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

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On February 7, 2007, 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. [Tony Snow, February 7, 2007].[1]

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, the President's science advisor 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.[2]

Taken at face value, these data appear to validate the statement made by Tony Snow earlier that day. In fact, this conclusion is an egregious example of the misuse of data called ***reference period hunting***, statistician-speak for ***cherry picking***. These data were 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 ***any year other than 2000*** is selected as the base year, the performance of the European Union is better than the United States, and over the entire period from 1990 to 2004, the

[1] http://www.whitehouse.gov/news/releases/2007/02/20070207-1.html
[2] http://www.whitehouse.gov/news/releases/2007/02/20070207-5.html

difference is stark.[3] 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%.[4] Moreover, calculating the index of emissions for any set of years between 1990 and 2004 other than 2000-2004, European greenhouse gas emissions either grew more slowly than U.S. emissions or actually declined.[5]

A graph of total greenhouse gas emissions for the United States and Europe reveals how this political manipulation of data was done (see Figure 1). Between 2000 and 2001, U.S. greenhouse gas emissions temporarily declined because of the modest recession, and the dramatic drop in air traffic and travel following the 9-11 terrorist attacks. 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.

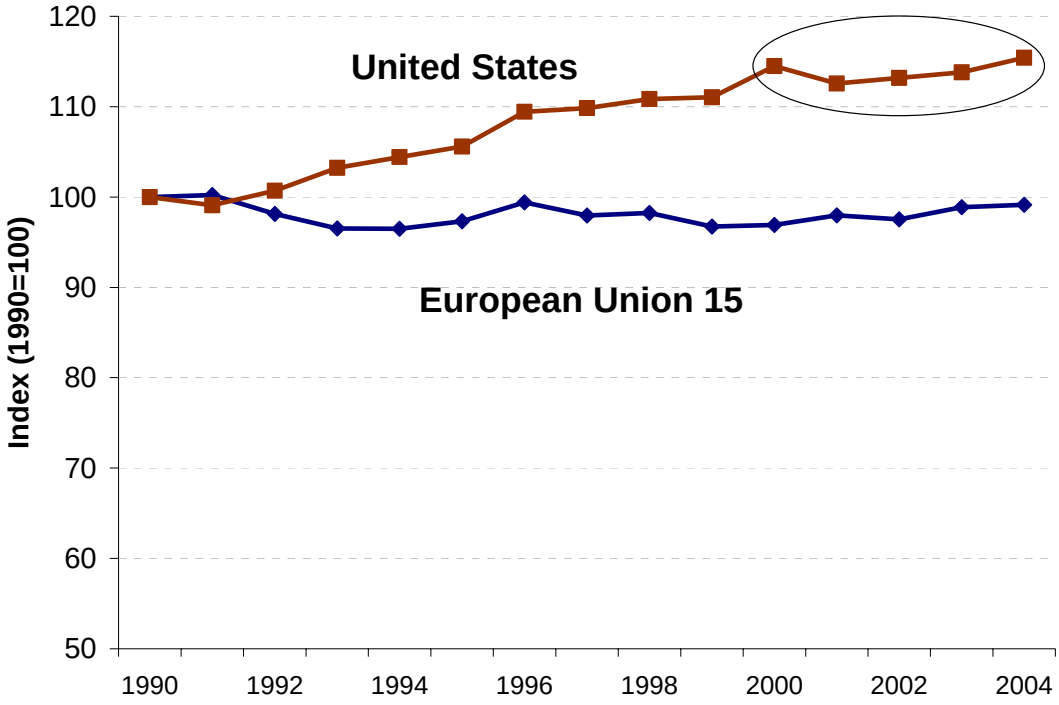

Figure 1. Index of Greenhouse Gas Emissions for the United States and the European Union, from 1990 to 2004. Index =100 for 1990. The artificial reference period selected by the White House is circled.[6]

[3] 1990 is considered the base year for all greenhouse gas calculations because of the requirements of the United Nations Framework Convention on Climate Change, signed and ratified by the United States and members of the European Union.

[4] 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.

[5] 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.

[6] 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 EPA Greenhouse Gas Inventory Report: http://epa.gov/climatechange/emissions/usinventoryreport07.html).