Some Kyoto News, Mid-2003

  • And lawsuits about climate change (July 2003)

► EU nations falling behind on greenhouse gas vows *(Boulder Camera, May 8, 2003)*

► Hit and myth of global warming

► Climate experts reject industry-linked report
  • They do not say that NOAA and NASA also funded this.

► Global warming debate heats up *(Boulder Camera, May 2, 2003)*

► Global warming bills could sneak through Congress

► More hot air on Kyoto *(Wall Street Journal, June 5, 2002)*

► Canada: Memo for prime minister: Restore honesty to climate change debate (Jul 28, 2003)

► Canada: Kyoto jeopardizes our quality of life (Jul 23, 2003)

► *Whither the US Climate Program?* (Jul 2003)
  By Robert White, former head NOAA, head UCAR, head Academy of Engineering

► *The Crowded Greenhouse* (by Firor and Jacobsen)
  • Review of their book. Review has a bad flavor that seems unjustified.

► Energy crunch *(Scientific American, Aug 2003)*
  • Natural gas in short supply


Roy Jenne
Oct 8, 2003
States Plan Suit to Prod U.S. on Global Warming

By DANNY HAKIM

DETROIT, Oct. 3 — California plans to sue the Environmental Protection Agency over the Bush administration’s recent decision that the agency lacks the authority to regulate greenhouse gas emissions from tailpipes and other sources, state regulators said on Friday.

Nine other states, including New York, Massachusetts and Oregon, as well as environmental groups like the Sierra Club and the Natural Resources Defense Council, are expected to join the suit. The legal strategy, an effort to prod federal action on global warming, sets up a battle between the Bush administration and the states over policy on climate change.

In California, the suit is also seen as an effort to stave off challenges to its plan to regulate automotive emissions of greenhouse gases.

“This issue is vital to the future of our state,” Gov. Gray Davis said in a statement. “It affects important resources like our rich agricultural lands; Sierra snowpack; the safety of our forests and our seaside communities.”

Mark Merchant, a spokesman for the E.P.A., said: “It’s apparent that California is reading the Clean Air Act one way and the E.P.A. is reading it another way. There’s a difference of opinion there, and California has decided to ask the court to make a decision.”

The move comes after suits filed by several states challenging the Bush administration’s loosening of regulations over power plants.

Mr. Davis’s administration announced on Friday that the suit against the E.P.A. would come in a matter of days. California

Continued on Page 2

States Plan Suit to Prod U.S. To Act on Global Warming

Continued From First Business Page

and the other states and environmental groups planned to make a joint announcement within a few weeks, but the Davis administration moved up its timetable because of the impending recall election, people briefed on the planned lawsuit said.

The suit stems from the E.P.A.’s decision, announced in late August, that it did not have the authority to regulate man-made emissions of carbon dioxide and other gases linked to global warming trends. Many scientists, but not all, say such trends are leading to a variety of health and ecological problems.

The E.P.A. decision came in response to a petition from environmental groups to take action on climate change and was a reversal of the Clinton administration’s policy on the matter. Environmental groups and regulators in several states say the Clean Air Act does give the federal government such authority.

“If the United States is ever going to regulate greenhouse gases, it will start with a victory in this lawsuit,” said David Bookbinder, Washington legal director for the Sierra Club.

The Clean Air Act directs the government to regulate air pollutants, including “any physical, chemical, biological radioactive substance or matter which is emitted into or otherwise enters ambient air” if they “may reasonably be anticipated to endanger public health or welfare.”

Climate change is included as a possible harm to public welfare.

The case could resolve whether greenhouse gases will be classified as air pollutants.

The nine other states expected to join the suit are New York, Washington, Oregon, New Jersey, Massachusetts, Maine, Illinois, Vermont and Connecticut, California officials said Friday.

Because of its history of smog problems, California has long been the most aggressive state on matters of air policy. Because the state’s air policies predated the Clean Air Act, it has the authority to set its own standards, and other states can pick California’s more aggressive rules over the federal government’s.

Last year, California became the first and only legislative body in the nation to make a measure aimed at curbing global warming emissions from cars.

The legislation put the state at odds with the auto industry, which is widely expected to sue the state. Environmental groups are concerned that the E.P.A.’s ruling could be used as a legal argument to undercut California’s authority to regulate greenhouse gases.

“California has the dual motive of wanting the federal government to do the job and to push back on the attempt of the Bush administration to interfere with California’s attempt to do its job,” said David D. Doniger, a policy director at the Natural Resources Defense Council.

Mr. Merchant said E.P.A.’s action did not necessarily preclude California from taking action on its own.

The auto industry has yet to file suit because the specifics of the measure itself have not been written. The ultimate tenor of the regulation depends on who occupies the governor’s office, because the chairman of the state’s Air Resources Board is an appointee of the governor.

Arnold Schwarzenegger, the leading Republican candidate whose enthusiasm for Hummers has unsettled environmentalists, supports the legislation.

“California’s landmark legislation to cut greenhouse gases is now law,” he says in a statement on his Web site. “I will work to implement it and to win the expected challenges in court along the way.”

Oct 4, 2003

New York Times
Worth discussing in Portland

The Financial Post has this today

http://search.ft.com/search/article.html?id=030714000196

or read it here:

FEATURES LAW & BUSINESS: Climate change could be next legal battlefield
By Vanessa Houlder
Financial Times; Jul 14, 2003

First it was tobacco and asbestos. Then it was the turn of the food sector. Now litigators have yet another target in their sights: those responsible for climate change.

Two cases have already been launched in the US courts. More are in the pipeline, according to the newly formed Climate Justice Programme. This is a collaborative venture involving lawyers, scientists and more than 40 civil groups supporting the use of the law to combat climate change.

It believes that international and domestic laws - covering human rights, product liability, public nuisance, pollution and harm to other states - will be an effective weapon in forcing emission cuts and make perpetrators liable for the consequences of their actions.

"The potential compensation for climate change impacts would make the tobacco pay-outs look like peanuts," says Peter Roderick, a lawyer working for the Climate Justice Programme.

There is no shortage of potential plaintiffs. If predictions of rising temperatures, floods, droughts, forest fires, rising sea levels, disease epidemics, thawing permafrost and damage to crops and water supplies prove correct, global warming is likely to be the most damaging environmental problem in history.

Their case may have been strengthened by the 2001 scientific report from the intergovernmental panel on climate change, appointed by the United Nations. It concluded that: "Most of the observed warming over the past 50 years is likely [defined as a better than two-in-three chance] to have been due to the increase in greenhouse gas concentrations."

Companies that delay taking action on climate change are also at risk of being sued by their investors. They could be accused of incurring higher costs as a result of unduly delaying emission reductions, damaging a company's reputation and failing to disclose investment-relevant information.
EU nations falling behind on greenhouse gas vows

Associated Press

BRUSSELS, Belgium — The European Union will fail to meet its goal of deep cuts in greenhouse gas emissions unless industry takes extra steps to reduce pollution, the EU's top environment official said.

"The European Union is moving further away from meeting its commitment to achieve a substantial emissions cut," as agreed under the 1997 Kyoto Protocol, EU Environment Commissioner Margot Wallstrom said Tuesday. The project requires industrialized nations to cut back heat-trapping gases.

The Kyoto Protocol is a sensitive subject internationally since President Bush pulled the United States out of the pact, saying its pollution targets would cost the U.S. economy too much.

The European Environmental Agency said 10 of the 15 EU nations are not reducing their output of such gases, notably carbon dioxide, by as much as promised.

The total emission of greenhouse gases — which are widely seen as contributing most to global climate change — rose by 1 percent in 2001 in the EU. Despite that rise from 2000, emissions in 2001 were still 2.3 percent below the 1990 level.

The Kyoto Protocol requires the EU to cut its greenhouse gas emissions by 8 percent from its 1990 level in the 2008-2012 period.

Wallstrom said 10 nations — Austria, Belgium, Denmark, Finland, Greece, Ireland, Italy, the Netherlands, Portugal and Spain — "are a long way off track for their agreed share of the EU greenhouse gas emissions target."

In the 2000-2001 period, Austria and Finland saw their emissions rise by 5 percent and 7.3 percent respectively. The EU commission blamed a cold winter and lower rainfall, which cut hydroelectric power production in these countries and forced them to use more fossil fuels for power and heat production.

Ireland, Spain and Portugal "are the furthest away from keeping to their share of the EU target," said the commission said.

Ireland's emissions in 2001 were 31.1 percent higher than in 1990, more than double the 13 percent rise the country had been granted between 1990 and 2008-2012.

For the first time in five years, Spain's emissions fell by 1 percent.

Luxembourg was the EU's best performer in 2001, cutting its emissions by 44 percent since 1990. Germany, the EU's largest economy, reduced its emissions by 18 percent since 1990, although in 2000-2001 its output rose by 1 percent, the commission reported.

May 8, 2003
Daily Camera
Boulder, CO
### Table A10. World Carbon Dioxide Emissions by Region, Reference Case, 1990-2020
(Million Metric Tons Carbon Equivalent)

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<tr>
<td>North America</td>
<td>1,562</td>
<td>1,742</td>
<td>1,767</td>
<td>1,986</td>
<td>2,171</td>
<td>2,346</td>
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<td>1,517</td>
<td>1,694</td>
<td>1,835</td>
<td>1,965</td>
<td>2,088</td>
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<td>146</td>
<td>150</td>
<td>160</td>
<td>173</td>
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<td>196</td>
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<td>101</td>
<td>101</td>
<td>132</td>
<td>164</td>
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<tr>
<td>Western Europe</td>
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<td>947</td>
<td>940</td>
<td>1,008</td>
<td>1,045</td>
<td>1,086</td>
<td>1,136</td>
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<td>154</td>
<td>151</td>
<td>167</td>
<td>176</td>
<td>183</td>
<td>191</td>
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<td>118</td>
<td>122</td>
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<td>237</td>
<td>230</td>
<td>246</td>
<td>253</td>
<td>259</td>
<td>270</td>
<td>0.8% 24.1% +27.5% 50%</td>
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<tr>
<td>Italy</td>
<td>112</td>
<td>122</td>
<td>121</td>
<td>132</td>
<td>139</td>
<td>144</td>
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<td>Netherlands</td>
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<td>67</td>
<td>67</td>
<td>70</td>
<td>71</td>
<td>0.5% 24.1% 29.1% 50%</td>
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<tr>
<td>Other Western Europe</td>
<td>223</td>
<td>260</td>
<td>264</td>
<td>278</td>
<td>288</td>
<td>301</td>
<td>318</td>
<td>0.9% 24.1% 29.1% 50%</td>
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<td>357</td>
<td>412</td>
<td>422</td>
<td>451</td>
<td>475</td>
<td>496</td>
<td>518</td>
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<tr>
<td>Japan</td>
<td>269</td>
<td>300</td>
<td>307</td>
<td>327</td>
<td>343</td>
<td>356</td>
<td>370</td>
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<td>112</td>
<td>115</td>
<td>124</td>
<td>132</td>
<td>140</td>
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<td>1.2% 50%</td>
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<td>Total Industrialized</td>
<td>2,849</td>
<td>3,101</td>
<td>3,129</td>
<td>3,445</td>
<td>3,692</td>
<td>3,928</td>
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<td>Former Soviet Union</td>
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<td>599</td>
<td>607</td>
<td>685</td>
<td>745</td>
<td>822</td>
<td>884</td>
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<td>301</td>
<td>217</td>
<td>203</td>
<td>222</td>
<td>233</td>
<td>246</td>
<td>255</td>
<td>1.1% -23.6%</td>
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<td>Total EE/FSU</td>
<td>1,337</td>
<td>816</td>
<td>810</td>
<td>907</td>
<td>978</td>
<td>1,068</td>
<td>1,139</td>
<td>1.6%</td>
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<td></td>
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<tr>
<td>Developing Asia</td>
<td>1,053</td>
<td>1,435</td>
<td>1,381</td>
<td>1,748</td>
<td>2,139</td>
<td>2,558</td>
<td>3,017</td>
<td>3.9% 2.7% 128% 149% 129%</td>
</tr>
<tr>
<td>China</td>
<td>617</td>
<td>765</td>
<td>669</td>
<td>881</td>
<td>1,127</td>
<td>1,393</td>
<td>1,692</td>
<td>4.5% 128% 149% 129%</td>
</tr>
<tr>
<td>India</td>
<td>153</td>
<td>231</td>
<td>242</td>
<td>298</td>
<td>349</td>
<td>410</td>
<td>475</td>
<td>3.3% 128% 149% 129%</td>
</tr>
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<td>101</td>
<td>107</td>
<td>136</td>
<td>152</td>
<td>164</td>
<td>175</td>
<td>2.3% 128% 149% 129%</td>
</tr>
<tr>
<td>Other Asia</td>
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<td>338</td>
<td>343</td>
<td>433</td>
<td>511</td>
<td>591</td>
<td>675</td>
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<tr>
<td>Middle East</td>
<td>231</td>
<td>325</td>
<td>330</td>
<td>372</td>
<td>439</td>
<td>501</td>
<td>566</td>
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</tr>
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<td>50</td>
<td>50</td>
<td>57</td>
<td>64</td>
<td>71</td>
<td>80</td>
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<tr>
<td>Other Middle East</td>
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<td>275</td>
<td>280</td>
<td>315</td>
<td>375</td>
<td>430</td>
<td>486</td>
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<td>Africa</td>
<td>179</td>
<td>216</td>
<td>218</td>
<td>256</td>
<td>287</td>
<td>327</td>
<td>365</td>
<td>2.5% 128% 149% 129%</td>
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<tr>
<td>Central and South America</td>
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<td>246</td>
<td>249</td>
<td>290</td>
<td>377</td>
<td>484</td>
<td>595</td>
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</tr>
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<td>Brazil</td>
<td>62</td>
<td>87</td>
<td>88</td>
<td>100</td>
<td>130</td>
<td>169</td>
<td>213</td>
<td>4.3% 128% 149% 129%</td>
</tr>
<tr>
<td>Other Central/South America</td>
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<td>159</td>
<td>162</td>
<td>190</td>
<td>247</td>
<td>315</td>
<td>362</td>
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<td><strong>Total Developing</strong></td>
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<td>6,139</td>
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<td>7,910</td>
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<tr>
<td>Industrialized</td>
<td>2,765</td>
<td>3,001</td>
<td>3,028</td>
<td>3,313</td>
<td>3,527</td>
<td>3,731</td>
<td>3,938</td>
<td>1.3% 3.5% 3.5% 3.5%</td>
</tr>
<tr>
<td>EE/FSU</td>
<td>1,132</td>
<td>704</td>
<td>700</td>
<td>776</td>
<td>832</td>
<td>905</td>
<td>962</td>
<td>1.5% 3.5% 3.5% 3.5%</td>
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<tr>
<td><strong>Total Annex I</strong></td>
<td>3,897</td>
<td>3,704</td>
<td>3,729</td>
<td>4,088</td>
<td>4,359</td>
<td>4,636</td>
<td>4,900</td>
<td>1.3% 3.5% 3.5% 3.5%</td>
</tr>
</tbody>
</table>

\(^a\)Includes the 50 States and the District of Columbia. U.S. Territories are included in Australasia.

Notes: EE/FSU = Eastern Europe/Former Soviet Union. The U.S. numbers include carbon dioxide emissions attributable to renewable energy sources.

Ahem, Someone Should Look at the Numbers about Carbon Dioxide Emissions!

- **Canada** promised to be down 6% on CO₂ by 2012 (vs 1990)
  - They will probably be **up 37%**.
  - So what will they do?

- They wanted the **US** to promise to be down 7%
  - But the US will likely be **up 36%** on CO₂

And...

- **Italy** will be **up 24%** by 2010.
- **France** will be **up 20%** by 2010.
- **UK** will be **up 7%**.
- **Japan** will be **up 28%**.
- **China** will be **up 83%**.

Roy Jenne
Oct 14, 2003
NCAR Press Clippings for November 1974

I recently discovered that I still had a copy of the NCAR press clippings for Nov 1974. They make interesting reading. This page has some of the headlines; following pages have a few of the articles.

Roy Jenne, NCAR
April 1995

The Global cooling problem: some hype stories from 1974

Hartford, CT COURANT November 15, 1974

Food Disaster Looming, Weather Scientist Warns

San Diego, CA EVENING TRIBUNE November 16, 1974

Atomic terror forecast as hunger's grim reaper
BY ROB CORBETT
EVENING TRIBUNE Science Writer

San Francisco, CA CHRONICLE November 15, 1974

World Weather Woes Predicted

World Planning Urged To Deal With Climate

Boston, MA CHRISTIAN SCIENCE MONITOR November 27, 1974

Is growing weather worsening?

Global Temperatures Are Cooling, Bringing Climatic Variability and Threat of Famine
S. FRED SINGER

Hit and myth of global warming

A press release from the federally supported National Center for Atmospheric Research claims a "New Look at Satellite Data Supports Global Warming Trend." This claim is likely to be played out big by supporters of the Kyoto Protocol, who want to restrict drastically the use of energy.

But the NCAR result is based on the wishful thinking of well-known Global-Warming promoters rather than on solid science.

The NCAR findings were reported by the journal Science on May 1 at (http://www.sciencexpress.org), well before the formal publication date and just before hearings by Sen. John McCain, Arizona Republican. Coincidence? The lead author is Ben Santer of the Lawrence Livermore National Laboratory; he became notorious for surreptitiously altering the text of a crucial chapter in the 1995 UN-IPCC Report on Climate Change — in order to make it conform to its politically inspired Summary for Policymakers.

The NCAR study is based on an analysis of weather satellite data by Frank Wentz and colleagues at Remote Sensing Systems (RSS); they proclaim a warming trend of about 0.1 degree Centigrade per decade between 1979 and 1999. These results are at odds with previous analyses of the same satellite data by John Christy and Roy Spencer (of the University of Alabama at Huntsville — UAH) that show virtually no warming over the 20-year period.

Over the past 25 years, a series of instruments aboard 12 U.S. satellites has provided a unique temperature record extending as high as the lower stratosphere. Each sensor intercepts microwaves emitted by various parts of the atmosphere, with emissions increasing if temperatures rise. These data are used to infer the temperature of key atmospheric layers, the (lower) troposphere and (higher) stratosphere.

Since the 1990s, the absence of an observed warming signal in the satellite-derived lower-atmospheric temperatures has stood in contrast to a distinct warming trend in temperature at Earth’s surface. A 2000 report from the National Research Council concluded that both trends might be correct — in other words, the global atmosphere
might be warming more quickly near the ground than higher up. By contrast, all theoretical climate models predict a higher rate of warming for the troposphere than for the surface.

Clearly, the RSS results would be a closer match with surface warming, as well as with computer-model simulations and are therefore preferred by the NCAR group. But are the RSS results correct? I don't think so.

* Mr. Wentz presented the RSS analysis of the satellite data on Dec. 4 in D.C. at a panel organized by the federal Climate Change Science Program. Mr. Christy, Mr. Santer and I were members of this panel and heard his presentation but there was no time for discussion of his startling results. However, Mr. Wentz was kind enough to give me a copy of his full paper so I could study it. It is a careful piece of work that must be taken seriously; but of course, that does not make it correct. I mailed him a number of comments to which his co-author Carl Mekars responded. I then suggested they perform some crucial tests on the internal consistency of their results, but there has been no reply so far. I did receive comments from Mr. Christy that discussed the weak points in the RSS work.

* Independent atmosphere temperature data from radiosonde instruments carried aloft in weather balloons do not support RSS but agree with the UAH result of a negligible warming trend (which will become even smaller as the huge 1998 El Nino warming is gradually washed out). Of course, the balloon data have problems of their own that require correction, but the latest reanalysis has further reduced the trend result. On the other hand, the surface data at weather stations are subject to large corrections as well. A most important one — and difficult to remove completely — is the well-known "urban heat-island" effect, the local heating produced over time by the expansion of housing, traffic and energy release in the vicinity of the stations.

* Finally, we have a large amount of non-instrumental data. Such proxies include measurements of the widths of tree rings, isotope data from ocean and lake sediments, ice cores and corals, etc. All of these can be calibrated in terms of temperature. I have personally examined many of these published results and have yet to find any that show a recent warming. It is another strong piece of evidence that supports the conclusion that the surface data from weather stations are contaminated by local heating effects and cannot be relied on to support global warming.

But if the RSS analysis is not correct, then the NCAR study is mostly hot air. As science journalist Ron Bailey points out, "Evidently the strategy being used by Santer et al. is that if their models don't agree with the data, then change the data." Our hope is that Congress does not buy into this shell game.

S. Fred Singer is professor emeritus of environmental sciences at the University of Virginia and president of the Science & Environmental Policy Project. He is the founding director of the U.S. Weather Satellite Service and the author of "Hot Talk, Cold Science: Global Warming's Unfinished Debate" (The Independent Institute, Oakland, Calif., 1999).
CLIMATE EXPERTS REJECT INDUSTRY-LINKED REPORT

JEFF NESMITH
WASHINGTON

A team of climate experts has rejected as invalid an industry-linked study which argued that the Earth's rising temperature may not be the result of human activity.

The study, authored by five scientists, including two from the Harvard-Smithsonian Astrophysical Observatory, asserted that the Earth experienced a warming trend in the Middle Ages that was even more dramatic than the current trend.

The occurrence of such a climate anomaly at a time before widespread combustion of coal, oil and natural gas began would raise questions about the scientific belief that current warming can be explained only by carbon dioxide given off by the combustion of these fossil fuels.

But in a paper appearing this week in EOS, a scientific journal published by the American Geophysical Union, 13 scientists reaffirmed their own earlier conclusions that a rise in the Earth's temperatures beginning in the late 20th century is unprecedented in at least 1,000 years.

There is a "robust consensus" among scientists that the current warming is caused by human activities, said authors of the EOS paper.

The EOS paper was written specifically to respond to the earlier study, which has been widely promoted by industry representatives, nonprofit organizations and politicians who oppose government actions aimed at controlling so-called "greenhouse gases."

Authors of the earlier study said they reexamined data cited in more than 200 scientific studies during the past decade and found evidence supporting the contention that the Earth heated up dramatically between 800 and 1300 AD.

Astronomers Willie Soon and Sallie Baliunas of the Harvard-Smithsonian center appear as authors of two papers based on the study. Neither responded to telephone messages requesting response to the EOS paper.

Cox Newspapers, in an article published in May, disclosed that the study by Soon, Baliunas and three other authors was underwritten by the American Petroleum Institute and promoted by nonprofit groups that are funded by energy interests, chiefly ExxonMobil Corp. In addition, some of the five authors have received funding from energy interests or nonprofits supported by energy interests.

The EOS response stated that Soon, Baliunas and their co-authors failed to show statistical evidence of an earlier, worldwide warming period, presenting merely anecdotal evi-
idence of local warming trends. Authors of the EOS article include many of the scientists whose data Soon, Baliunas and their co-authors claimed to have re-examined.

The Soon-Baliunas study continues to be cited by opponents of government action to address the global warming issue.

The White House edited a draft Environmental Protection Agency "State of the Environment" report to remove statements that the Earth is growing warmer and replace them with material from the two papers. The final version of the report leaves out both references to global warming.

The 13 authors of the EOS paper are: Michael Mann of the University of Virginia; Caspar Amman, Kevin Trenberth and Tom Wigley of the National Center for Atmospheric Research in Boulder, Colo.; Ray Bradley of the University of Massachusetts; Keith Briffa, Philip Jones and Tim Osborn of the University of East Anglia, Norwich, England; Tom Crowley of Duke University; Malcolm Hughes and Jonathan Overpeck of the University of Arizona; Michael Oppenheimer of Princeton University, and Scott Rutherford of the University of Rhode Island.

Jeff Nesmith's e-mail address is jeffn(at)coxnews.com
Global warming debate heats up

Conflicting data have researchers on both sides of controversy steamed up

By Katy Humen
Camera Staff Writer

By some accounts, a new paper co-written by Boulder researchers could help put to rest some controversy about whether and how quickly the planet is warming.

Earth is heating up, according to the new paper, and fairly fast. The new analysis of satellite temperature data and climate models shows that a region of the atmosphere that had confounded scientists by not warming up substantially has, in fact, done that.

But one critic called the paper speculative and unfounded.

Researchers on both sides of the controversy accused the others of an almost faith-based adherence to their own personal beliefs about global warming.

Several years ago, Alabama researchers published a paper showing that although the surface of the planet has apparently warmed in recent decades, the warming was not reflected in the lower atmosphere — between 1.5 and 7.5 miles above the planet's surface — as expected. Satellite and weather-balloon data showed an extremely slow warming trend at that level.

Global warming skeptics often cite the older data set as proof that scientists have a long way to go in understanding the complicated climate, and that evidence of planetary warming is weak.

The new paper, however, suggests that the lower atmosphere has, in fact, warmed substantially since 1979.

"This is more consistent with surface data," said Tom Wigley,

Please see DEBATE on 3B
Debate on global warming heats up

Continued from 1B

a senior scientist with the National Center for Atmospheric Research in Boulder, one of the co-authors of the paper, published online Thursday in the journal Science.

The general scientific consensus is that the surface of the planet has risen by about 0.2 degrees Celsius or 0.4 degrees Fahrenheit per decade for the last few decades.

Wigley predicted some would be quick to dismiss the new study.

"They're just going to say they believe the old data because of their ideological stance," he said.

In fact, climate researcher John Christy from the University of Alabama-Huntsville, said the new paper is based on unpublished and unreviewed numbers.

Christy, co-author of the original paper showing little warming, said his own satellite temperature measurements, by contrast, have been corroborated by real temperature data collected by hundreds of weather balloons around the globe.

"Look, this is almost a religious thing for many people. They will want to believe what agrees with their beliefs already. ... I don't think it will stand the test of time in the scientific world."

climate researcher John Christy

Wigley countered that Christy's balloon data have many problems of their own and that he and his colleagues expect to publish more research soon in support of the recent results.

"(Roy) Spencer and Christy have always claimed their data has low levels of uncertainty, but now we have two data sets that are different, and that means there's more uncertainty than we thought existed before," he said.

"Eventually, we'll reconcile the differences. ... This is what science is all about — open-mindedness, communication and a continual learning process."

Sandy MacDonald, director of the Forecast Systems Laboratory at the National Oceanic and Atmospheric Administration in Boulder, said the scientific controversy is understand-

May 2, 2003
Global Warming Bills Could Sneak Through Congress

BY MYRON EBELL

The scientific case for global warming alarmism grows ever weaker, and President Bush has long since announced he will not submit the Kyoto global-warming treaty to the Senate for ratification, but congressional liberals are still making mighty efforts to revive this dead horse.

In the next few weeks they will try to saddle several pieces of legislation with global-warming amendments.

Four of the Senate’s leading global-warming grandstanders, John McCain (R.-Ariz.), Joseph Lieberman (D.-Conn.), John Kerry (D.-Mass.), and James Jeffords (I-Vt.) are likely to play prominent roles in the follies on the Senate floor. But so far the real action has been in two committees.

In March, Senate Energy Committee Chairman Pete Domenici (R.-N.M.) released a draft of comprehensive energy legislation for comment. The draft included a climate title that would create a White House climate czar, require the administration to produce a strategy to “stabilize and over time reduce net U.S. emissions of greenhouse gases,” and give companies incentives for producing less energy.

Limiting greenhouse gas emissions, which is also the goal of the Kyoto treaty, would require Americans using much less coal, oil, and natural gas, since these three fuels now provide most of America’s energy. Switching to alternatives would raise prices dramatically for American consumers, in the process weakening the U.S. economy.

Domenici’s plan was to give the global warming alarmists half a loaf and hope that they would be satisfied. Alas, appeasement doesn’t work when dealing with environmental pressure groups. Good conservatives on the committee asked that the climate title be removed. A coalition of conservative and free-market groups (led by my own Competitive Enterprise Institute) kicked up a ruckus in public. Domenici listened and proceeded to pass his energy bill out of committee on April 30 without any climate provisions.

Let it Die

But that is not the end of the story. When the energy bill comes to the Senate floor, probably in the next week or two, global warming amendments will be offered by the usual grandstanders and may pass. The energy bill passed by the House on April 11 contains nothing on global warming. So it will be up to a House-Senate conference committee to work out the differences if the Senate puts something in.

Turning to the Foreign Relations Committee, on April 9 Chairman Richard Lugar (R-Ind.) accepted Ranking Member Joe Biden’s (D-Del.) “sense of Congress on climate change” amendment without a vote. Biden’s amendment proclaims global warming alarmism as established scientific fact and then calls for Kyoto-style rationing policies to cut greenhouse gas emissions. To top everything, it then calls on the administration to negotiate a new climate change treaty with binding commitments to cut emissions. This is so goofy it’s hard to believe. The answer to a disastrous treaty is to let it die, not clone it.

The House International Relations Committee is expected to take up the issue May 7. Last year, Rep. Robert Menendez (D.-N.J.) attached an amendment similar to Biden’s on a 23-to-20 vote. Four Republicans missed the vote, and moderate Republican Chris Smith (R.-N.J.) voted with the Democrats.

Menendez is expected to offer his amendment again, but the result could be different because this time the Republicans are prepared. Chairman Henry Hyde (R.-Ill.) is assembling the votes to defeat it. The House Republican leadership is adamantly opposed. And a coalition of conservative and free-market groups has formed to apply public pressure. So it’s the same old story: conservatives must count on House Republicans to save the day.

Mr. Ebell is director of global warming policy at the Competitive Enterprise Institute. He can be contacted at mebell@cei.org.
More Hot Air on Kyoto

I read the report put out by the bureaucracy,” said a dismissive President Bush yesterday, taking the opportunity to reiterate his opposition to the Kyoto treaty on global warming. Too bad the bureaucracy didn’t show its report to Mr. Bush before it released it to everyone else.

The President was doing damage control on a report on climate change that his Environmental Protection Agency sent to the United Nations Friday. In what was widely hyped as a reversal of the Administration’s policy, the report warned that global warming was in fact occurring and admitted that recent temperature changes were “likely due mostly to human activities.” Aha, said the greens, “Gotcha.”

Having plopped our way through some of the 263 pages, we can see how, without too much squinting, the report might be interpreted as a greater acceptance of the whole global warming doctrine, even if the White House now says it hasn’t changed its position. EPA boss Christie Whitman sure has a knack for blind-siding her boss; someone should inform her that Al Gore lost the election.

Whether it was sloppy language, a runaway EPA, or truly a change in position, you’d think the Administration would know better than to hand the green lobby such an easy target. In February, when Mr. Bush laid out a voluntary plan for reducing greenhouse emissions, environmentalists wrote it off as “window dressing.” They have now seized on the EPA report as an “admission” and are renewing calls for Kyoto.

The good news in all this is that the Administration truly appears determined to stay out of Kyoto. “The Kyoto treaty would severely damage the United States economy, and I don’t accept that,” Mr. Bush said yesterday. Though you’d never know it from the media reports, the most important part of the EPA tome was that it dared to say the great unsaid: Even if you do believe in global warming, there’s only so much that can be done. In other words, Kyoto won’t help.

Kyoto’s ineffectiveness remains the great dirty secret of the treaty, one its creators have been eager to hide under piles of statistics.

With and Without Kyoto
Global temperature increase over the next century

-2.0
-1.8
-1.6
-1.4
-1.2
-1.0
-0.8
-0.6
-0.4
-0.2
0.0
2.0

Source: Tom Wigley, 1994

Only a few brave souls have been willing to root through the numbers, including Professor Bjorn Lomborg, author of “The Skeptical Environmentalist.” Mr. Lomborg’s opinion carries special credibility since he is a former Greenpeace member and a devoted environmentalist.

He has been making the rounds with the nearby graph, which shows changes in the world’s temperature—both with Kyoto and without—over the next 100 years. The graph, the work of a noted global-warming researcher, shows that if nations religiously follow the treaty, we will see an expected increase in temperature of 1.92 degrees Celsius by 2100. If we don’t follow Kyoto, we will get hit by the same increase by 2084. In other words, Kyoto saves us six whole years.

That the whole world is in a huff over six piddling years might be funny, if it weren’t for the very serious costs of the piddling. Starting in 2010, the world will pay up to $350 billion a year to comply with Kyoto. By 2050, as the treaty targets become harder to reach, the cost will skyrocket to 2% of OECD countries’ GDP, or $900 billion a year. As it turns out, $900 billion is also about what the effects of global warming are estimated to cost nations by 2100. In other words, as Mr. Lomborg puts it, the world will pay for global warming twice.

To put all this in perspective, Mr. Lomborg has noted that for a one-time cost of $200 billion (the approximate cost of complying with Kyoto in 2010 alone), developed nations could today provide clean drinking water and sanitation for every single human on Earth—saving two million lives a year.

As the EPA report notes, not all global warming is bad. Warmer weather will result in fewer cold-related deaths, longer agricultural growing seasons and even increased precipitation. Chances are that new forms of energy will replace fossil fuels long before Kyoto really kicks in.

All of this is further reason why Mr. Bush would be smart to stick with his current voluntary program. Whatever hot air rises from the EPA report, what really matters is the Administration’s actions. So far, those actions have been the right ones.

By Michael A. Ledeen

Ayatollah Ruhollah Khomenei in the creation of modern Iran, died in 2012 on the 13th day of the Iranian calendar, famously unlucky number, Th. Khomenei’s death on the 12th, which was yesterday. In honor of the obligatory chants of death to Iraq, 167 top Islamic organizations gathered in the city of Tehran on “Support for the Islamic Republic of Iran” on the usual suspects, among them, the mullahs from al Qaeda, who live in a remote region.

The terror summit comes in the form of internal agitation and support for terrorist activists in Britain and Israel. The collapse of the Mideast conflict has brutally exposed the last remaining 10,000 of the authorities in the city of Yarmuk and the other physical condition.

People Power

The Iranian people’s power is growing in the face of problems. Most powerful institution in Iran has announced that it will support the present government and continue to lay the ground for the future. The Revolutionary Guard’s role in the current situation is crucial.

Despite Ayatollah A Khomeini’s opposition to the use of repression and the rise of the opposition, the Ministry of Interior released a statement that the leaders are not in trouble. The///////////////////////////////////////////////////////////////////////////////

By Michael Useem

The abrupt decision to loosen the reins on the board to rev up the company’s fortunes and replace the CEO may yet recover the $800 million that has been lost over the past year.
Bush dismisses EPA report

Humans blamed for climate change

By John Helprin
Associated Press

WASHINGTON — President Bush dismissed on Tuesday a report put out by his administration warning that human activities are behind climate change that is having significant effects on the environment.

The report to the United Nations, written by the Environmental Protection Agency, puts most of the blame for recent global warming on the burning of fossil fuels that release carbon dioxide and other heat-trapping gases into the environment.

But it suggests nothing beyond voluntary action by industry for dealing with the so-called "greenhouse" gases, the program Bush advocated in rejecting a treaty negotiated in Kyoto, Japan, in 1997 calling for mandatory reduction of those gases by industrial nations.

"I read the report put out by the bureaucracy," Bush said dismissively Tuesday when asked about the EPA report, adding that he still opposes the Kyoto treaty.

The report was first issued by the Bush administration blaming human activity for global warming.

"The changes observed over the last several decades are likely mostly due to human activities, but we cannot rule out that some significant part of these changes is also a reflection of natural variability," the report says.

The report also says that despite some lingering scientific uncertainties, "There is general agreement that the observed warming is real and has been particularly strong within the past 20 years."

In the United States, changes over the next few decades are expected to put South- eastern coastal communities at greater risk of storm surges, prompt more uncomfortable heat waves in cities and reduce snowpack and water supplies in the West.

Kalee Kreider, global warming campaign director for the National Environmental Trust, an advocacy group, said environmentalists want from the administration a climate change plan that joins with other nations in requiring carbon dioxide emission reductions and increased fuel efficiency requirements for vehicles.

President Bush favors a climate plan with voluntary measures to slow the rate of growth in gas emissions but allow them to continue to rise.
Getting warmer
But U.S. stance still lacking on climate change

Another authoritative study concludes that global warming is mostly due to human activity. This is no surprise, except that the document bears the imprimatur of the Bush administration.

Bush himself dismissed the work. “I read the report put out by the bureaucracy,” Bush said this week. He seems unaware that while the report contradicts his views on global warming, it endorses his do-nothing policies on global warming.

At least it’s a step toward prudence. The new report, “U.S. Climate Action Report 2002,” was written by the Environmental Protection Agency for the United Nations. The 268-page document puts the blame for the global-warming trends predominantly on human shoulders.

“The changes observed over the last several decades are likely mostly due to human activities, but we cannot rule out that some significant part of these changes is also a reflection of natural variability.”

Although the EPA’s document is likely to be derided as “junk science” by some skeptics, it reflects a careful analysis of empirical data. It does not, for instance, proclaim that the sky is falling (or that the ground is warming). Instead, it acknowledges the uncertainties of forecasting anything as complex as the earth’s climate.

At the same time, it argues that the United States will “very likely” suffer major changes from global warming in the coming decades. Assuming continued growth in the world production of greenhouse gases such as carbon dioxide and methane, the report says, temperatures in the lower 48 states would probably rise by 5 degrees to 9 degrees Fahrenheit on average by the end of the 21st century.

If that forecast proved true, some regions would become wetter, and some drier. “A few ecosystems, such as alpine meadows in the Rocky Mountains and some barrier islands, are likely to disappear entirely in some areas,” the report says. That would be devastating for some plants and animals, and some goods and services lost in the process “are likely to be costly or impossible to replace.”

Furthermore, such a climate change is likely to threaten buildings, roads, power lines and other infrastructure in climate-sensitive areas such as Alaska, the report says. At the same time, it concedes that the results of global warming could be either much milder or much harsher than these examples.

As it acknowledges the high probability of anthropogenic global warming, the report notes the rapid rise of greenhouse gases from burning fossil fuels. The United States produces more greenhouse gases than any other nation. About one-third of these gases come from transportation. Americans are projected to keep burning more and more.

This is where the report is most interesting. If humans are “very likely” causing major shifts in climate, and if those shifts are “likely” to be wide-ranging and severe, a prudent response would be to restrict and reduce the production of greenhouse gases.

But the prudent response contradicts Bush and his friends in industry. The report studiously declines to acknowledge the wisdom of, say, higher gas-mileage standards for cars or stricter limits on power-plant emissions.

The Bush administration opposes higher mileage standards, and its Global Climate Change Initiative would allow greenhouse gases to increase by 18 percent over 10 years (roughly the same increase that would occur if the government did nothing). Those are the kinds of trends that would hasten the scenarios outlined in the EPA report.

That’s distressing. If we don’t change our direction, we’ll probably end up where we’re headed.
Some Stories About Energy, Kyoto, Climate, Politics,
July 2003

- In 1997, the US Senate voted 97 – 0 against any Kyoto plan that would hurt the US economy.

- There is now plenty of energy in the world.
  - In 30 to 50 years, it will be harder to deliver adequate energy.
  - A workable strategy for energy supply is needed.

- There are lots of politics around energy and environment
  - This makes it harder to settle on workable strategies.

- The Bush Administration has released a few energy plans
  - And there are always lots of critics.
  - The public is not yet aware that energy supply could become a bigger issue.

- If US policy does not delivery adequate energy at a reasonable cost, then people will get very angry.

Ready to scan July 9, 2003, 22 pages, RJ0290

Also see these 22 pages in another document (RJ0290)

Roy Jenne
July 9, 2003
Memo to next prime minister: restore honesty to climate change debate

Special to The Province
Kenneth Green

Now that Paul Martin is considering the appointment of pro-Kyoto Maurice Strong as senior advisor in the Prime Minister's Office, it's crucial that Canadians see the dangers greenhouse gas restrictions pose to quality of life, the resources to fund health care and environmental protection, and our ability to compete internationally.

It's reasonable to worry about rapid climate changes, but Canadians have been sold a bill of goods on the solidity of such science.

Researchers at the U.S. National Center for Atmospheric Research, a leading climate modeling center, says, "It should be noted that the future climates simulated by these models [the Hadley and Canadian climate models used in the national assessment] are in no way to be considered predictions or forecasts of the future. They are scenarios of the future and thus inherently uncertain.

"Researchers should exercise extreme caution in the conclusions they draw from impacts analysis using the output from these climate models, given the uncertainty of the model results, especially on a regional scale."

Says the United Nations 2001 climate report: "Uncertainties are pervasive throughout climate change impact assessment. For sectors such as agriculture uncertainty is large enough to prevent a highly confident assessment of even the sign of the impacts."

This means climate science isn't reliable enough to tell us whether change would cause harm or benefit! Still worse than the misrepresentation of such science are the anti-energy, anti-development measures sought by old-school environmental groups and Environment Canada officials that would ultimately give us less environmental quality, not more.

Increasing energy efficiency sounds good, especially when it's part of the natural process of technology advancement and market economics. But rushing to pass regulation means higher energy and technology costs and the wasting of previous investments.

Analysts say when it comes to economic development and personal incomes, more prosperity means more environmental protection. As environmentalists, we should understand this since "everything is connected" is practically our mantra.

Shifts to renewable power also sounds good, but not only is it expensive, it can't come close to providing the power needed. A U.S. report showed renewable energy sources could provide only 50 per cent of the country's needs while requiring nearly one-sixth of its land mass.

Increasing vehicle fuel economy also sounds good, but it means favouring smaller, lighter vehicles. The problem is, the market for compact vehicles is limited, and the risk of death much higher.

The abundance of studies questioning the link between greenhouse gases and recent climate change, and pointing out the harmfulness of energy-rationing and greenhouse-gas restrictions, means Canadians need to tell their apparent Martin to reopen the Kyoto file, restore honesty to the science debate, and avoid sacrificing Canadian quality of life on the altar of the Kyoto Protocol.

Kenneth Green is chief scientist at The Fraser Institute and author of Greenhouse Gas Reductions: Not Warranted, Not Beneficial.

IN QUOTES
'
'Canadians have been sold a bill of goods on the solidity of climate change science. It isn't reliable enough...'}
Kyoto jeopardizes our quality of life

Special to Times Colonist
Kenneth Green

With speculation that Paul Martin is considering the appointment of rabidly pro-Kyoto Maurice Strong as a senior adviser in his prime minister’s office, it’s more important than ever that Canadians realize the dangers that greenhouse gas restrictions pose to their quality of life, the resources they need to fund health care and real environmental protection, and their ability to compete internationally.

Though it’s reasonable to worry about rapid changes in climate, Canadians have been sold a bill of goods regarding the solidity of climate science. Researchers at the United States National Center for Atmospheric Research, one of the leading climate modelling centers, says: "It should be noted that the future climates simulated by these models (the Hadley and Canadian climate models used in the national assessment) are in no way to be considered predictions or forecasts of the future. They are scenarios of the future and thus inherently uncertain."

They go on to say: "Researchers should exercise extreme caution in the conclusions they draw from impacts analysis using the output from these climate models, given the uncertainty of the model results, especially on a regional scale."

The United Nations 2001 climate report admits “uncertainties are pervasive throughout climate change impact assessment. For some sectors, such as agriculture, uncertainty is large enough to prevent a highly confident assessment of even the sign of the impacts.”

In plain English, that means the science isn’t good enough to tell us, in any given situation, whether climate change would cause harm or benefit! Of course, with the Orwellian doublespeak of the Chrétien government on the science of climate change, no such uncertainty is acknowledged.

Still worse than the misrepresentation of climate science that permeates debate over climate change are the anti-energy, anti-development measures sought by old-school environmental groups and Environment Canada bureaucrats that would ultimately give us less environmental quality, not more.

Increasing energy efficiency always sounds good, and it’s fine when it’s part of the natural process of technology advancement and market economics. But rushing it into place through regulation means increasing energy and technology costs, and wasting previous investments. That slows economic growth, which is itself a protective factor in human health and environmental quality.

As numerous analysts have shown, when it comes to economic development and individual incomes, more prosperity means more environmental protection. As environmentalists, we should be the first to understand this since “everything is connected” is practically our mantra.

Shifting to “renewable” power also sounds good, until you realize that it’s not only expensive, it can’t come close to providing the power needed for industrial societies. A report by ecologists at Cornell University showed that even if deployed as thoroughly as possible in the United States, "renewable energy" sources could provide only 50 per cent of the needs of the United States, while requiring nearly one-sixth of the entire land mass of the country.

The situation would probably be worse for Canada, which isn’t likely to build more dams to generate renewable hydro power, and isn’t exactly known for massive quantities of uninterrupted sunlight or vast reservoirs of geothermal energy.

Increasing vehicle fuel economy also sounds good at first,
but it generally means influencing the driver to favor smaller, lighter vehicles that use less power by imposing fuel-efficiency standards on automakers. The problem is, the market for such vehicles is quite limited, and as they lead to lighter, less powerful vehicles, such fuel-efficiency standards lead to increased risk of death in automobile accidents.

Indeed, it was the imposition of fuel-efficiency standards in the United States in the 1970s that planted the seed of the sport utility vehicle trend by rendering the mid-size, not particularly profitable station wagon non-economic for automakers.

As for hybrid cars and fuel cells, don't hold your breath:

A recent article in the Globe and Mail points out that Canadians, who have very high environmental values, draw the line at buying hybrid cars that offer less performance than conventional gasoline cars at a higher price.

In the face of more and more studies questioning the linkage between the so-called greenhouse gases and recent changes of climate, and a mountain of studies pointing out the net harmfulness of energy-rationing and greenhouse-gas restrictions, it's more important than ever that Canadians ring up heir apparent Martin and let him know that he should re-open the Kyoto file, restore honesty to the science debate in Canada, and avoid sacrificing Canadian quality of life on the altar of the Kyoto Protocol.

Kenneth Green is chief scientist at the Fraser Institute, and author of a recent Fraser Institute occasional paper "Greenhouse Gas Reductions: Not Warranted, Not Beneficial."
Why Alberta opposes the 
Kyoto Protocol

450,000 Jobs Lost in Canada
Income Taxes Increase
Gasoline Prices Increase
Investment Flees Province

We could see these headlines if the Kyoto Protocol is approved!

If approved, the Kyoto Protocol will affect the Canadian economy more than that of any other country and Alberta will suffer the most. It could cost Alberta over $8 billion and thousands of jobs per year. Every business and every individual in Canada would be negatively affected by higher prices, higher taxes and a devastated economy.

Although experts have conducted many studies, the potential impact of implementing the Kyoto Protocol is still uncertain. Some reports suggest that 450,000 jobs would be lost, income taxes would increase substantially, electricity costs could increase by 100%, natural gas prices could increase by 60%; and gasoline could reach $1.10 per litre.

You will likely pay more income taxes, worry about job security, pay more to drive your car, heat your home, and keep your appliances running - all without making an actual or significant reduction in global gas emissions.

What is the Kyoto Protocol?

In 1997, an international agreement under the United Nations was created to reduce greenhouse gases in the developed countries of the world. Its goal is to reduce greenhouse gas emissions an average of 5.2% below 1990 levels by 2012.

There is general agreement among all countries, and in Canada by all provinces, that the goal of reducing greenhouse gas emissions is desirable. Disputes have largely arisen over details of the Protocol such as implementation time frames and the relatively small number of countries that actually have to make emission reductions.

Dated Fall 2002

Page 1

Size = 11 x 17 inches

Source: Government of Alberta

Global Greenhouse Emissions 2000

Canada - 2%

33%

No target

Cutting greenhouse gas emissions halfway towards target
What US Strategy About Kyoto Works Best?

If we sign up for Kyoto; some ideas and results:

- The present understanding of energy issues and answers is still poor.
- We now take good energy supply for granted (no problem).
- We forget about the need for a few big reliable energy sources.
- The energy cure is thought by many to be mainly wind and solar ("We are ready now.")
- We would spend a ton of money.
- Results:
  - Not much that helps energy supply.
    - Perhaps hurt the energy supply.
  - And there is not much that helps climate.
- And not much work on options that can work better.

Sign up for Kyoto carbon limits; can promises be achieved?

- Europe has best chance (but it won't).
- Canada signed Kyoto in Dec 2002.
  - Almost no way they would meet promise.
- US did not sign Kyoto.
  - Almost no way to meet Kyoto.
- But signing creates politics and possible legal action.

Roy Jenne
July 27, 2003
Leading Climate Scientists Reaffirm View that Late 20th Century Warming was Unusual

Warming resulted in part from human activity

WASHINGTON - A group of leading climate scientists has reaffirmed the "robust consensus view" emerging from the peer reviewed literature that the warmth experienced on at least a hemispheric scale in the late 20th century was an anomaly in the previous millennium and that human activity likely played an important role in causing it. In so doing, they refuted recent claims that the warmth of recent decades was not unprecedented in the context of the past thousand years.

Writing in the 8 July issue of the American Geophysical Union publication Eos, Michael Mann of the University of Virginia and 12 colleagues in the United States and United Kingdom endorse the position on climate change and greenhouse gases taken by AGU in 1998. Specifically, they say that "there is a compelling basis for concern over future climate changes, including increases in global-mean surface temperatures, due to increased concentrations of greenhouse gases, primarily from fossil-fuel burning."

The Eos article is a response to two recent and nearly identical papers by Drs. Willie Soon and Sallie Baliunas of the Harvard-Smithsonian Center for Astrophysics, published in Climate Research and Energy & Environment (the latter paper with additional co-authors). These authors challenge the generally accepted view that natural factors cannot fully explain recent warming and must have been supplemented by significant human activity, and their papers have received attention in the media and in the U.S. Senate. Requests from reporters to top scientists in the field, seeking comment on the Soon and Baliunas position, lead to memoranda that were later expanded into the current Eos article, which was itself peer reviewed.

Paleoclimatologists (scientists who study ancient climates) generally rely on instrumental data for the past 150 years and "proxy" indicators, such as tree rings, ice cores, corals, and lake sediments to reconstruct the climate of earlier times. Most of the available data pertain to the northern hemisphere and show, according to the authors, that the warmth of the northern hemisphere over the past few decades is likely unprecedented in the last 1,000 years and quite possibly in the preceding 1,000 years as well.

Climate model simulations cannot explain the anomalous late 20th century warmth without taking into account the contributions of human activities, the authors say. They make three major points regarding Soon and Baliunas's recent assertions challenging these findings.

First, in using proxy records to draw inferences about past climate, it is essential to assess their actual sensitivity to temperature variability. In particular, the authors say, Soon and Baliunas misuse proxy data reflective of changes in moisture or drought, rather than temperature, in their analysis.

Second, it is essential to distinguish between regional temperature anomalies and hemispheric mean temperature, which must represent an average of estimates over a sufficiently large number of distinct regions. For example, Mann and his co-authors say, the concepts of a "Little Ice Age" and "Medieval Warm Period" arose from the Eurocentric origins of climatological histories. The specific periods of coldness and warmth differed from region to region and as compared with data for the northern hemisphere as a whole.

Third, according to Mann and his colleagues, it is essential to define carefully the modern base period with which past climate is to be compared and to identify and quantify uncertainties. For example, they say, the most recent report of the Intergovernmental Panel on Climate Change (IPCC) carefully compares data for recent decades with reconstructions of past temperatures, taking into account the uncertainties in those reconstructions. IPCC concluded that late 20th century warmth in the northern hemisphere likely exceeded that of any time in the past millennium. The method used by Soon and Baliunas, they say, considers mean conditions for the entire 20th century as the base period and determines past temperatures from proxy evidence not capable of resolving trends on a decadal basis. It is therefore, they say, of limited value in determining whether recent warming in anomalous in a long term and large scale context.

The Eos article started as a memorandum that Michael Oppenheimer and Mann drafted to help inform colleagues who were being contacted by members of the media regarding the Soon and Baliunas papers and wanted an opinion from climate scientists and paleoclimatologists who were directly familiar with the underlying issues.

Mann and Oppenheimer learned that a number of other colleagues, including Tom Wigley of the University Corporation for Atmospheric Research (UCAR) in Boulder, Colorado; Philip Jones of the University of East Anglia's Climatic Research Unit in Norwich, United Kingdom; and Raymond Bradley of the University of Massachusetts in Amherst were receiving similar media requests for their opinions on the matter. Their original memorandum evolved into a more general position paper jointly authored by a larger group of leading scientists in the field.

Mann says he sees the resulting Eos article as representing an even broader consensus of the viewpoint of the mainstream climate research community on the question of late 20th century warming and its causes. The goal of the authors, he says, is to reaffirm support for the AGU position statement on climate change and greenhouse gases and clarify what is currently known from the paleoclimate record of the past one-to-two thousand years and, in particular, what the bearing of this evidence is on the issue of the detection of human influence on recent climate change.

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The "K" Word
U.S. turns its back on Kyoto and global warming

By Karen Charman

As evidence of global warming mounts, the Bush administration and right-wing, industry-funded "researchers" who have long denied the phenomenon are trying a new tactic: muzzle the science.

In February, the Competitive Enterprise Institute, a pro-market think tank, asked the Bush administration to "cease dissemination" of a government report on grounds that it violates a new regulation, the Data Quality Act. The report, the National Assessment of Climate Change, modeled the likely impact of global warming on the United States. The unprecedented research effort took several years and involved government agencies, scientists and academics.

The Data Quality Act requires federal agencies to ensure the information they disseminate is accurate, and to enable interested parties—that is, industry—to challenge the information if they disagree.

According to one high-ranking government official, who requested anonymity, the law—which was slipped into a 2001 appropriations bill without hearings—"could be used to undermine any legitimate scientific effort" that threatens corporate interests.

Burning fossil fuels releases carbon dioxide, the main culprit in planetary warming, into the atmosphere. The journal Science reports that energy consumption over the last 100 years has increased 16-fold, bumping atmospheric concentrations of carbon dioxide to their highest level in 420,000 years.

Acknowledging the existence of global warming threatens the fossil fuel industry, because mitigating or reversing it means shunning fossil fuels like coal and oil. Rather than deal with the problem, the powerful and hugely profitable fossil fuel industry has engaged in an aggressive disinformation campaign to discredit the science and disrupt any effort to solve it.

As higher levels of greenhouse gases trap heat in the Earth's upper atmosphere, rising global temperatures are destabilizing climate patterns—thawing the permafrost in Alaska, melting glaciers, and causing enormous ice shelves to break apart in both the Arctic and Antarctica. The melting ice is expected to raise sea levels four to 40 inches by 2100, scientists say, submerging islands and coastal regions throughout the world. According to Robert Gagosian, director of the Woods Hole Oceanographic Institute, the influx of fresh water into the northern Atlantic Ocean could disrupt global ocean currents and potentially lead to a "mini ice age" in the northeastern United States and Europe, even as the rest of the planet warms.

Escalating weather-related disasters, which confirm computer-modeled predictions, are further discrediting the naysayers. And even the Bush administration now reluctantly acknowledges global climate change is occurring as a result of burning fossil fuels.

That doesn't mean they're doing much about it. President Bush's climate change plan, announced last year, has called for 10 more years of study and voluntary reductions of 18 percent in greenhouse gas intensity by 2012. The Kyoto Protocol, which Bush rejected, calls for 5 percent reductions from 1990 levels for industrialized nations by 2012. The United States, with 4 percent of the world's population, is the largest contributor to global warming, releasing about 25 percent of the world's greenhouse gases into the environment each year.

The environmental community dismisses the plan for voluntary reductions in greenhouse gas intensity as business as usual. Because the measures suggest decreases in the rate of growth of greenhouse gas emissions—rather than actual reductions—the policy on its own will actually increase greenhouse emissions 14 percent by 2012, says Dan Lashof, a climate scientist with the Natural Resources Defense Council.

Jerry Mahlman, a climate scientist with the National Center for Atmospheric Research, says scientists cannot predict exactly how much carbon in the atmosphere will tip off a catastrophic cascade of climate change, or what exactly the effects will be in any given region. But, he says, the future is here. Since carbon dioxide remains in the atmosphere for at least 100 years, past emissions have already committed the world to significant future climate change.

And censoring the science won't make it go away.
Whither the U.S. Climate Program?

Robert M. White

Approximately 50 years ago, the first contemporary stirring within the scientific community about climate change began when Roger Revelle and Hans Suess wrote that "human beings are now carrying out a large-scale geophysical experiment." Since that time, the scientific community has made remarkable progress in defining the effect that increased concentrations of greenhouse gases could have on the global climate and in estimating the nature and scale of the consequences. The political discussion about how to respond to this threat has been less successful.

Although a small vocal group of scientists continues to raise important questions about whether the data and the theory validate the projected trend in the climate, these views have been more than counteracted by the overwhelming consensus of scientists that the case for the projected climate change is solid. The 2001 assessment by the Intergovernmental Panel on Climate Change of the World Meteorological Organization projects that by the year 2100, there will be a global temperature increase of 1.4 to 5.8 degrees centigrade, a global sea level rise of 9 to 88 centimeters, and a significant increase in the number of intense precipitation events. The wide range of these estimates reflects differences in assumptions about population projections, technological developments, and economic trends that are used in constructing the scenarios.

As the consensus on the likelihood of climate change became more robust, the world's political leaders began to take notice. At a 1992 meeting in Rio De Janeiro, the world's nations agreed to the United Nations' Framework Convention on Climate Change (FCCC), which called for the "stabilization of the concentration of greenhouse gases at a level that would prevent dangerous climatic consequences." Unfortunately, they were not able to specify what level of concentration would be acceptable or what constituted "dangerous" climate change. Instead, they established a Conference of Parties to work out the details and develop a plan of action to control climate change.

By some time in the latter half of this century we will need to have in place a transformed energy system that has been largely "decarbonized."

When the Conference of Parties convened in 1997 to produce the plan of action known as the Kyoto Protocol, the scientific and political differences among nations came into sharp focus. The U.S. Senate by unanimous vote declined to approve the plan because it excused many less developed countries such as India and Brazil from the requirement to curb greenhouse gas emissions and because the senators were afraid that meeting its requirement of reducing greenhouse gas emissions to 7 percent below the 1990 level by 2012 would have disastrous consequences for the U.S. economy.

A final political blow occurred in 2000 when President Bush withdrew the United States as a signatory to the Kyoto Protocol and announced that the country would meet its climate objectives by voluntary means. He called on the National Academies to review the sci-
Population and Development Review

The Crowded Greenhouse: Population, Climate Change, and Creating a Sustainable World
Book Reviews

Meyerson, Frederick A.B.

JOHN FIROR AND JUDITH JACOBSEN

The Crowded Greenhouse: Population, Climate Change, and Creating a Sustainable World


In a world with limited resources it is important to understand the links between demographic trends, public policy, and climate change. It is no mean feat to put all of these issues on the table coherently and persuasively in a relatively short book. This particular effort meets with some success and some mixed results. On the positive side, both the language and logic are accessible. The downside is that certain issues are oversimplified.

The Crowded Greenhouse, aimed at a general audience, was written by the director emeritus and senior climate scientist of the National Center for Atmospheric Research (John Firor) and a writer and consultant on global population issues (Judith Jacobsen). It is essentially two short books written separately by the authors (who are married to each other), cemented together by an introductory and a concluding chapter written jointly.

The book begins with a rather optimistic demographic, environmental, and social vision of the world in 2050, a thought-provoking exercise with a perhaps implausibly rosy result. (For unexplained reasons, the authors base this scenario on the United Nations' 1994 population projections, rather than one of the three available subsequent UN revisions.) The next three chapters, written by Jacobsen, offer a brief history of population policy issues from the 1960s through the present, highlighting a few of the success stories of reproductive health programs in the developing world. The section includes a virtually blanket endorsement of the agenda of the International Conference on Population and Development (ICPD) held in Cairo in 1994 as the way forward. While the Cairo agreement was an important milestone, almost a decade has elapsed since its passage. It therefore might have been productive to examine ICPD’s shortcomings as well as its successes, and to consider what new agreements and policies could address rapidly changing demographic challenges.

One major thrust of the population section is a criticism of ecologists, “neo-Malthusians,” and the US population-stabilization movement. Jacobsen makes some reasonable points, but I found her treatment too heavy-handed. The battle depicted between the “neo-Malthusians” and women’s rights activists is still being waged, but many on each side of this fence have (or should have) moved past these issues. On the other hand, Jacobsen offers a short but thoughtful treatment of some of the difficult aspects of the US immigration policy debate.

Chapters 5 through 7 shift to climate change science and policy: they serve as a sort of sequel to Firor’s 1990 book, The Changing Atmosphere (also Yale University Press). His writing is authoritative and less colloquial than Jacobsen’s. The section begins with a solidly written review of the state of climate science and potential impacts, followed by an equally cogent and readable chapter on climate-change negotiations. The final climate chapter focuses on energy policy dynamics, particularly internalizing environmental costs—“getting the price right”—and the development of efficient materials and processes. Although the climate material in the book breaks no new ground, it is timely, particularly given the stark contrasts between American and European climate policy.

The final part of the book calls for two “revolutions,” one social and the other technological. The first is essentially a reaffirmation of the Cairo agenda—greater equity and better education, opportunity and health for the poor of all countries, particularly women and girls. The second, “efficiency” revolution focuses on the better design and use of energy systems and materials. The authors recognize the serious challenges facing professionals and activists in both fields, but here, as throughout the book, they maintain an optimistic outlook.

The Crowded Greenhouse will be primarily of interest to general readers rather than demographers or climate scientists. It may also be a valuable resource for specialists who interact with policymakers or the general public, particularly those who must explain connections between climate and demographic change.
Energy Crunch

AVOIDING FUTURE SHORTAGES DEMANDS CRUCIAL CHOICES NOW

BY RODGER DOYLE

Summer now often means rolling blackouts and brownouts—on top of rising utility bills and higher prices at the pumps. Unpredictable circumstances can lead to energy headaches—hot weather partly caused California's infamous shortages of 2001—but the main culprit is inadequate investment and lack of an integrated power grid to transmit electricity from one area to another during emergencies.

The chart shows an increasing gap between consumption and domestic production, one that historically has been filled by importing fuels, mostly oil and natural gas. The growing dependence on imports puts the U.S. at risk, not only because 53 percent of the world's proven oil reserves are in the volatile Persian Gulf region but because pipelines and international sea lanes must be protected. Additionally, the growing need for imports contributes to the economic vulnerability of the U.S. by increasing the foreign trade debt [see By the Numbers, February 2000]. And of course, fossil-fuel consumption produces carbon dioxide and other heat-trapping gases, thereby contributing to global warming.

An endless supply of clean energy—say, from nuclear fusion plants or orbiting solar panels beaming down microwave energy—may someday be possible. But such radical technology will not be available soon. To address America's needs in the next 25 to 50 years, the Bush administration detailed a controversial plan in 2001, favored by industry, called the National Energy Policy. It calls for, among other measures, investing huge sums in the oil, gas, electricity and coal infrastructures, opening the Arctic National Wildlife Refuge in Alaska to oil and gas development, expanding the use of nuclear (fission) power, and developing a national power-grid system to prevent local and regional electricity shortages.

Among the more prominent counterplans is the Clean Energy Blueprint, issued by a consortium that includes the Union of Concerned Scientists (UCS). This strategy calls for considerably less investment in fossil-fuel infrastructure and greater investment in renewable energy. Of all such sources—solar, geothermal and biomass—wind power emerges as the most important to the UCS, which considers it essential to any plan to meet U.S. energy needs over the next two decades. The UCS estimates that in the 20th year of implementation, the proposed measures will reduce annual energy consumption by 20 percent as compared with the "business as usual" forecast of the U.S. Energy Information Administration that underlies the administration proposal.

This past June, U.S. Secretary of Energy Spencer Abraham warned that the country is critically low on natural gas. Whether this news will nudge the U.S. into making the really big decisions about energy policy is unclear. Few Americans feel that there is an energy crisis, to judge by Gallup polls, which consistently show that "lack of energy" or "energy crisis" is at the bottom of their list of important problems facing the nation.

Rodger Doyle can be reached at rdoyle2@adelphia.net
Bush Efforts to Speed Gas Drilling In Rockies Are Slowed by Lawsuits

By RUSSELL GOLD

With natural-gas inventories low and prices high, Bush administration efforts to speed up drilling in the Rocky Mountains are intensifying. But environmental groups are battling back in court and elsewhere, slowing the process instead.

The Interior Department this month ordered its field offices to work to remove impediments to energy drilling and leasing. The directive was one of a string of Bush administration attempts over the past two years to open up the Rockies, an area with vast potential for the energy industry. But much of the region is considered by environmentalists to be pristine as Alaska’s Arctic National Wildlife Refuge, which the administration wants to open to oil drilling—also drawing environmentalists’ ire.

The latest order came as oil and gas companies are having an increasingly difficult time winning permits and getting access to the region’s huge reserves of natural gas, a relatively clean and efficient fuel that has been in short supply. In fact, getting a drilling permit today takes nearly six months, more than twice as long as it did in 2001.

“While there’s a thought out there that the West is open for ramping up exploration, it’s actually getting tougher and tougher,” says Jim Lightner, president, chairman and chief executive of Denver-based Tom Brown Inc.

The administration’s eagerness to get to the natural gas has energized the area’s environmental groups, which have been galvanized by the issue and are using it to gain financial backing from their supporters. Dan Hellig, executive director of the Wyoming Outdoor Council, credits a “growing level of anxiety” about the impact of oil and natural-gas production on public lands for a 56% increase in his operating budget since 2001, to $600,000 this year, despite the poor economy.

Using their increased resources, the groups can more effectively appeal Bureau of Land Management decisions and file more lawsuits to keep drillers and producers off federal land, where most of the region’s natural gas is believed to be. The groups argue that the government is so focused on energy production that it is neglecting other potential uses, such as recreation and wilderness preservation. Mr. Hellig’s group is one of a dozen that filed lawsuits earlier this year to block an estimated 55,000 proposed wells in Montana and Wyoming’s Powder River Basin.

The battles have increased tensions between environmental groups and energy producers. Winning a permit last year to do seismic work on federal lands in southwestern Colorado took Legacy Energy Corp. more than two years and an out-of-court settlement with a local environmental group. In 1995, Legacy got a similar permit on adjacent lands in seven months.

As producers wait for the OK to drill thousands of wells in the Rockies, production in other U.S. regions continues to steadily decline. North American natural-gas production in the first six months of the year was down an estimated 2.4% from a year earlier. Gas prices are at about $5.10 per million British thermal units, down from highs earlier this year.

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Aug 26, 2003
Wall st. Post.