



**The Political and Selective Use of Data:
Cherry-Picking Climate Information in the White House**

**Dr. Peter H. Gleick
Pacific Institute**

**Initial Version: March 8, 2007
Updated and Expanded: June 1, 2007**

Summary

Throughout the first half of 2007, the White House has falsely claimed that the United States is doing better than Europe in reducing greenhouse gas emissions. This claim was officially made by the White House on February 7 and has been repeated in various forms by White House Press Secretary Tony Snow, Council on Environmental Quality Chairman James Connaughton, and Science Advisor to the President John Marburger, most recently on May 31, 2007.¹ The White House is misusing science and data to make this claim, as the Pacific Institute first pointed out on March 8.² The White House can only back up this claim by looking at a single greenhouse gas over a narrow timeline. Looking at the full range of gases over a longer period, the conclusion reverses completely: the European Union is curbing greenhouse gas emissions more aggressively and successfully than the United States. Interestingly, the origin of this claim is not the White House at all, but appears to be the Competitive Enterprise Institute, which published a version of this claim in the *Washington Times*, five days before the White House began using it.

Background

We believe the false claim – that the United States was doing better than the European Union in reducing greenhouse gas emissions – first appeared in a February 2, 2007 *Washington Times* op-ed by Christopher Horner, a well-known climate skeptic from the Competitive Enterprise Institute. In that op-ed, Horner recommended the following strategy for the White House:

Pick any year since the Kyoto Protocol was agreed to in 1997, Mr. Bush should have said, and the U.S. CO₂ emission performance is superior to that of all major Kyoto parties, including and most notably Europe (CO₂ being the focus of the many pending legislative proposals).

One would never know this from reading European Union press releases, most any media

¹ White House press briefing with Snow and Connaughton.
<http://www.whitehouse.gov/news/releases/2007/05/20070531-17.html>

² This is an expansion and update of that assessment.
http://www.pacinst.org/topics/integrity_of_science/case_studies/selective_use_climate.html

account or even White House statements on the issue. The latter fact is deeply troubling given the political and diplomatic capital lost over public misunderstanding of this matter, and also the traction that proposals to mimic Europe's failed approach are gaining in Congress. In truth, Europe's CO₂ emissions are rising twice as fast as those of the U.S. since Kyoto, three times as fast since 2000. This figure balloons to more than five times as fast when one tallies the individual country average of the EU-15.³

Five days later, the White House made use of this strategy. On February 7, White House Press Secretary Tony Snow bragged that the United States was doing better than Europe in reducing greenhouse gas emissions, despite the fact that the European Union had adopted a carbon cap system and the U.S. had not.

I would point out that the carbon -- that there is a carbon cap system in place in Europe. We are doing a better job of reducing emissions here.⁴

That same day, partly in response to press inquiries for statistical support for this claim, the White House website posted an "Open Letter on the President's Position on Climate Change" signed by James L. Connaughton, Chairman of the Council on Environmental Quality and John H. Marburger, Science Adviser to the President and Director of the Office of Science Technology Policy. This letter states:

Our emissions performance since 2000 is among the best in the world. According to the International Energy Agency, from 2000-2004, as our population increased and our economy grew by nearly 10%, U.S. carbon dioxide emissions increased by only 1.7%. During the same period, European Union carbon dioxide emissions grew by 5%, with lower economic growth.⁵

The most recent repetition of this argument occurred on May 31, 2007 at the White House press briefing by Snow and Connaughton in the White House Conference Center Briefing Room. At that briefing, Connaughton stated,

Europe -- some countries in Europe, like Germany and the U.K., have made very significant strides in reducing their emissions. But if you look at the period since we took office, so since January 2001 -- we have international data through the end of 2004 -- the U.S. saw economic growth of about 10 percent while our emissions went up only about 1.6 percent. In Europe, they had economic growth of 8 percent while their emissions went up 5 percent, not down. It's always going to go up and down, and so you can't pick any one moment in time to gauge your progress. As I said, this is a marathon, it's not a sprint. We want to see what the overall trend lines look like.⁶

³ <http://www.washingtontimes.com/op-ed/20070201-084311-7972r.htm>

⁴ <http://www.whitehouse.gov/news/releases/2007/02/20070207-1.html>

⁵ <http://www.whitehouse.gov/news/releases/2007/02/20070207-5.html>

⁶ <http://www.whitehouse.gov/news/releases/2007/05/20070531-17.html>

Analysis

There are two fundamental flaws in the argument made by Horner and subsequently by the White House. Both flaws are the result of egregious misuse of data. The first flaw is *cherry picking the indicator*: that is, carefully selecting the measure to be reported to prove a point – in this case, choosing to look at carbon dioxide emissions rather than all greenhouse gas emissions. The second flaw is the result of *reference period hunting*, or *cherry picking the time period* used. The data used by Horner and the White House appear to be carefully selected to support the appearance that the United States is doing more to reduce greenhouse gas emissions than Europe. The opposite is true when the proper time period is used.

Cherry Picking the Indicator

While carbon dioxide represents the majority of greenhouse gas emissions, a variety of gases are responsible for climatic change. International agreements, including the UN Framework Convention on Climate Change, require emissions constraints on six different gases.⁷ By carefully choosing which gases to measure and which indicators to use to measure them, however, it is possible to claim false credit for progress in reducing greenhouse gas emissions.

Selective choice of indicators has long been a hallmark of the misuse of information in the climate area.⁸ In this case, the cherry-picking focuses on the choice of greenhouse gas. Horner's February 2 op-ed focused on carbon dioxide alone. Indeed, it appears Horner is aware that he could be accused of carefully selecting the measure that looks best because he tries to justify his choice ("CO₂ being the focus of the many pending legislative proposals"). In fact, this justification is itself false: all the major legislative proposals address all six major greenhouse gases.⁹ While the February 7 White House briefing mentioned "emissions" ("We are doing a better job of reducing emissions here"), all subsequent White House comments and publications have also returned to a selective look only at carbon dioxide.

Below, we analyze how the conclusions change when the proper set of gases is evaluated.

Cherry Picking the Time Period

In addition to selectively choosing the indicator to evaluate, Horner and the White House both selectively chose a time period to make U.S. policy look good. Horner, who ironically has been a staunch and regular opponent of U.S. participation in the Kyoto Protocol, chooses 1997 ("Pick any year since the Kyoto Protocol was agreed to in 1997"), and 2000 ("In truth, Europe's CO₂ emissions are rising twice as fast as those of the U.S. since Kyoto, three times as fast since 2000"). The White House settled on 2000 as their base period.

⁷ The Kyoto Protocol to the United Nations Framework Convention on Climate Change addresses six separate greenhouse gases: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF₆). <http://unfccc.int/resource/docs/convkp/kpeng.html>

⁸ Indeed, the entire focus of the current administration on "greenhouse gas intensity" (typically reported as emissions per unit of economic activity, such as carbon dioxide per \$GDP) misrepresents total emissions – permitting the US to claim progress while actual emissions of greenhouse gases continue to rise.

⁹ Senate Bill 309 (Sanders-Boxer), SB 280 (McCain-Lieberman), SB 317 (Feinstein-Carper), the Kerry-Snowe Global Warming Reduction Act, and the Bingaman-Specter draft climate resolution all look at the suite of greenhouse gases, not just carbon dioxide.

First of all, Horner gets his math wrong, even when selectively choosing 1997 as a base year. From 1997 to 2004 (the last year for which official data are available for both regions), European carbon dioxide emissions rose just under 8%; US emissions rose just under 7%. Thus, Horner's claim that "Europe's CO₂ emissions are rising twice as fast as those of the U.S. since Kyoto" is false. Indeed, in absolute terms, US carbon dioxide emissions rose by a larger amount over this period than Europe's.

Second, when the proper date is chosen as the base year, Europe does better than the United States.¹⁰ The proper base year for comparison is 1990. Article 3 of the United Nations Framework Convention on Climate Change specifies that all greenhouse gas emissions analyses are to use 1990 as the base year.¹¹ Even when carbon dioxide is the only gas evaluated, the EU-15 does far better than the U.S. over the proper period from 1990 to 2004. U.S. carbon dioxide emissions grew almost 18% over that period, while EU-15 CO₂ emissions grew 8.6%.¹²

Correcting the Flaws: Using the Right Base Year and Looking at All Greenhouse Gases

When *any year other than 2000* is selected as the base year, and *when all greenhouse gases covered by the UN Framework Convention are included in the analysis*, the claims of Horner and the White House that the U.S. is outperforming the EU turn out to be false: the European Union is performing far better than the United States. Over the entire period from 1990 to 2004, the difference is stark. During those 15 years, U.S. greenhouse gas emissions *grew* more than 15% while emissions from the 15 countries of the European Union (the EU-15) *declined* by around 1%. Moreover, calculating the index of emissions for *any* set of years between 1990 and 2004 other than 2000 to 2004, European greenhouse gas emissions either grew more slowly than U.S. emissions or actually declined.¹³

A graph of total greenhouse gas emissions for the United States and Europe reveals how this manipulation of data was done (see Figure 1). Between 2000 and 2001, U.S. greenhouse gas emissions temporarily declined because of the modest economic slowdown and the dramatic drop in air traffic and travel following the September 11, 2001 terrorist attacks, not because of government policies to reduce emissions. Thus, the only way to support a statement that the U.S. is "doing a better job of reducing emissions" is by choosing a starting date of 2000, and by only looking at carbon dioxide.

¹⁰ Horner refers to the EU-15, as do we. The EU-15 are the 15 countries of the European Union before the 2004 expansion: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom.

¹¹ The 1992 United Nations Framework Convention on Climate Change was signed and ratified by the United States and members of the European Union and made effective in 1994.

¹² <http://www.eia.doe.gov/pub/international/iealf/tableh1co2.xls>. This table shows all carbon dioxide emissions by country from 1980 to 2004.

¹³ It is also worth noting that in March 2007, the EU formally committed to reduction in greenhouse gas emissions of 20 percent from 1990 levels by 2020. The United States has made no such commitment.

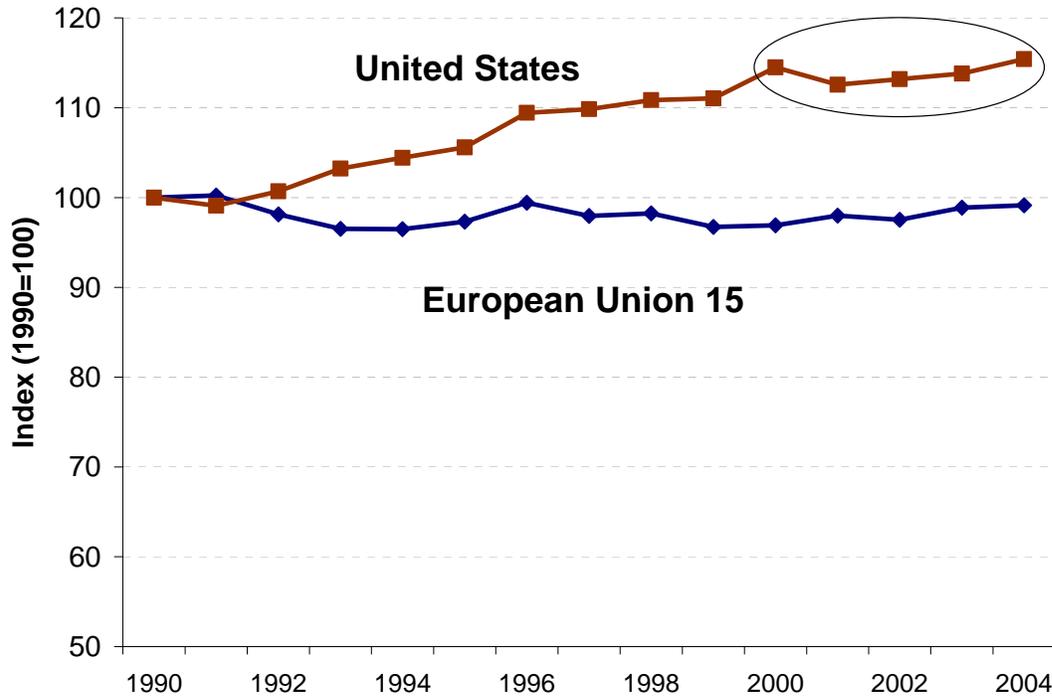


Figure 1. Index of Greenhouse Gas Emissions for the United States and the European Union, from 1990 to 2004. Index =100 for 1990. The artificial reference period selected by the White House is circled.¹⁴

For more information about the Pacific Institute, visit www.pacinst.org.

For more information about the Institute's **Integrity of Science** initiative, visit www.integrityofscience.org.

¹⁴ Source data for the EU come from their formal calculations submitted to the Secretariat of the UN Framework Convention on Climate Change (EEA Technical Report 10/2006). Source data for the United States come from the 2007 US EPA Greenhouse Gas Inventory Report. <http://epa.gov/climatechange/emissions/usinventoryreport07.html>.