



Policies for a Low Carbon Society: Is the Industrialized World Doing Enough?

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10 largest CO2 Emitters

- USA 21.44%
 - China 18.80%
 - Russia 5.69%
 - Japan 4.47%
 - India 4.23%
 - Germany 3.00%
 - Canada 2.02%
 - United Kingdom 1.95%
 - Italy 1.67%
 - Korea, Rep. 1.65%
- c Germanwatch 2007

Overall Results of the Climate Change Performance Index 2008

CCPI Rank	Country	Score ^a	Partial Score		
			Trend	Level	Policy
1	Sweden	65.6			
2	Germany	64.5			
3	Iceland	62.6			
4	Mexico	62.5			
5	India	62.4			
6	Hungary	61.0			
7	United Kingdom	59.2			
8	Brazil	59.0			
9	Switzerland	59.0			
10	Argentina	58.5			
11	Latvia	58.1			
12	Belgium	57.9			
13	Portugal	57.9			
14	Malta	57.8			
15	Indonesia	57.6			
16	Norway	57.6			
17	Denmark	57.3			
18	France	56.8			

CCPI Rank	Country	Score ^a	Partial Score		
			Trend	Level	Policy
20	Lithuania	55.9			
21	Turkey	55.7			
22	Bulgaria	55.5			
23	Morocco	54.8			
24	Slovenia	54.2			
25	Czech Republic	51.9			
26	Thailand	51.7			
27	Romania	51.5			
28	Algeria	50.5			
29	Spain	50.1			
30	Netherlands	50.1			
31	New Zealand	50.0			
32	Croatia	49.7			
33	South Africa	49.5			
34	Iran	49.4			
35	Estonia	49.2			
36	Finland	49.1			
37	Austria	48.7			

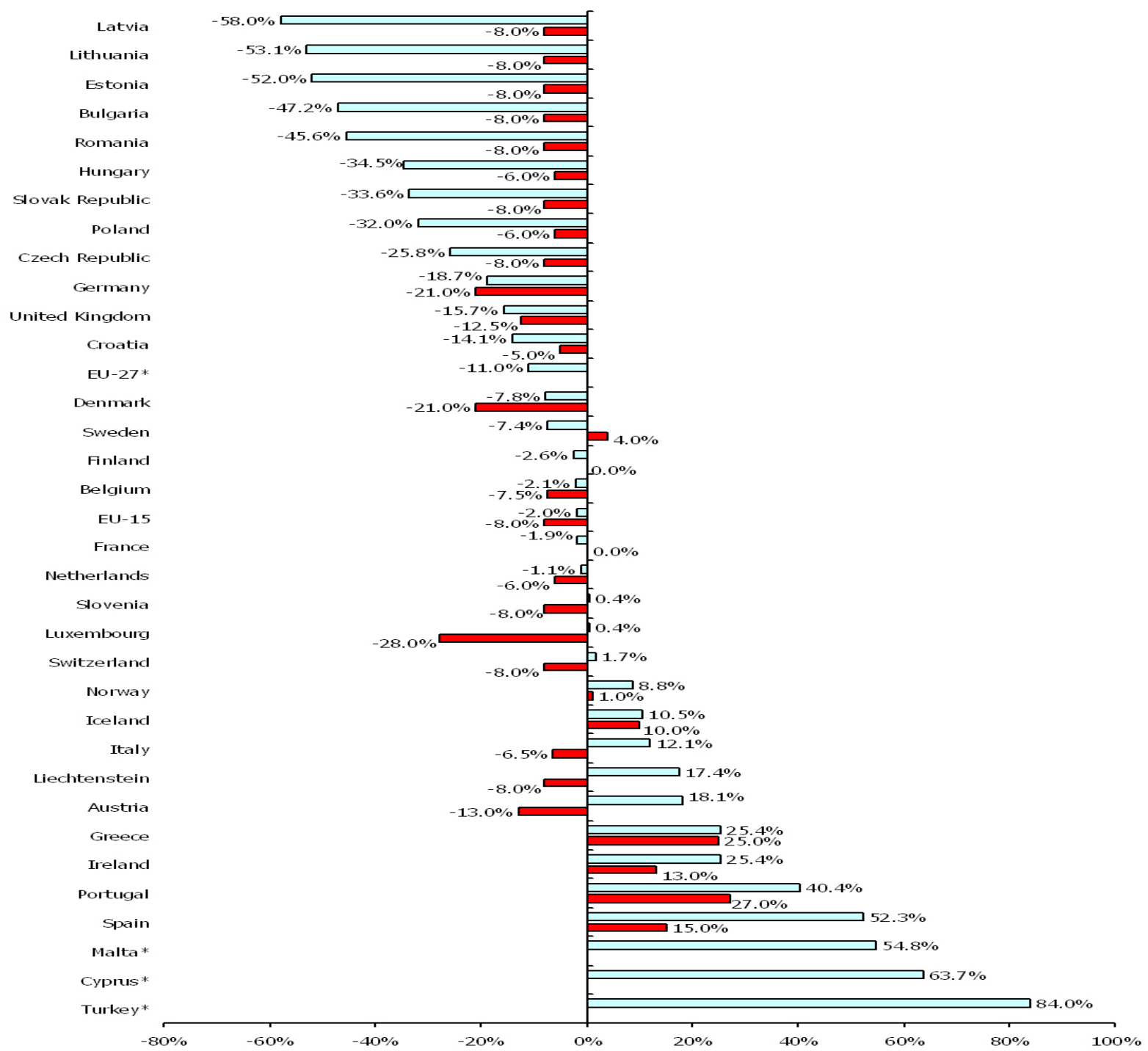
CCPI Rank	Country	Score ^a	Partial Score		
			Trend	Level	Policy
39	Poland	47.2			
40	China	47.0			
41	Italy	47.0			
42	Japan	46.9			
43	Greece	46.8			
44	Ireland	46.4			
45	Cyprus	46.0			
46	Singapore	45.4			
47	Ukraine	44.7			
48	Kazakhstan	44.6			
49	Malaysia	44.2			
50	Russia	43.9			
51	Korea, Rep.	41.3			
52	Luxembourg	39.2			
53	Canada	37.6			
54	Australia	35.5			
55	USA	33.4			
56	Saudi Arabia	30.0			

EU Action on Climate Change

- The EU aims to cut CO₂ emissions:
 - by 8% on 1990 levels by 2008-12 (Kyoto)
 - by 20% by 2020 (30% if other developed countries commit to comparable reductions)
 - (tied to a goal of saving 20% of energy consumption through energy efficiency improvements by 2020)
- EU-wide CO₂ emissions trading scheme operational since January 2005

Legislative Developments: Targets for Renewables

- EU 20% renewable energy target for 2020 (as share of total energy)
- 10% target for biofuels as share of all fuel



Angela Merkel: Heiligendamm June 2007

- Merkel convinces a skeptical George W. Bush to agree to G8 statement that **“Global greenhouse gas emissions must stop rising, followed by substantial global emission reductions .”** G8 text includes mention of Merkel’s proposal for a 50% cut by 2050



German “Climate Agenda 2020”

German plan for achieving 40 percent CO₂ emission reduction cuts without relying on nuclear energy.

The plan called for increasing the share of renewables in electricity to 27 percent by 2020, doubling combined heat and power, modernizing power plants, and improving energy efficiency by 11 percent

Germany

- December 2007, German cabinet adopts Climate Package (a set of policies and measures to help the country achieve its target of a 40% reduction of CO₂ emissions by 2020 relative to 1990 levels).
- -renewable energies, energy efficiency, higher energy standards for buildings...
- German playing big part in helping EU to meet its 20, 20, 20 by 2020 goals

1990-2005 trends

- Between 1990 and 2005 total greenhouse gas emissions, excluding LULUCF:
 - decreased by 7.9 % (444 Mt CO₂-eq.) in the EU-27;
 - decreased by 1.5 % (65 Mt CO₂-eq.) in the EU-15;
 - decreased by 27.8 % (379 Mt CO₂-eq.) in the new Member States.
- EU-15 has achieved one fourth of the total reduction needed to achieve the 8 % reduction goal.

Japan and Kyoto Protocol

- Japan commits to 6 percent reduction of CO₂ emissions relative to 1990 levels by 2008-2012
- Japan joins EU in ratifying Kyoto Protocol in 2002, agreement goes into effect in 2005
- Japan's 2003 emissions 13.1% above Kyoto target

New GHG Emission reduction targets being expressed for Post-Kyoto

- UK (-60% by 2050)
- CA (-80% by 2050)
- Warner-Liebermann (-63% by 2050 (base 2005))
- Germany (-40% by 2020)
- EU (-20% by 2020, -50% by 2050)
- Japan (-80% as a global target for 2050 ; -60-80% for Japan by 2050)

Bali Negotiations

EU proposal for a 25-40% emissions reduction target for rich countries for post-2012.

Reductions are for 2020 relative to 1990 (the EU proposal was based on IPCC estimates of emission cuts that would be necessary to maintain global temperature rises to 2 degrees C by mid-century).

US and Japan reject



G8

Work toward -50% by 2050.

Changing Climate Change Dynamics in the United States

- Growing grass roots support for a strong climate change program
- State and local level climate change initiatives
- Growing Congressional support for climate change legislation
- 2008 Presidential election (Obama vs McCain)

Conference of New England Governors & Eastern Canadian Premiers

adopted a resolution recognizing climate change as a joint concern.

August 2001 regional Climate Change Action Plan (each must reduce GHGs to 1990 levels by 2010 and 10 % below 1990 levels by 2020)

Regional Greenhouse Gas Initiative

- cap-and-trade scheme for CO₂ from major power plants to beginning January 2009
- Goal: stabilize CO₂ emissions between 2009 and 2015
- annual cuts in CO₂ emissions by 2.5 percent per year after this (total 10 % reduction by 2019 in each state)
- Includes: Maine, Maryland, Massachusetts, Vermont, New Hampshire, Connecticut, New York, New Jersey, and Delaware

At the regional level

- about half of the 50 states have entered into regional climate change and emission trading pacts.

California Climate Bill (AB1493)

- plan for achieving “maximal feasible reduction” of carbon dioxide emissions from vehicles, effective 2006.
- Car makers have been given until 2009 to meet the new standards.

Connecticut, Maine....

- At the state level, numerous states have introduced climate change legislation.
- Maine (2003), Connecticut (2004) passed legislation that states it shall be a goal of the state to stabilize greenhouse gas levels at 1990 levels by 2010 and to reduce them by 10 percent of 1990 levels by 2020.

CA Renewable Energy Portfolio Standard (2002)

aim of achieving 20 percent of its energy come
from renewable resources by 2017.

U.S. Mayor's Climate Protection Agreement

As of 2008

850 mayors of U.S. cities, representing 80 million Americans, have signed.

They have agreed to strive to meet or exceed the Kyoto Protocol targets.

C40 Large Cities

(<http://www.c40/seoulsummit.com/>)

cities alone consume approximately three-quarters of the world's energy and produce about 80 percent of anthropogenic greenhouse gas emissions.

CCI and C40 Large Cities Climate Leadership Group

- a group of 40 of the largest cities around the world—including from the countries focused on here: Chicago, Houston, Los Angeles, New York, Philadelphia, Berlin, Tokyo, Shanghai, Beijing--that have pledged to speed up their efforts to reduce global warming emissions. There are also as of September 2008 an additional 13 affiliate cities (including Austin, New Orleans, Portland, Salt Lake City, San Francisco, Seattle, and Heidelberg).

America's Climate Security Act (2007)

- In Dec 2007, the Senate Environment and Publics Work committee passed the Lieberman-Warner climate bill (America's Climate Security Act).
- cap-and-trade system for carbon and mandate a 7 % cut in GHG pollution by 2050 relative to 2005 levels. (11-8 vote)

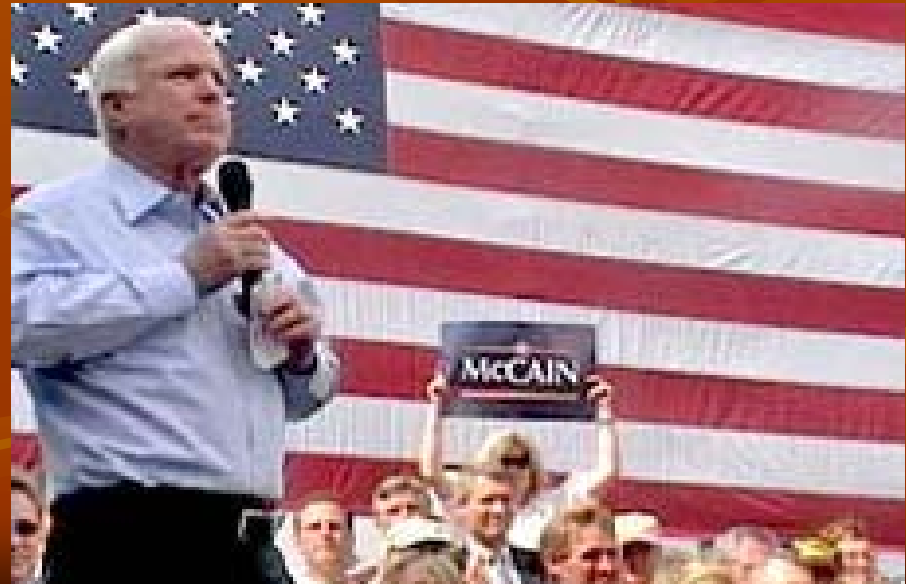
....but

Climate Security Act (2007)

- Fails to win sufficient votes to pass in Senate (48 to 36 vote (neither Obama nor McCain cast a vote though both expressed support for the bill))
- In the lead up to the vote, President Bush expressed his disapproval of the bill, arguing it "would impose roughly \$6 trillion in new costs on the American economy"

Obama vs McCain

- Both support federal leadership role for climate change
- Obama supports an 80% reduction target for 2050
- McCain first introduced a bill supporting cap and trade in 2003



Barack Obama

- **Reduce Carbon Emissions 80 Percent by 2050**
- **Cap and Trade:** will require all pollution credits to be auctioned. Some of the revenue generated by auctioning allowances will be used to support the development of clean energy, to invest in energy efficiency improvements, and to address transition costs, including helping American workers affected by this economic transition.

Barack Obama

- **\$150 Billion over 10 Years in Clean Energy**
- **Double Energy Research and Development Funding**
- **Require 25 Percent of Renewable Electricity by 2025**
- **Develop and Deploy Clean Coal Technology**
- **Increase Fuel Economy Standards 50 Percent by 2030**
- **Set National Building Efficiency Goal** of making all new buildings carbon neutral, or produce zero emissions, by 2030.
- **Restore U.S. Leadership on Climate Change**
- **Create Global Energy Forum** — that includes all G-8 members plus Brazil, China, India, Mexico and South Africa — the largest energy consuming nations from both the developed and developing world.
- **Re-Engage with the U.N. Framework Convention on Climate Change**

John McCain

Proposes A Cap-And-Trade System That Would Set Limits On Greenhouse Gas Emissions While Encouraging The Development Of Low-Cost Compliance Options.

Greenhouse Gas Emission Targets And Timetables

2012: Return Emissions To 2005 Levels (18 Percent Above 1990 Levels)

2020: Return Emissions To 1990 Levels (15 Percent Below 2005 Levels)

2030: 22 Percent Below 1990 Levels (34 Percent Below 2005 Levels)

2050: 60 Percent Below 1990 Levels (66 Percent Below 2005 Levels)

John McCain

- Innovative, Development, Deploying Climate Change Technologies
- Effective International U.S. Leadership and support of UN negotiations
- Support for Adaptation

Joseph Biden

- League of Conservation Voters: 83 % lifetime scorecard during his 35 years in the Senate.
- introduced legislation to eliminate subsidies to oil companies,
- supported raising the fuel economy standard,
- opposed the nuclear waste repository in Yucca Mountain,
- opposed drilling for oil in the Arctic National Wildlife Refuge, big supporter of biofuels and renewable energy (calling for 20 percent of electricity to come from renewables),
- takes cautious view on increasing US reliance on nuclear energy
- cosponsor of Sense of the Senate resolution: calls on US to participate in UN climate negotiations.
- co-sponsored Boxer-Sanders Global Warming Pollution Reduction Act, to establish a cap and trade system with a stabilization goal at 1990 levels by 2020 and an 80 percent cut below 1990 levels by 2050.

Sarah Palin

- strong supporter of enhancing oil and gas production and pushing for energy independence.
- August 2008 interview: “A changing environment will affect Alaska more than any other state, because of our location. I’m not one though who would attribute it to being man-made.”
- At Republican National Convention she called for laying more pipelines, building more nuclear power plants, creating jobs with clean coal, and moving forward on solar, wind, geothermal and other alternative sources.
- called for lifting moratorium on off shore oil drilling and has indicated her support for drilling for oil and gas in the Arctic National Wildlife Refuge.