, a landmark gathering of environmental scientists, theologians, and policymakers issued a declaration stating very firmly that global warming is real and that it is the duty of committed Christians to do something about it.

"By reducing the Earth's biological diversity," their statement said, "human-induced climate change diminishes God's creation.... The call to 'love the Lord Your God and love your neighbor' (Matthew 22:37-39) takes on new implications in the face of present and projected climate change." "This was an important breakthrough," said Climate Forum 2002 participant Rev. James Ball, the American Baptist minister who heads the Evangelical Environmental Network. "The meeting brought together senior climate scientists and Christian leaders, and it really helped us understand this crucial issue." It helped that many of the participating scientists were themselves evangelical Christians, including co-convenor Sir John Houghton of the John Ray Initiative, a former science advisor to Margaret Thatcher and co-chair of the United Nations climate change panel's Scientific Assessment Working Group. Houghton's impressive credentials include work as editor of both the first and second Assessment Reports of the Inter-governmental Panel on Climate Change, which laid the foundation for the Kyoto Protocol.

Among the declaration's signers was Reverend Richard Cizik, vice president of the National Association of Evangelicals, an influential body that represents between 25 million and 40 million churchgoers. "I was persuaded enough by the evidence to sign the document," Reverend Cizik said. "Many evangelicals have been led to believe that the challenge of global warming is simply fiction, but I don't see how they could take a look at the evidence of these scientists-many of whom are also Christians-and not be convinced. The church community is challenged to examine the evidence for global warmin, and to respond to the fact of it."

For many environmentalists, the phrase "evangelical Christian" is likely to conjure an implacable enemy who supports Jerry Falwell, the Christian Coalition, and the polluters' lobby in Congress. But in fact, there is a wide spectrum of opinion among Christians - and a growing activism for the environment.

Rev. Jim Ball, for instance, is an American Baptist minister and also executive director of the Evangelical Environmental Network. "Our purpose as an organization is to help evangelical Christians understand what the Bible says about caring for all creation," said Ball, another Oxford signatory. When conservative evangelical Christians join wide-ranging coalitions calling for action on global warming and Episcopal priests plug in to green energy, the battle lines are clearly being redrawn in what has long been recognized as a Manichean struggle for the political hearts and minds of the world's believers. Faith-based environmental activism is soaring, and with it comes new criticism that the activists are straying from church doctrine. Many of the arguments hinge on a seemingly simple point of doctrine: Did God give human beings "dominion" over the Earth, to control as we see fit, or did He give us "stewardship" of his creation as a sacred trust?

## **ENVIRONMENTAL EQUITY**

It is possible to date the resurgence of faith-based environmentalism to 1993, when the National Religious Partnership for the Environment (NRPE) was founded by a former radio talk show host and spokesman for the Episcopal Cathedral of St. John the Divine named Paul Gorman. NRPE quickly proved its effectiveness by joining together such disparate and mainstream bodies as the U.S. Catholic Conference, the National Council of Churches of Christ, the Coalition on Environment and Jewish Life, and the Evangelical Environmental Network and helping educate their vast congregations. With dynamic leadership like that, church leaders are moving environmental concerns to the heart of their ministry and calling on their congregants to take increasingly radical action. "A child born in a wealthy country is likely to consume, waste, and pollute more in his lifetime than 50 children born in developing nations," said the Archbishop of Canterbury in a New Year's address on the eve of 2001. "In fact, our energy-burning lifestyles are pushing our planet to the point of no return. It may not be time to build an ark like Noah, but it is high time to take better care of God's creation. Indeed, in my view this is a challenge humanity must not ignore."

In 1997, the Patriarchate of the Greek Orthodox Church, His Holiness Bartholomew I, used strong language against polluters: "To commit a crime against the natural world is a sin," he said. "For humans to cause species to become extinct and to destroy the biological diversity of God's creation ... for humans to degrade the integrity of [the] Earth by causing changes in its climate, stripping the Earth of its natural forests or destroying its wetlands ... for humans to contaminate the Earth's waters, its land, its air, and its life with poisonous substances, these are sins," he said. In a speech before the Scenic Hudson environmental group in 2000, he added another element: a ringing declaration against over-consumption, "which leads to exploiting and lording it over nature." In a 1990 Word Day of Peace message, Pope John Paul II emphasized that Christian responsibility toward nature is an essential part of one's faith.

Statements like these are heartening and common across many denominations, but it's the concrete actions and growing faith-based activism that represents an important change. "It's one thing to have theological arguments, but the average member of a congregation needs to be able to connect those with their own lives and actions," said Rebecca Gould, Professor of Religion and Environmental Studies at Middlebury College in Vermont. "Environmental issues are a reminder that there is a connection." According to Gould, congregations are beginning to step forward and say, "Our house of worship should reflect our beliefs for creation." The resulting determination has rippled across faiths, creating unlikely coalitions. A pioneering example is the National Religious Partnership for the Environment (NRPE), composed of four groups: the U.S. Catholic Conference (the policy agencies for all Catholic bishops, clergy, and parishes); the National Council of Churches of Christ (a federation of Protestant, Eastern Orthodox, and African-American denominations); the Evangelical Environmental Network (a coalition of evangelical Christian agencies and institutions); and the Coalition on Environment and Jewish Life (COEJL, an alliance across all four Jewish movements). Its priority: to "weave the mission of care for God's creation across all areas of organized religion."

Since 1993, the NRPE has striven to do so by incorporating environmental activities into programs already established to address social issues. Habitat for Humanity, a Christian housing organization, began identifying chemical threats in construction and promoting environmentally friendly materials. The United Jewish Appeal underwrote curriculum for outdoor Jewish environmental education. The Association of Evangelical Relief and Development agencies prepared field staff to become environmental advocates, as well as hunger workers, in the 40 countries in which they are placed. Congregation-based projects were soon born as well: Jesus People Against Pollution in Columbia, Miss., has surveyed 20,000 citizens affected by chemical dioxins, built up a coalition of community organizations, and forced Superfund clean-ups. The Sisters of the Immaculate Heart in Detroit, Mich., have turned a former crack cocaine house into a community garden and cleared 120 lots for planting trees and flowers. The Hamburg Presbyterian Church in upstate New York adopted the nearby Eighteen Mile Creek, monitored pH levels, and won it state designation as a protected habitat.

## **ENVIRONMENTAL JUSTICE**

Since this kind of pollution concentrates in poor neighborhoods, many churches see the struggle for environmental justice as ideally combining the twin missions of concern for the world's disadvantaged with concern for the Earth itself. Incorporating environmental justice into social programs is a natural step for many churches, and it has been the sole purpose of The United States Catholic Conference's Environmental Justice Program. Regional grants awarded by the program have helped raise awareness about the environmental impact to the Chesapeake Bay from Maryland's poultry industry and clean up the Clinton River Watershed in Michigan. Other grants have organized parishes to develop reuse plans for abandoned brownfields, educated communities about the health problems of toxic emissions, and trained teachers in land stewardship and ethics.

The Church's involvement has become more pronounced in the last 10 or 15 years, said Walt Grazer, director of the program. "One of the charges made is that 'you guys finally showed up,' and that's not unusual," he said. "The Catholic Church has been around for 2,000 years; we don't rush into things." Some 20,000 resource kits have been distributed to every parish in the United States, offering tips on how to integrate environmental justice into ongoing parish ministries. Target Earth, a national Christian group, has activities in 15 countries, including field stations for research, service projects to accommodate hands-on involvement, and conservation programs to preserve land and culture. Particularly active on college campuses, Target Earth training programs have taught students to lobby issues such as the Endangered Species Act and reform of the 1872 Mining Law. Alternative spring break programs have sent them to build container gardens for the elderly and engage elementary students in community clean-ups.

Other examples include the Catholic Coalition for Children and a Safe Environment - created by several major Catholic religious, health care, social service, and policy organizations - which advocates on the behalf of children exposed disproportionately to environmental hazards. Pat Waak's guide Faith, Justice, and a Healthy World has been widely used to train clergy and religious laypersons alike on the subject of population and the environment. It is to be expanded in its eighth printing to include exercises, sample sermons, and activities for faith communities. Environmental Ministries in Southern California, which has "Mission to Planet Earth" task forces within its congregations, and has worked to prevent Native American land in the Mojave Desert from becoming a nuclear dumpsite.

## **CORPORATE RESPONSIBILITY**

Faith communities have not shied away from the corporate arena either, where shareholder activism has been a particularly effective tool, said Tim Smith, director of Socially Responsive Investment for Walden Asset Management and former executive director for the Interfaith Center on Corporate Responsibility (ICCR). Religious bodies have evolved from using their investments to speak out against Southern Appalachian strip mining to tackling issues as broad as climate change, genetically engineered foods, and greater disclosure of environmental impacts. A proxy resolution sponsored by religious organizations was a powerful persuader in General Motors' move to endorse the CERES principles, a blueprint for sustainable

business practices, and in the withdrawal of several corporations, including Ford and Sun Oil, from the Global Climate Coalition, an industry group that tried to debunk global warming.

A coalition including the General Board of Pension & Health Benefits of The United Methodist Church called upon Sony's American division this past November to accept standards proposed by the European Union for recycling obsolete computers and ending their use of toxic heavy metal components. The range of faith-affiliated groups finding power in this approach is wide. They include churches, such as Episcopalians, Presbyterians and United Methodists; health care systems, such as Catholic Health Care West; money managers, such as Christian Brothers Investment Services; and Catholic charities, such as Adrian Dominican Sisters and the Sisters of Charity. ICCR alone claims 275 religious groups, representing \$100 billion in portfolio money, as national members.

## **JOINING FORCES**

More cut-and-dried environmental groups see the power in such an approach as well and, increasingly, are seeing the power in joining with religious bodies to more effectively accomplish like goals. "There is a growing partnership, cooperation, and synergy between the religious community and environmental groups," said Smith. Environmental nonprofit Friends of the Earth, for instance, works in close partnership with the religious community through its Green Investments program to increase corporate disclosure. Ozone Action, now folded into Greenpeace, has been the official resource group for faith groups in shareholder actions that pertain to global warming. "One often gets a sense of extremism with media portrayal of environmental organizations," said Mark Regier of MMA Financial Services, the financial services arm of the Mennonite Church, which manages \$1.2 billion in assets. "Religious organizations can find common ground in a way a little more possible than if Exxon and Greenpeace were to sit together at the table. Faith organizations understand the values and concerns that environmental groups share but are also familiar with the demands on companies to perform and how they can respond. They can play a bridging role to open new and creative channels otherwise not possible between two groups so opposed."

That role, when bridging between environmental groups and government, also "adds a degree of power for effective public policy change," said Bill Meadows, president of The Wilderness Society. The Society has a strong relationship with the Episcopal Diocese in Alaska, which has resolved that the Arctic National Wildlife Refuge is important to protect for reasons other than for oil or economic interest. The Society provides the Diocese with information about public policy and access to staff economists and ecologists and leaves dialogue with leaders in Washington, D.C., to the diocese constituency who live in their districts and states. It's not that big of a stretch, added Meadows. "It's not as if a person is singularly an environmentalist, a conservationist, or a religious practitioner," he said. "We have many aspects to our lives. People who hold religious values are often very strong conservationists, and the reverse is true as well. But the move from values to action is really important, and church is very, very effective in making that happen."

## **ACTIVE FOR ISLAM**

Especially in light of the terrorist attacks of Sept. 11, 2001, it's important to point out the deep ecological teachings inherent in Islam, and the very real on-the-ground projects that are manifest from those teachings. Although high-impact environmental projects are still not widespread in Islamic societies, some efforts have taken root. The Sultan of Oman, for instance, has worked with the World Wildlife Fund on a project called Operation Oryx, which has successfully reintroduced the native oryx (an antelope that had disappeared from the wild in the 1970s) to that desert land. And in Saudi Arabia, King Fahd established the National Commission for Wildlife Conservation and Development, which by 1999 had set up research centers to breed endangered species (including the oryx, ibex [another antelope], ostrich, and bustard), created a network of nature reserves covering 4 percent of the kingdom, and initiated a nationwide public education campaign. "Allah entrusted man with the guardianship of the Earth," said the Islamic Foundation for Ecology and Environmental Sciences, founded in the mid-1980s. "We have to fulfill that ancient trust now, before it becomes too late."

The foundation has set up an extensive training program in environmental teachings based on the Qur'an. It promotes self-sufficiency in farming through organic agriculture and permaculture and serves as a demonstration center for solar technology, water wheels, waste recycling, and wind power. The foundation distributes a slide-based teaching pack titled "Qur'an Creation and Conservation" and is setting up the Muslim Alliance for Conservation as an international grassroots organization. Dr. Richard Foltz, an Islamicist who teaches in the religion department at the University of Florida, says the strongest environmental activism in the Muslim world occurs in Iran, which also has the only explicitly Islamic government in the world. Although the mullahs are not themselves sponsors of green initiatives, the revolutionary constitution adapted in 1979 asserts that protection of the natural environment is "a public obligation," and that therefore "all activities, economic or otherwise, which may cause irreversible damage to the environment are forbidden."

Despite the strong words, however, Teheran, Iran's capitol city, has some of the worst air pollution in the world, killing an estimated 7,500 people a year from related illnesses. The country also faces both water and population crises. These problems have been a spur to the launching of some 149 nongovernmental environmental groups in Iran. Among the most active is the Green Front of Iran, established by four medical students in 1989. In 2001, for example, the Green Front held a Clean Mountain Day that educated people about protecting the Alborz Mountains northwest of Tehran. In 1999, it organized hundreds of volunteers in a cleanup of the Caspian Sea coast. "This is a symbolic action to raise consciousness about environmental issues," said Siamak Moattari, who heads the Green Front. Although many Muslim countries campaign against women's reproductive rights, the Islamic government of Iran has one of the most extensive birth control programs in the world. Family planning courses are mandatory for couples about to be married, and birth control devices are free and widely available.

Contraceptive use rose from 37 percent of married women in 1976 to 73 percent in 1997. As a result, both population growth and women's fertility rates has been drastically reduced. According to the Population Reference Bureau, an annual growth rate of 3.9 percent in 1976 has been slashed to 1.2 percent today. Fertility dropped from 5.6 live births per female in 1986 to two - or even replacement level - today. "Iran is a very interesting test case that shatters all the stereotypes about Islam and the environment," said Foltz. Unfortunately, while Iran is a role model for much of the Islamic world, it has found few adherents on the environment. In most Islamic countries, population control is a taboo subject, and rigid centralized control stifles nongovernmental activity, including grassroots environmentalism. Women's rights and, by most measures, freedom, are the lowest in the world in Arab societies, according to the United Nations' Arab Human Development Report 2002

## **THE BUDDHIST WAY**

There is a strong tradition of nonviolent respect for nature in Buddhism as well. As Nick Wallis of the Friends of the Western Buddhist Order explained, "All the most significant events [of Buddha's life] occur in the countryside and are associated with trees." Buddha was born as his mother grasped the branch of a sal tree and achieved Enlightenment beneath the Bodhi tree. "As a body studying Buddhism, I was taught the importance of a caring attitude toward the environment," writes His Holiness the Dalai Lama. "Our practice of nonviolence applies not just to human beings but to all sentient beings or any living thing." In practice, environmentalists face an uphill battle being heard in societies that are authoritarian and rapidly industrializing, but religious faith has manifest itself in courageous ways.

Some 700 Thai monks and nuns are united in Sekiya Dhamma, a network that has fought logging and other environmental exploitation and increasingly takes on governmental development policies. One such monk is Pha Pachak, who in order to protect forests from loggers, wrapped saffron monk's cloth around imperiled trees and blessed them. The tactic worked, for killing an ordained being is a dangerous undertaking for people of Buddhist faith. But Pha Pachak was persecuted for his obstruction of the powerful lumber industry, beaten, and thrown in jail. Pachak's work is carried on: in 1999, a International Solidarity Walk through Thailand ended with an Interfaith Tree Ordination. The monk Buddhadasa Bikkhu, who died in 1993, was a kindred spirit; he was very politically active and a strong environmentalist. "The greedy and selfish are destroying nature," he declared. Also in Thailand, writer and activist Sulak Sivaraksa has helped

form a number of groups, including the International Network of Engaged Buddhists. Like Pha Pachak, he has been arrested for his work. "Not only our traditional culture, but our natural environment, too, is in crisis," he said.

## **HINDUISM**

Although Hinduism expresses a reverence for nature, imbuing even the rivers, forests, and mountains with divine significance, India today is in its worst environmental crisis, facing 2.5 million premature deaths annually from air pollution alone. As Hinduism Today points out, "Most economic advancement during the last half century has come at severe environmental cost: falling water tables, soil loss, air and water pollution, forest degradation, overgrazing, loss of species, and unmanageable municipal waste."

"Hindu religious leaders can always help in protecting the environment," said Dr. P.R. Trivedy, chairman of the Indian Institute of Ecology and Environment. "In the Vedas and other religious books there are detailed discussions and descriptions on nature and how to protect it. There is an urgent need to have a competent cadre of Hindu leaders educated and trained in religion, culture, and the environment. Let there be trained saints having an eco-mind."

Dr. Suman Sahai, who campaigns for farmers' rights, points out that the 5,000-year-old Hindu tradition respects all forms of life, "Religious leaders can do wonders, but we are forgetting our traditions and have done nothing so far," she said. Perhaps "nothing" is a little strong. Through the work of the Institute of Himalyan Environment and Development, Hindu pilgrims to mountain provinces ravaged by clear-cutting have been convinced to plant trees in God's name - with dramatically successful results. "I tell them to plant trees throughout India for the sake of peace and well-being for all," said an orange-robed sadhu who runs a rest house for pilgrims in the Himalayas. One such sadhu, or holy man, 80-year-old Swami Vankhandi, personally replanted 15 acres of deforested land and fought off loggers. India's wealthiest Hindu temple, Tirumala Tirupati in Andhra Pradesh, has organized the planting of several million trees across the country. One of India's foremost environmentalists, Dr. Vandana Shiva, predicts that the country will be in severe food and water crisis by 2020. But she also points to some points of light in the form of faith-based activism. "I know several Hindu religious leaders active in the environmental movement," Shiva said. "Swami Chidanand of Hardiwar blessed the struggle against Tehri Dam [in the hills of Uttar Pradesh, the dam will submerge 100 villages and destroy the Ganga River] and the Chipko movement [Indian "tree huggers" who have stopped loggers dead in their tracks]." Vashudha Narayanan, in an eloquent essay titled "One Tree is Equal to 10 Sons: Hindu Responses to the Problems of Ecology, Population, and Consumption," summed up the reformists' message: "It is we who belong to the Earth," she wrote, "and by wrongly usurping what is not ours and what should be shared with the future generations of human beings, we are indulging in adharmic, or unrighteous behavior."

## **JEWISH REVERENCE FOR LIFE**

"The Talmudic sages express great concern about preserving the environment and preventing pollution," writes Richard Schwartz in his book *Judaism and Global Survival*. "It is forbidden," he quotes, "to live in a town which has not garden or greenery." And he quotes an ancient Jewish story, in which two men who are quarreling over ownership of a piece of land go to see their rabbi, who puts his ear to the ground and proclaims, "Let us ask the land." As the rabbi straightens up, he announces, "Gentlemen, the land says it belongs to neither of you, but that you belong to it." Trees are the focus during the Hebrew month of Shevat. In what has become something of a Jewish Earth Day, congregations plant trees and pursue agricultural projects on Tu B'Shevat, the 15th day of the month. On that day, observant Jews believe, God decides how bountiful the fruit trees will be in the next year.

Rabbi Arthur Waskow, who founded and runs the Philadelphia-based Shalom Center, reminds observant Jews of such traditions in books such as *Trees, Earth, and Torah* and *Torah of the Earth: Exploring 4,000 Years of Ecology in Jewish Thought*. "Our work is deeply rooted in Jewish spiritual tradition," Rabbi Waskow said. "We are reviving ancient harvest festivals, helping to integrate concern for the Earth into the fabric of Jewish life. But instead of simply asking God to protect us from famine and locusts, we are asking to be saved from General Electric's pollution of the Hudson River with PCBs." The Shalom Center is on the

front lines. "Focusing on the Jewish heritage of protecting trees," Rabbi Waskow said, "we joined with such groups as the Redwood Rabbis and brought people to Maxaam shareholders' meetings to protest against the planned logging of ancient redwood trees. We held a 'plant-in' on company land and were nearly arrested." The Redwood Rabbis were also a sponsor of the National Forest Protection and Restoration Act to protect all national forests from any form of commercial logging, a piece of legislation spearheaded by Christians Caring for Creation and by the Religious Campaign for Forest Conservation (RCFC).

The Coalition on the Environment and Jewish Life (COEJL), headquartered in New York, has 26 member organizations. When it was formed in 1993, it issued an eloquent statement. "Our agenda is already overflowing," it said. "Israel's safety, the resettlement of Soviet Jewry, anti-Semitism, the welfare of our people in many nations, the continuing problems of poverty, unemployment, hunger, health care, and education as well as assimilation and intermarriage - all these and more have engaged us and must engage us still. But the ecological crisis hovers over all Jewish concerns, for the threat is global, advancing, and ultimately jeopardizes ecological balance and the quality of life." Energy security, and global warming are primary COEJL concerns, and members conduct letter-writing campaigns and other actions. COEJL Chair Sharon Bloome blasts efforts to drill for oil in the Alaska National Wilderness Refuge and specifically refutes attempts to link that issue with Israel's future security. "The road to energy independence does not go through the Arctic wilderness," she said. "We do not need to drill in ANWR to maintain our capacity to ensure Israel's oil supply. Israel's oil use is less than 2 percent that of the United States."

Mark Jacobs, executive director of COEJL, says that, like the Shalom Center, the group is very involved in forest protection. "The roadless forest initiative represents an extraordinary opportunity for us to fulfill our obligation as tenants in God's world," he said, "preventing destruction of the last remaining wild forests and creating a legacy of fully protected forest ecosystems." Another Jewish activist, Rabbi Fred Scherlinder Dobb of the Adat Shalom Reconstructionist Congregation in Maryland, is a co-chair of the Massachusetts-based Religious Witness for the Earth (RWE). "To me, religion and ecology just go together," he said. "Religion points to our relations with each other and with creation; ecology reminds us that everything is one and opens doors of mystery and spiritual power." He added, "The prophets weren't always popular, but speaking truth to power, their calls to justice became the enduring voices of their generation." RWE concentrates on the New England states, where it hopes to duplicate some of the work of California Interfaith Power and Light. "The New England governors have committed themselves to a platform of sustainability," Rabbi Dobb said. "To hold them to it and to enable those states to further the progress we've recently seen in California will take continued pressure from people of faith."

RWE has circulated calls for religious witness against the Arctic National Wildlife Refuge signed by more than 170 clergy; organized a prayer witness outside the U.S. Department of Energy that was followed by a nonviolent protest that resulted in 22 arrests (10 of them clergy members), and held events in each New England state capital. The increasing momentum on domestic environmental issues is unfortunately not mirrored in the Middle East. Tragically, one casualty of the intifada in Israel and the West Bank has been environmental partnerships between Jews and Muslims. For instance, a mutual project on air pollution managed by Professor Menachem Luria of Hebrew University and Dr. Jad Isaac of the Research Institute of Jerusalem (ARIJ) in Bethlehem received Palestinian cooperation, but the joint effort ceased after the conflict began. Nevertheless, there is a strong tradition of interfaith work on issues ranging from water distribution and pollution

## **A GALVANIZING ISSUE**

The Oxford Declaration on global warming, supported by mainstream evangelical Christians, was not a shot in the dark or an isolated incident. An unstable climate is perceived as a threat to all of creation, and there is growing awareness in the religious community that not only has the science become irrefutable but the effects are already causing extensive damage to the Earth. "The involvement of the religious community is growing quickly - and it is essential," said climate journalist Ross Gelbspan, author of the influential book *The Heat is On*. "When I talk about the climate crisis to policymakers, I cast it in terms of bottom-line thinking because that's their vocabulary. But at root, climate change is not an economic issue; it's a moral

and ethical one. To continue to ignore it means putting at risk billions of poor people who are immediately vulnerable to climate impacts."

He continued, "That's why it is so heartening to see the Oxford Declaration as well as recent initiatives by the World Council of Churches, the Eastern Orthodox Church, Interfaith Power and Light, Jewish congregations around the country, the Interfaith Center for Corporate Responsibility, and numerous other faith-based groups. They're demanding that all of us - as human beings - address the fundamental moral imperative of the climate crisis." In 1997, the Christian Environmental Council did just that by passing a resolution calling upon the United States to reduce its emissions of greenhouse gases 10 percent by 2010; two years later, it passed another resolution calling for government and business leaders to implement the type of clean-energy policy that would allow this to happen. In 2001, the U.S. Catholic Bishops said in an unequivocal statement: "While some uncertainty remains, most experts agree that something significant is happening to the atmosphere. Human behavior and activity are, according to the most recent findings of the international scientific bodies charged with assessing climate change, contributing to a warming of the Earth's climate.... Consequently, it seems prudent not only to continue to research and monitor this phenomenon but to take steps now to mitigate possible negative effects in the future."

That same year, Congregational minister Dan Smith took to his pulpit in Lexington, Mass., and asked the memorable question: "What Would Jesus Drive?" Such questions are rooted in evangelical tradition, where "What Would Jesus Do?" is a common query. With help from the environmental writer Bill McKibben, Smith crafted a campaign that included demonstrations at local sport-utility vehicle dealerships. "I was motivated to bring my faith to bear, not on the crisis I perceived in the environment per se, but in God's creation," Smith told his congregants. In an interview, he added, "I wanted to say something about global warming, but our church parking lot is usually half full of SUVs. For me to be involved in an activist rally surprised some people, but I have to say that the congregation has been supportive." The Evangelical Environmental Network hopes to launch "What Would Jesus Drive?" as a national campaign. The Jewish Council for Public Affairs (representing 13 national and 122 local Jewish public affairs organizations) adopted a resolution advocating that Congress move toward a clean and sustainable energy system that will diminish reliance on imported oil and reduce greenhouse gas emissions. COEJL director Mark Jacobs testified before Congress in support of increasing vehicle fuel economy standards. Interfaith global climate change campaigns have formed in 18 states, educating congregations and organizing visits with their elected officials. The National Council of Churches (NCC), working with COEJL, created the Interfaith Climate Change Network, which describes global warming as "a matter of justice ... for future generations who will inherit an unstable climate." Bob Edgar, the Methodist minister and former Congressman who is NCC's general secretary, is proud of the group's role in helping reduce carbon dioxide emissions. "We've led efforts on climate change and educating people about energy efficiency," he said. And we've helped them understand that the depletion of ozone layer is not a good thing."

## **VOICES OF DISSENT**

If religious campaigns for the environment were ineffective, they probably wouldn't generate much opposition. But, perhaps sensing a gathering consensus, some groups have been critical, particularly the Michigan-based Acton Institute for the Study of Religion and Liberty, headed and co-founded by a Catholic priest, Father Robert A. Sirico. Father Sirico, a frequent visitor to the Vatican, denounces "this ongoing alliance between the radical environmental movement and the faith community" as "tragically unreflective." In an e-mail response to E questions, he invoked the pastoral division between God's mission for humankind: stewardship or dominion. "In the first chapter of Genesis," he wrote, "man is given dominion over the Earth. This clearly specifies that man - not the birds or cows - is responsible for the world and enjoys a large degree of prudential discretion in how he uses his authority over the nonhuman elements and creatures of the world."

Father Sirico strikes out at what he calls "the New-Ageist neo-paganism in which people ascribe divine status to animals and plants," though most of the religious activism has been coming from mainstream denominations. The Acton Institute was inflamed by a television advertisement jointly sponsored by the Sierra Club and the NCC that attacked President Bush's proposal to drill for oil in the Arctic National

Wildlife Refuge as incompatible with "caring for creation." It was further incensed when the Wall Street Journal quoted Sierra Club President Carl Pope as saying the relationship with the churches gives him new clout on Capitol Hill. According to Father Sirico's associate, Phillip DeVous, "That kind of activist campaign serves the interests of the Sierra Club more than it does the interests of Christianity. The nuanced church message is lumped in with the green political agenda. The National Council of Churches is doing a disservice to the Christian believers who hold orthodox viewpoints. There's a disconnect between the leadership and the people in the pews."

By being out front on a number of issues, NCC has become a lightning rod of criticism for conservative theologians. "The NCC is in the pocket of a lot of those environmental groups," said Michael Cromartie, vice president of the Washington-based Ethics and Public Policy Center. Because he signed the Oxford declaration on global warming, Rev. Richard Cizik of the National Association of Evangelicals worries that "friends at the Heritage Foundation and on the political right" will now think him a candidate for NCC membership. But Rev. Cizik isn't going that far. "The NAE is the conservative alternative to the National Council of Churches," he said. "We represent mainline Christianity today, which the NCC does not." Bob Edgar of NCC says NCC earned its scarlet letter from conservatives 50 years ago, when it translated the Bible from the original Hebrew and Greek and helped to foster the idea of stewardship, rather than dominion over the Earth. "We were also part of the civil rights movement, working with Martin Luther King and loaning a young man named Andrew Young to his organization, so that was a factor in our liberal reputation," Edgar said. "We don't agree with the Sierra Club on everything, but on some issues we have like-mindedness."

The conservative theologians formed their own coalition, the Interfaith Council for Environmental Stewardship (now dormant, it spoke out against "a romantic view of nature"), and they have written their own declarations about God's plan for humanity. In 1999, 25 of them got together in West Cornwall, Conn., and drew up what's known as the Cornwall Declaration. This document praises human advances in human health, nutrition, and life expectancy and says that economic progress shouldn't be traded for environmental goals. "Many people mistakenly view humans as principally consumers and polluters rather than producers and stewards," the Declaration states. "Consequently, they ignore our potential, as bearers of God's image, to add to the Earth's abundance." Paul Gorman of the National Religious Partnership says that, despite the rhetoric, it's not accurate to see the current struggle as one between stewardship and dominion. The evidence of humankind's dominion is all around us, in our warming atmosphere, in our polluted seas, and in our deforested plains. An increasing number of the faithful see that evidence, too, and that - rather than an excess of romanticism or mistaken neo-pagan beliefs - is what's turning believers all over the world into activists for the Earth.

## **INTEREST ALL AROUND**

The ability of religion to advance the environmental cause has not gone unnoticed by those who stand to lose. In September 1999, two logging companies filed suit against the U.S. Forest Service and the environmental groups Forest Guardians and Superior Wilderness Action Network. It argued that the groups' "deep ecology" philosophy is religious in nature, and that when the Forest Service sided with these environmentalists, it was violating the constitutionally mandated separation of church and state. The lawsuit was thrown out of court the following February. Others fight religion with religion, touting the book of Genesis (1:28) that states that God granted humans "dominion over every living thing that moves on Earth." The Interfaith Council on Environmental Stewardship was created in April of 2000 with the express purpose of prioritizing human needs over those of nature and unleashing free-market forces as a panacea to environmental ills.

Besides scientists and academics, the founding group includes high-profile Protestant, Catholic, and Jewish leaders aligned with conservative politics, such as Dr. D. James Kennedy of the Florida-based Coral Ridge Ministries, who has been quoted saying, "If ever an issue needed sound Biblical doctrine brought to bear, it's the environment." Many in academics, however, are interpreting that doctrine more compassionately and passing the revised version along. The Forum on Religion and Ecology aims to establish religion and ecology as an area of academic study and research in both theological and nontheological institutions of

higher learning. It is guided by the belief that engaging the world's religions - their traditions and ethic of respect for nature - is critical to effectively implementing environmental policy. The Theological Education to Meet the Environmental Challenge (TEMEC) has like goals, seeking to green institutional operations while making principles of eco-justice integral to higher education. The Baylor University Department of Religion, Toronto School of Theology, and Wesley Theological Seminary are just a few of TEMEC's participants.

President Bush, in a controversial move, signed executive orders to establish the new White House Office of Faith-Based and Community Initiatives, which will provide government funding for social service programs, allowing secular and religious organizations alike to become part of the government-funding loop. Though its purpose is primarily to increase the role of private organizations in offering the types of social services typically provided by the federal government, it marks an intentional - and precedent setting - nonseparation of church and state. The U.S. Environmental Protection Agency is one agency that already encourages faith-based involvement with its Energy Star for Congregations Award, which recognizes actions that reduce operating costs while protecting the Earth's natural resources. The program offers free energy-efficiency and pollution-prevention technical information and support, tailored for the nuts-and-bolts issues of lighting, office upgrades, and heating and air condition systems.

Although only seven congregations won the award in 2000, about 250 take advantage of this program, with significant results. The Sligo Adventist School in Takoma Park, Md., for example, saves \$11,136 annually, preventing the release of 213,909 pounds of carbon dioxide in the process. The ultimate goal of the program is to influence individual parishioners to choose less environmentally exhaustive sources as well.

Philanthropic foundations have similarly found this development worthy of support. Environmental Media Services has been generously funded to educate Americans about the movement among faith institutions to purchase renewable energy. The National Catholic Rural Life Conference has received monies to expand advocacy programs on sustainable agriculture, water quality, and land use. Ministries and church councils in Iowa, Michigan, Ohio, Pennsylvania, and West Virginia have been funded to train religious leaders to educate their congregations about climate change.

"For many, many people, their religious education is their only means of education, social stability, community, and where their ultimate values and concerns are talked about and lived," said Gould. "That's their center. If they start getting the message there that the natural world is something to think and care about, they will listen. These conservative organizations are bringing environmental issues into the fold," she said. "If they were coming from the political left, people would be quite resistant, but through the churches people are much more open, filtering the issues through their own understanding of the world."

## **69) RESTRUCTURING THE ENERGY ECONOMY by Lester Brown**

The Globalist

March 6, 2003

Internet: <http://www.theglobalist.com/DBWeb/StoryId.aspx?StoryId=2991>

The key to restoring climate stability is shifting from a fossil-fuel-based energy economy to one based on renewable sources of energy and hydrogen. The good news is that this shift is under way. But is it happening fast enough to avoid a climate-disrupting buildup of pollution? Lester Brown provides a roadmap. The burning of coal, the dirtiest and most carbon-intensive fossil fuel, peaked in 1996 and has dropped by 6% since then.

### **NEW TRENDS**

This historical peak, marking the first decline in the use of a fossil fuel, may be followed by a similar peak in oil use within the next 5-15 years. As the world turns to alternative fuels as primary energy sources, the energy economy is localizing, reversing a 100-year trend. In contrast, renewables, starting from a small base, are growing at an extraordinary pace. Worldwide, wind electric generation grew by 32% a year from 1995 to

2001. In 2001, it grew by a robust 36%. And in the United States, wind electric generating capacity jumped by a phenomenal 66% in 2001.

### **HERE COMES THE SUN**

Solar cell sales, growing by 21% a year from 1995 to 2001, are likely to grow even faster in the years ahead. Once economically competitive only when used in satellites and pocket calculators, solar cells are now becoming competitive for residential lighting in villages in developing countries not yet connected to the grid. In many countries, if getting electricity to villages means building both a centralized power plant and a grid to deliver the power, it is now often cheaper for families simply to install solar cells.

### **SUNSHINE OR CANDLES**

In Andean villages, for example, the monthly installment cost (with a 30-month payment period) on an array of solar cells to provide lighting is comparable to the cost of candles. A similar price relationship exists for the more remote villages in India that depend on kerosene lamps for light. The natural gas infrastructure can easily be adapted for hydrogen as gas reserves are depleted. Another renewable source, one with a largely overlooked potential, is geothermal energy, which is growing at 4% a year. This is a vast resource - and one that is likely to figure prominently in the energy economies of the Pacific Rim - particularly where widespread volcanic activity indicates that geothermal energy is close to the earth's surface.

### **TURNING VOLCANOES INTO ENERGY**

The western coasts of South America, Central America and North America have an abundance of geothermal energy. Perhaps the geothermally richest region is the western Pacific, including Indonesia, the Philippines, Japan and the eastern and southern coasts of China. Another rich region is the Great Rift Valley, which stretches through East Africa up into the Middle East. In fact, the entire eastern Mediterranean is geothermally well-endowed. Some countries have enough geothermal energy to meet all their electricity needs.

### **DAMMED IF YOU DO**

Hydroelectricity, which supplies over one-fifth of the world's electricity, has expanded by 2% a year since 1990. In contrast to the other renewable sources of energy, the growth in hydropower is losing momentum. One way to accelerate the restructuring needed to stabilize climate is to adopt full-cost pricing, requiring that those using energy pay the full cost of doing so. Suitable sites for new dams are scarce - and public opposition is mounting to large-scale inundation of land, the associated displacement of people and the disruption of ecosystems. One of the difficulties in restructuring the energy economy is that doing so typically depends on small, fledgling industries challenging large, well-established, often heavily subsidized industries. One way to accelerate the restructuring needed to stabilize climate is to adopt full-cost pricing, requiring that those using energy pay the full cost of doing so.

### **SETTING THE STAGE FOR NATURAL GAS**

Fortuitously, the fastest-growing fossil fuel is natural gas, which is the obvious transition fuel from a carbon-based energy economy to a hydrogen-based one. The natural gas infrastructure - including distribution networks and storage facilities - can easily be adapted for hydrogen as gas reserves are depleted.

### **NEW ENERGY EQUILIBRIUM**

The new century is bringing new directions in the world energy economy. The last century was characterized by the globalization of energy as oil emerged as the leading energy source. As the effects of climate change become clearer, the public's desire to avoid extreme climate events will intensify. Indeed, the entire world became heavily dependent on one region, the Middle East, for a disproportionately large share of its energy. Now, as the world turns to wind, solar and geothermal as the primary energy

sources and to hydrogen as an end-use fuel, the energy economy is localizing, which reverses the trend of the last 100 years.

## **70) TILTING AT 8000 WINDMILLS TO CUT EMISSIONS BY 10PC by Keith Orchison**

Canberra Sunday Times

March 6, 2003

Internet:

[http://canberra.yourguide.com.au/detail.asp?class=features&subclass=science&category=feature&story\\_id=213422&y=2003&m=3](http://canberra.yourguide.com.au/detail.asp?class=features&subclass=science&category=feature&story_id=213422&y=2003&m=3)

*Mr Orchison is managing director of the Electricity Supply Association of Australia.*

ONE of my contacts in Canberra confided the other day that he had reached the "MEGO" stage on the topic of renewable energy in the face of the unrelenting barrage of claim and counter-claim by stakeholders in the greenhouse debate. "MEGO", he enlightened me, stands for "My Eyes Glaze Over". This is not a reaction I find beyond comprehension. The arena for greenhouse dialogue does seem from time to time to be overflowing with the exceedingly zealous, the not-terribly-keen-to-listen and the statistically artistic, and not just on one side of the fence. The bad news for my "MEGO" mate is that there is no prospect of the debate letting up in 2003. Indeed, with the mandated renewable-energy target review being about to get under way, it will intensify.

One of my own pet beefs is the insistence of some on underpinning their arguments for whatever policy they espouse by using every new weather development to argue that this demonstrates (a) that climate change is upon us and (b) that complete catastrophe is just around the corner. "We have no more than two generations to save the planet," opined one contributor to the London Guardian recently as the British coped with widespread early winter flooding. Well, "MEGO". On the other hand, while finding the alarmists' arguments dubious, I agree that it is prudent to limit greenhouse-gas emissions to levels that more objective climatologists consider acceptable, while allowing a sensible lead time for the introduction of new technology that can bridge the "carbon gap".

A writer in the American Public Utilities Fortnightly late last year neatly summed up the two questions that industry and policymakers have to address in this situation. This is my paraphrase of his points: "First, what resources, options or strategies are available, and offer the greatest opportunity for success, in a transition process over this century to sustain the level of human, economic and social progress made possible today by fossil fuels? Second, which fuels and processes offer the lowest cost impact in reducing the 'carbon gap' in the relatively near term (say the next 25 years)?"

The proponents of renewable energy, of course, will be quick to argue that they have the answer to both problems, and the current Australian "mandated renewable energy target" (MRET) scheme is, in fact, a 20-year approach to the issue. The problem with the renewable-power options now available or in the process of commercial development is that they are inherently intermittent, difficult to integrate on a large scale with the power grid and more costly than fossil-fuel alternatives. Even wind power, the most advanced and widely used renewable-energy option after large hydro, brings with it real problems of intermittency and grid management, as well as the likelihood of more intense "not in my backyard" opposition when it starts being used in large complexes at many sites.

Research into compressed-air storage of wind power to overcome the "dispatchability" problem is one of the more interesting research and development activities being undertaken, but this brings us back to the issue of cost, as, indeed, do proposals for capture and disposal of CO from fossil-fuelled generation. Both come today with price tags way above present wholesale electricity prices. The need for subsidies to make wind power viable in competition with fossil fuels (at least when they are unburdened with carbon taxes) is not about to go away. Investment bankers Babcock and Brown made it clear in a submission to the Parer Panel that even the suggestion of dropping the MRET subsidy arrangement was enough to "create an adverse

investment climate and slow the pace of investment". This is a banker with \$1.3 billion worth of wind projects in the planning stage in Australia, so its opinion should carry some weight.

The unwillingness of some in the renewables debate to be fully open and up-front about the issue of cost is another one of my "MEGO" things. In the context of some of the propositions being bandied about at present for expansion of the MRET scheme, I asked the Electricity Supply Association of Australia's resident greenhouse expert, assistant director Harry Schaap, for some cost estimates. He says that the current scheme (designed to deliver 9500 GWh of new renewable power in 2010) will add around \$380 million to power costs and increase retail prices by about 2.3 per cent at the end of the decade. Pushing up the subsidy target to deliver 2 per cent of the 2010 consumption of power (13,000 GWh) would add about \$520 million to costs and send up retail prices by 3.2 per cent. A 5 per cent target (20,600 GWh in 2010) would add \$824 million and increase retail prices by 5 per cent, and a 10 per cent target (33,300 GWh) would drive a \$1.3 billion cost rise and increase retail prices by 8 per cent, assuming such a large amount could be delivered at the current penalty price.

The last option, by the way, would involve erecting more than 8350 wind turbines in more than 540 "farms", virtually all requiring good coastal sites at cost-effective grid-connection points, leading to large-scale "NIMBY-itis", one imagines. The Federal Environment Minister, David Kemp, and Federal Cabinet are going to need a massive amount of reliable information about such costs and other factors, as well as about the benefits in terms of abatement, employment and so on, before they can come to a policy landing this year about MRET and about greenhouse programs generally. As a consequence of the Parer Report, they also need to undertake a thorough assessment of such programs against use of an emissions-trading scheme.

## **71) CLIMATE CHANGE FOR EUROPE'S UTILITIES**

The McKinsey Quarterly,  
March 5, 2003

Internet: [http://www.forbes.com/2003/03/05/cx\\_mckinsey\\_europe.html](http://www.forbes.com/2003/03/05/cx_mckinsey_europe.html)

Europe's plan to control the greenhouse gases responsible for global warming will probably lead to higher energy prices for both consumers and businesses and greatly accelerate the shift from coal to gas as the primary fuel used in power plants. These are the main conclusions to be drawn from a McKinsey model of Europe's energy market as it would emerge under a European Commission scheme to cap the emissions of power and heavy industrial plants and make the individual caps allocated to plants tradable.

But the model also generated a paradoxical finding: Unless utility regulators intervene, many power producers could receive unexpected financial gains under the scheme, even though they include some of the fossil-fuel-burning generators that emit the largest amounts of carbon dioxide (CO<sub>2</sub>), the greenhouse gas that the European Union is trying to control. The proposal as it stands would lead utilities to invest in new gas plants and to write off obsolete coal plants. But in many cases, the cost would be more than covered by increased operating profits arising from a forecast 40% rise in wholesale electricity prices. Europe's power regulators have never given utilities a free ride, however, and are unlikely to do so now, when the whole point is to curb emissions. If, as the model suggests, some power plants would gain from the current proposal, modifications to the scheme--scheduled to take effect in January 2005--almost certainly lie ahead.

Given the far-reaching strategic implications of the European plan, power generators and heavy energy users have so far given its details surprisingly short shrift. Yet those details will determine which (and how many) coal- and oil-burning plants should be closed in favor of new gas-fired ones, how and when the remaining coal and oil plants can be run most profitably, and the amount of additional gas Europe will need. What is more, higher electricity prices could force heavy energy users to consider new conservation methods, alternative energy sources, or other cost savings--all of which would affect producers.

The McKinsey model's projected higher electricity prices might be partly offset by the increasing efficiency of existing plants and by reductions in transmission and distribution charges over the seven-year (2005 to 2012) duration of the plan. In any event, the model makes the expected cost of CO<sub>2</sub> regulation more

transparent to all parties. Whatever final regulations emerge from Brussels, the European power generation business, is likely to change fundamentally. Many of Europe's power utilities were caught unprepared by the last shock to the industry--deregulation, a decade ago--and the same thing might happen again. Despite a growing awareness of a carbon-constrained future, most utilities don't understand how the proposed cap-and-trade scheme could transform their market, let alone each particular business.

Yet almost any form of CO2 regulation would enable utilities to make attractive adjustments to their portfolios--for example, by expanding into the gas sector. Other developments, such as acquiring high-emissions plants in Eastern Europe to secure access to cheap emissions rights, will depend on the final shape of the plan. Meanwhile, owners of coal-fired plants should be calculating how long they could remain competitive and perhaps consider limiting their use to periods of high demand. Managers of gas-fired plants should review ways of guaranteeing their access to energy supplies and hedge their exposure to rising prices. And since the scheme alone won't increase the demand for renewable energy, its producers might be wise to employ their improved margins to pursue other growth strategies. As for large users of electricity, the time is right to consider conservation measures or to try locking in long-term supply contracts.

Uncertainty remains over how targets and rights will be allocated to individual plants, which countries will be included in the scheme, and whether investment in plants outside them may be included in it if emissions from those plants fall. Such details will be ironed out as European governments strive to meet their energy and environmental-policy needs and to address the economic and social consequences of the scheme. Rather than simply try to stop it, companies that own investments in power generation should ensure that the final details protect the rights of all stakeholders. Industry organizations are involved in the fray, but in view of the enormous economic value to be redistributed, individual utilities--not to mention heavy energy users--must attend to their own interests.

## **72) GLOBAL WARMING: THE PERVERSION OF SCIENCE by Alan Caruba**

Sierra Club

March 3, 2003

Internet: <http://www.sierratimes.com/03/03/03/alcaruba.htm>

*Alan Caruba is the founder of The National Anxiety Center, a clearinghouse for information about media-driven scare campaigns. The Center maintains an Internet site at [www.anxietycenter.com](http://www.anxietycenter.com). where he writes a weekly column, "Warning Signs". He is also the author of "A Pocket Guide to Militant Islam" and "The United Nations Vs. The United States", another pocket guide available from the Internet site of The National Anxiety Center.*

Who are you going to believe? The Green claim of global warming or the huge piles of snow left behind by the latest record-setting blizzard? The one thing that the claim of global warming has achieved is the debasement and perversion of science. This corruption has been foisted on the world by environmentalists who hate science that does not conform to their political and social agendas. They use the façade of science to advance their ceaseless attacks on industrialization and modern technology. Their purpose is to force the reduction of energy sources, primarily petroleum, but including coal, and, surprisingly, nuclear energy, the cleanest form. If they could claim that hydroelectric energy was a form of pollution, they would.

The latest example of their willingness to completely reverse reality is a claim by Melissa Carey, a so-called "climate change policy specialist" with the Environmental Defense fund. On February 20, a reporter for CNSnews, Marc Morano, quoted her as saying the blizzard that immobilized the East Coast of the United States was, in her view, proof that global warming was occurring. She was quoted saying that "increased extreme events like this are very, very much in line with the predictions of climate models, definitely." The Earth is not experiencing increased extreme events. It is simply experiencing natural events, blizzards, hurricanes, and floods that have been part of its climate for its 4.5 billion years of existence. Climatic cycles such as the El Nino contribute to swings in the number of events, as does the Sun that has cycles of high magnetic discharges.

It is not global warming. It is just the weather. Claims that the so-called science of global warming is "settled" are hogwash. As Paul Georgia pointed out in a recent commentary on Tech Central Station, "One can find a half dozen National Academy of Sciences reports from the last five years that argue that not only is the science not settled, but that scientists are operating in almost complete ignorance on many of the most basic and key assumptions behind the theory." This, of course, does not disturb Ms. Carey and the army of Greens who have been insisting for years now that global warming is real. It is not. It is not even science. It is politics as seen in the United Nations' effort to force the world to accept its Kyoto Treaty in order to reduce energy use. The claim is that greenhouse gases produced by human activity will doom the Earth.

Not surprisingly, the greenhouse gases claim is disputed by figures for 2001 released by the U.S. Energy Department. Greenhouse gas emissions, for the first time since 1991, actually dropped. These are emissions composed primarily of carbon dioxide from burning fossil fuels. Carbon dioxide is not a pollutant. It is essential to the growth of crops, forests, and all vegetation on the face of the Earth. Humans emit CO<sub>2</sub> every time they exhale. The Greens are so desperate to advance the Big Lie of global warming that the UN Intergovernmental Panel on Climate Change literally offers forty different scenarios to support its specious claim in the hope that one of them might actually prove correct. That's not science. That's science fiction.

If the "debate" over global warming was just something confined to the Greens and the thousands of scientists who dispute it, one could assign it to academia, but the U.S. has invested nearly \$20 billion dollars in research since 1990. Its conclusion for this insane amount of investment is that the science does not support rapid and intense cuts in energy emissions. We do not need to reduce energy use. It is the key to a successful economy here and around the world. The Earth has been warming ever since the last Ice Age. You better hope it continues to enjoy its current cycle of moderate weather because another Ice Age, predicted in the 1970s by the very same Greens advocating a catastrophic global warming today, will make the Earth a cold place on which to live. So far, the only real hot air has been coming from people who can look at a huge blizzard of snow and claim it proves that global warming is real.

### **73) EFFECTS OF CLIMATE CHANGE ON MARINE BIODIVERSITY**

CO<sub>2</sub> Science

March 2003

Internet: <http://www.co2science.org/journal/2003/v6n10b1.htm>

#### **WHAT WAS DONE**

The authors used "appropriate measures of biodiversity" to test "whether a molluscan death assemblage from a single sand beach on the north Cornish coast is representative of the biodiversity of the regional species pool," after which they "compare[d] the biodiversity of a fossil death assemblage from the same coast, laid down when the climate was similar to that of the present Mediterranean, to assess possible climate change effects."

#### **WHAT WAS LEARNED**

It was determined that the death assemblage of molluscs from the sandy beach at Harlyn Bay, north Cornwall, was "fully representative of the biodiversity of the regional species pool from all habitat types." A late Pliocene fossil assemblage of molluscs from St. Erth Pits, north Cornwall, was also found to be "not significantly different in biodiversity ... from the present-day regional species pool."

#### **WHAT IT MEANS**

Noting that the climate of the late Pliocene was similar to that of the present-day Mediterranean, the authors conclude that "predicted changes in climate, by the end of this century, will not affect molluscan biodiversity, although the species composition will undoubtedly change." With respect to this latter change, they note that if the climate warms by 2°C over the next 50 years, "we can expect future latitudinal shifts in the marine biota of 300-600 km." In enlarging upon these findings, the authors note that although "there is increasing concern about the effects of global warming on biological diversity," in coastal marine ecosystems "widespread extinctions seem unlikely, but changes in community distributions and compositions will inevitably occur." These changes, they say, "will track the timing of global warming quite

closely because of the high fecundity and dispersal capabilities of most marine organisms." In summary, coastal marine ecosystems will likely experience latitudinal shifts and species redistributions in response to any additional warming that may occur in the future, but it is unlikely that any extinctions will occur, as the species that comprise these ecosystems can readily relocate themselves and thereby follow latitudinal shifts in water temperature.

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Warwick, R.M. and Turk, S.M. 2002. Predicting climate change effects on marine biodiversity: comparison of recent and fossil molluscan death assemblages. *Journal of the Marine Biological Association of the United Kingdom* 82: 847-850.

#### **74) IS THE EUPHORIA OVER CDM UNWARRANTED? by Preety Bhandari**

Financial Express

February 24, 2003

Internet: [http://www.financialexpress.com/fe\\_full\\_story.php?content\\_id=28699](http://www.financialexpress.com/fe_full_story.php?content_id=28699)

*The writer is Director, Policy Analysis Division, Tata Energy Research Institute (TERI)*

Notwithstanding the controversies related to the uncertainty in predicting climate change, let alone the ratification of the Kyoto Protocol to the UN Framework Convention on Climate Change (UNFCCC), the new and emerging issue insofar as the developing country context is concerned is the access to additional funds and technology through the Clean Development Mechanism (CDM). Will CDM actually live up to the expectations of developing countries? The CDM, as described in the Kyoto Protocol, is ostensibly to help developing countries in "achieving sustainable development and in contributing to the ultimate objective of the Convention" as also developed countries to meet their emissions reduction targets. This will be effected through projects sponsored by developed countries in developing countries and resulting in certified emission reductions to be used by the former in complying with their commitments.

As things stand now, the Kyoto Protocol will enter into force if it is ratified by 55 countries including Annex I (synonymous with developed country Parties) countries accounting for 55% of the reduction commitment of the developed countries. The status at the moment is that 101 countries (including only 30 from developed world) have ratified the Protocol but these account for only 43.9% of the emission reduction commitments of developed countries. This has significant implications for the size of the market for the CDM. According to the Kyoto Protocol, the total emission reductions that need to be undertaken by the first commitment period i.e. 2008-12, is about 620 Mt C. With the withdrawal of the US, the emission reduction requirement has reduced the international requirement to only 196 Mt C. Further, with recent vociferous bargaining by developed countries which enables them to use forest management to sequester carbon to meet their carbon commitments, it further reduces the requirement to 125 MtC. Another detractor from the pie is the provision in the Protocol for emissions trading (Article 17) of the protocol. This allows countries such as Russia and the CIS states who, due to unforeseen circumstances such as economic slowdown, have fortuitously managed to reduce their emissions to be able to sell their excess quota to buyers in the market.

These countries were given targets that are likely to be above what their emissions will be even if no conscious measures are taken to reduce emissions. It is estimated that supplies from these countries could be of the order of 92 MtC, which aggravates the situation further, leaving a paltry 33 MtC. The market size at the moment is thus about 33 MtC, and these reductions could be met by three alternative pathways — domestic action in developed countries or by jointly implementing projects in other developed countries or through the CDM, the much-touted mechanism for sustainable development in developing countries. Even if one were to discount recourse to "hot air" of 92 MtC, and assume optimistically that all of 125 MtC would be met through the CDM, it would amount to a flow of funds of only \$2 billion at the current expected price of Certified Emission Reduction (CER) to be \$18/t-C (or \$ 5/t of CO<sub>2</sub>). On the other hand, inflows through the FDI to developing countries is as high as \$200 billion.

So why the euphoria for CDM? And it is strange that many have jumped into the fray, for developing CDM projects. At the moment the Prototype Carbon Fund of the World Bank, and some European governments are taking the lead, and some consultancies such as Price Waterhouse Coopers are gearing up to play a role as operational entities for validating and verifying CDM projects. How much business would it generate for them? Or are these plans contingent on imponderables such as the return of the US to the fold, or development of a parallel market? Decisions of this kind are remarkable, as the rules of the game are yet to be evolved, and CDM may turn out to be relatively unattractive in that part of the proceeds from sales of CERs would be taken away to meet the administrative expenses of the CDM Executive Board, compounded by 2% of the proceeds going toward a vulnerability and adaptation fund. Also, there is a likelihood of a fee to register a project with the CDM Executive Board. Also, validation of projects and verification of CERs by independent entities imply a drain on the project economics, implying that CDM may not be the preferred avenue for meeting commitments.

What are the implications of the above for India? With China as the preferred destination, and much of the experimentation on the subject being undertaken with bilateral money or multilateral funds, would a true market develop, internationally? Ostensibly, the small scale CDM projects (including renewables of about 15 MW size), for which the international rules and procedures are likely to be simplified, are the way out, and India may like to pursue this option vigorously on two accounts—one to corner as much market as it can and also to garner experience for developing projects in the event and hope that a large market does materialise. To this extent the Ministry of Environment & Forests has come up with some interim criteria for approving projects under CDM and in fact of the 18 projects forwarded by the MoEF for the Certified Emission Reduction Procurement Tender of the Dutch Government, six small scale projects have been shortlisted for further screening. But would this be enough to attract investors to the country? Or does the answer lie in project proponents in India developing unilateral projects, with ample expression of interest and support from the Government of India, to enable initial creation of a portfolio of projects? This would imply that the government would have to play a more proactive role in facilitating a supply menu rather than wait for the demand to grow. Are we geared for that?

The international rules for CDM are evolving gradually. At the eighth session of the Conference of the Parties (CoP-8), the rules of procedure for the Executive Board of the CDM, and the methodology panel appointed by the CDM Executive Board were adopted. The international process may be moving slowly but surely in formalising the framework within which CDM could function, but the process in India is yet to gather momentum. For India to benefit from the CDM process, it is imperative that appropriate institutional mechanisms and modalities are established, and clear signals are provided to project proponents on national priorities.

## **75) 'CONCERTED INTERNATIONAL EFFORT' NECESSARY TO FIGHT CLIMATE CHANGE by Tony Blair**

Number 10

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The recent divisions in international relations are plain. I remain hopeful we can pull people round to a common position. But in reality they mask a deeper and more worrying divide. The world is in danger of polarising around two different agendas. On the one hand there are the very clear and dangerous threats of unstable states developing or proliferating weapons of mass destruction and the evil of terrorism exemplified by September 11th. These are the issues, if you like, of immediate security. They are a threat we can see confronting us directly and now. On the other hand, there are the issues that affect us over time. They are just as devastating in their potential impact, some more so, but they require reflection and strategy geared to the long-term, often straddling many years and many Governments. Within this category are the issues of global poverty, relations between the Moslem world and the West, environmental degradation, most particularly climate change.

The trouble with long-term issues is that they seldom fit political time-scales. The impact of some of the measures we announce today will not be felt under this Government, or even this generation. We have to do what is right for the long-term. The truth is investment now to meet the challenge of these issues is worth every penny in the long-term. But the polarity is there. And it is dangerous. It divides sometimes along left/right lines. It divides along North/South lines. It divides the US and its allies from the rest. It can lead to people striking positions that are wholly counter to their professed beliefs. One of the saddest things in politics was to see some African countries decry attempts to isolate Mr Mugabe as neo-colonialism when on any rational basis his rule is impoverishing millions of black Zimbabweans, taking away their democratic rights and hugely undermining our concerted attempts to partner Africa out of poverty. Why did they do so? One reason is because if "the West" wants it, it must be resisted.

The only answer is to construct a common agenda that recognises both sets of issues have to be confronted for the world's security and prosperity to be guaranteed. There will be no lasting peace whilst there is appalling injustice and poverty. There will be no genuine security if the planet is ravaged by climate change. Yet we know we cannot wait to tackle terrorism and WMD. They are affecting us now and have to be dealt with now. The whole of British policy since 1997 has been geared to trying to establish such a consensus. It is why at the same time as being prepared to take military action to fight terrorism or ethnic cleansing or states with WMD, it is the UK which is increasing its aid substantially as a percentage of GNI; doubling it to Africa to reach £1 billion in 2005; working with countries and pharmaceutical companies to tackle AIDS; leading the way on Kyoto and climate change; and trying to influence for the better the MEPP which is the single biggest source of mistrust between the West and the Arab and Moslem world.

Of these issues, it is global poverty and environmental degradation that come together in the cause of sustainable development. Today I want to argue that we have not yet been nearly bold enough; and that real investment now to tackle the causes of poverty and degradation would not only yield enormous benefits to us in years to come; but they could be such a strong signal of our determination to pursue justice in an even-handed way. At Rio in 1992 sustainable development was put squarely on the world agenda. Last year in South Africa the international community met again at the World Summit on Sustainable Development. A lot more was achieved than was recognised. I pay tribute to the hard work of the UK team, under the leadership of Margaret Beckett, and to the enormous efforts made by business, community groups and NGOs. We agreed action on areas such as sanitation and water, renewable energy, biodiversity, and oceans.

But in truth we are still not meeting the scale of the challenge. In thirty years' time there will be two billion more people on the planet. Already 40% of the population is short of fresh water; on current trends this will rise to 50% by 2030, in west Asia it will be 90%. One-third of the world's fish stocks and one-quarter of the world's mammals are threatened with extinction. There are already over a billion urban slum dwellers. With the population of the world's cities due to rise by another billion by 2010, this will only increase. The World Bank recently estimated that nearly one fifth of preventable disease in the developing world is caused by environmental factors, such as urban air pollution and unclean water. The World Summit did much to address these issues. But it is becoming clear that we have a profound choice as an international community: continue to make modest progress; or act decisively. We need a new international settlement that enables us as nations, acting collectively, to address these issues: to help the poorest countries develop; to promote a fairer allocation of wealth and opportunity. That should comprise, amongst other things, the \$50 billion facility proposed so imaginatively by Gordon Brown; the partnership for Africa - NEPAD, which we must take forward decisively at the G8 in June; a successful WTO round which truly opens up the markets of the developed world to developing nations. Real progress on these things would be immense. And we also need a new international consensus to protect our environment and combat the devastating impacts of climate change.

Today, I want to make the case for that new covenant between nations. I do so firmly in the belief that tackling climate change or other environmental challenges need not limit greater economic opportunity nor higher living standards for the poorest in the developing world. This - to me - is the essence of sustainable development. Economic development, social justice and environmental modernisation must go hand in hand.

Climate change was not on the agenda of the World Summit. Yet it remains unquestionably the most urgent environmental challenge. The facts are clear. The number of people affected by floods worldwide has already risen from 7 million in the 1960s to 150 million today. Globally, 2002 joined 2001 and 1998 as the hottest years on record, and our own world-renowned Hadley Centre has predicted that global warming could strongly accelerate over the next few decades. Worldwide, damage from extreme weather events last year reached \$55 billion. The United Nations Environment Programme has estimated that economic losses from severe weather events have doubled every decade. At this rate annual losses will reach \$150 billion within ten years.

And the longer term? The latest report from the Intergovernmental Panel on Climate Change indicates global warming by up to 6 degrees this century - the impacts devastating, particularly in the developing world. We face a situation in which 50 million people in Asia could be killed or displaced by floods, further swathes of Africa could be reduced to desert, accompanied by massive deforestation in central and South America, and huge increases in disease, particularly malaria. And it is the poorest countries, particularly in Asia and Africa, which will suffer the most devastating effects of these changes. In Kyoto, five years ago, we signed up to targets and timetables to address climate change. In Britain we pledged to meet a target of 12.5%. This was a spur for action - the climate change levy; the first economy-wide national greenhouse gas emissions trading system; a reform of company car taxation to a new green system. Today I can tell you that Britain is well on the way to meeting its target.

But whilst Kyoto was an enormous achievement, it is simply not enough. Global emissions of greenhouse gases have risen 10% since 1990, with a 35% increase in developing countries. At best Kyoto will mean a reduction of 2% in emissions. That is better than emissions just continuing to rise and rise. But we know now, from further research and evidence, that to stop further damage to the climate we need a reduction in 60% reduction world-wide. The Royal Commission on Environmental Protection found just that: a 60% reduction by 2050 was essential. So it is clear Kyoto is not radical enough. But it is at the moment the most that is politically achievable. And even the Kyoto targets have proved controversial with some countries, notably America. Many see it as a threat to the pursuit of economic growth. I believe this needn't be the case. If we harness new technology the evidence is mounting that we can achieve a target of 60% - and at reasonable cost.

A few months ago, I asked a team of experts from Imperial College here in London to produce a report saying how the world could reduce its emissions of greenhouse gases. I found the report fascinating - and startling. It said that by using known technologies or those very close to market, the world could reduce emissions by over 60%. This would not involve huge shifts in the economy, or enormous changes in lifestyles. It would allow developing countries to increase emissions, in the medium term, on a conventional development path. And it could be achieved gradually, over a period of years. Solar energy alone, for example, could supply world energy demand using 1% of the land currently under crops and pasture. There is also huge potential from wind, wave and other renewable technologies. Tidal sites already identified around the UK coast could provide up to one-sixth of our electricity needs. In a joint venture between Southampton University, the DTI and the European Commission, there will be a large-scale test of the technology this summer, off the Devon coast.

Improving the efficiency with which we operate our energy processes also offers enormous savings - up to half our energy use could be saved by the use of known efficiency techniques. The ability of hydrogen to replace fossil fuels, especially in transport, will also transform our energy system - and offers a vision of a transport system that is completely clean - with no exhaust emissions. Of course, this is still some way off. We need to make further advances on technology and infrastructure before it can become a reality. But possibilities exist now to manufacture hydrogen from natural gas or biofuels, which coupled with fuel cell technology, could offer a reduction in emissions of up to 50% compared to conventional vehicles. And when I meet the heads of the major car companies, they tell me that these new advances are not far away. As Dave King said in his brilliant Zuckerman lecture, the possibilities for scientific advance are there. But they do require urgent investment.

Are these solutions expensive? Not against the scale of the problem. And it is a myth that reducing emissions makes us poorer. The UK's economy has grown by nearly 17% since 1997 - in that time, emissions have fallen by 5%. The picture on resource use is also encouraging. Recent European research showed that the UK's total resources requirements grew by just 13% between 1970 and 1999, whilst our GDP increased by 93%. We in Britain have shown that it is possible to break the relationship between economic growth and ever-rising pollution. And through further reductions in resource use, we will benefit our economy, business and the environment. I believe that these conclusions are so important that they should lead to a step change in the UK's energy strategy over the next 50 years, as the Energy White Paper will show later today.

Of course there is little point in the UK acting alone. We need a concerted international effort. As a first step, we are working intensively with our European partners to agree a 60% target for the EU as a whole. I wrote today a joint letter with the Prime Minister of Sweden to the Greek Prime Minister, Costas Simitis, in his capacity as President of the European Council. In it we confirm our ambition to reduce emissions in the EU by 60% by 2050, and our commitment to policies that will demonstrate how we can achieve it. We will continue to work also with our new partners from Central, Southern and Eastern Europe, who with us, will help extend the EU's commitment to sustainable development further across the continent. And we will continue to make the case, to the US and to others, that climate change is a serious threat that we must address together as an international community.

I want to say today in terms: that for Britain we will agree the Royal Commission's target of a 60% reduction in emissions by 2050. And I am committed now to putting us on a path over the next few years towards that target. I know that the Sustainable Development Commission and others will hold us to account on this, as you have recently done on our climate change programme. I welcome that. It is vital that we deliver on these targets, and that we review our strategy and policies at every stage. And there are clear economic advantages for Britain in taking the lead. We have enormous potential in this field - in our universities, our research institutes, our businesses. Science and technology are vital. That is why, in partnership with governments, businesses and NGOs, we are working to find new ways of removing barriers to investment in these technologies. I set up the Carbon Trust two years ago, as a business-led organisation charged with bringing forward cutting edge climate change technologies. Today I am pleased to announce its first large portfolio of projects - including fuel cells, wave power, photovoltaics and CHP - which together will amount to £70m in combined public-private investment.

We will also set out later today our ambition to double the amount of energy supplied by renewables. And I believe that this investment is not only good for the environment, but will also benefit our economy and communities. Indeed, in our drive to improve energy efficiency, to shift to renewable energy, and to help the fuel poor, new employment opportunities have been stimulated across the country. For me this strikes at the heart of what sustainable development means in practice. At its core, modern social democracy stands for a high wage, high skill society, supported by decent environmental and social standards. We shouldn't forget that one of the first great Labour modernisers, Keir Hardie, included the reforestation of Lancashire as one of the ten proposals in the first Labour manifesto. Or that we are now considering proposals to create the first National Parks in 50 years. The environment is as much a part of the progressive left tradition as the economy and public services.

And it is through our actions we demolish the myth that sustainable development is only important for the well off - or that it is only the wealthy that have the time and resources to be green. I believe the environment, not just globally, but locally, in our towns and cities, is overwhelmingly an issue of concern for the poorest citizens in our communities. It is the poorest that live in the worst housing, and are the most affected by traffic pollution, live closest to landfill sites and have the worst graffiti and litter problems. The Social Exclusion Unit has analysed the concerns of people living in the 10% most deprived wards in England. Overwhelmingly they listed pollution, the appearance of their estate, and public transport as major concerns. In spite of efforts to clean up our industrial areas, poorer people are twice as likely to live near polluting factories. Children from families on low incomes are five times more likely to be killed by road transport than children from affluent areas.

We are acting now to improve quality of life by tackling poor local environments, particularly in areas of higher social deprivation. In addition to the large amounts invested in inner city regeneration, we have made available £200 million for improving streets, parks and public spaces in the Communities Plan launched by the Deputy Prime Minister earlier this month. And we have introduced the Anti Social Behaviour Bill and the Street Crime initiative with the express aim to deliver safer, less threatening streets. By raising the standards of our local environments overall, we have the greatest impact on the poorest areas. All these policies have sustainable development as a guiding principle. But we must do more to embed this at the heart of policy-making. That is why I believe that the report on sustainable development in the UK that is published today is so important. The UK was the first country in the world to publish a comprehensive set of indicators of sustainable development. And the first country to report annually on our progress against those indicators.

Many inside government felt we were taking a big risk - that the indicators wouldn't go in the right direction. Some of them are not. But they show clearly the direction we should be moving in. This is a bold experiment. And I think it is right that Defra have decided to review the set of indicators in consultation with individuals and experts like yourselves, to determine whether we have got it right. But most importantly I think it is vital that we don't stop trying. The challenge for this Government today is in continuing to integrate the goal of environmental modernisation into our vision of Britain. To combine greater economic development with better environmental impact - bringing the environment, economic development and social justice together. I believe our approach offers the best hope for reversing the conditions that lead to hunger and division, and for building a more prosperous, just and stable world. Ultimately this is about our world as a global community - a cliché perhaps but true. Interdependence is the defining characteristic of the modern world. What we lack at present is the common agenda that is broad and just and global institutions to execute it. That is the real task of statesmanship today. And the time-scale is urgent.