

# Obama and Clinton plan to cool it

Earth, that is. Our energy expert cracks open the Democratic candidates' proposals on global warming -- and is impressed.

By Joseph Romm



Reuters images

Sen. Barack Obama and Sen. Hillary Clinton

March 15, 2008 | The most important call for the next president won't come at 3 a.m., and it won't involve military security.

The gravest threat to the American way of life is posed by unrestricted greenhouse gas (GHG) emissions. Global warming threatens to put the Southwest into a permanent drought, raise sea levels by 6 or more inches a decade, generate hundreds of millions of environmental refugees at home and abroad, wipe out half the planet's species, and increase average temperatures in the nation's interior 10-20 degrees Fahrenheit. And these impacts would likely get steadily worse for hundreds of years or longer.

No enemy, foreign or domestic, poses a threat to us that is so devastating, so irreversible. Top climate scientists tell us the threat might be all but unstoppable if the nation and the world don't take serious steps over the next decade to restrict GHG emissions. For all the urgent crises the next president has to deal with in the middle of the night, the most important calls he or she will have to make concern how to stop global warming.

**We've seen** that a President McCain is not likely to be the leader this country and the world need to maintain the planet's livability for our children and the next 50 generations. What about a President Hillary Clinton or Barack Obama? Both would be a giant step forward. Unlike McCain, they have both put out detailed and comprehensive plans. (Obama's is [here](#). Clinton's is [here](#).) Although you wouldn't know it from the media coverage, these plans are more important to the long-term health and well-being of future generations than the candidates' healthcare or Iraq plans.

Before I look in depth at them, the first thing to make clear is that no president, not even a modern-day Lincoln or FDR, could possibly stop global warming even by their second term. The increase in concentrations of heat-trapping greenhouse gases is primarily what determines how much humans will increase the planet's temperature. To stop concentrations from rising further, the entire planet will have to reduce total annual emissions at least 60 percent or more from current levels, including

carbon dioxide emissions from burning fossil fuels. Absent a World War II-type mobilization, that kind of dramatic change in the planet's energy system will take a few decades.

Even when concentrations stop rising, global temperatures will continue to increase for many decades because it takes a long time for the planet's temperature to come into equilibrium with any new level of GHG concentrations. Ultimately, by 2100, we will probably need net human GHG emissions to be close to zero, if not negative, to avert catastrophe. We can't stop global warming in the next decade.

Humanity's great challenge is to stop the warming before we cross key thresholds or tipping points, in which amplifying feedbacks in the carbon cycle start to seriously kick in and overwhelm human efforts to reduce emissions. A typical feedback would be the melting of the permafrost or tundra, which currently has locked away some 1,000 gigatons of carbon -- more carbon than the atmosphere is holding today.

If the permafrost stops being perma, that would release tens of billions of tons of carbon into the atmosphere, much of it in the form of methane -- a much more potent greenhouse gas than carbon dioxide. That, in turn, would speed the temperature increase and the thaw of additional permafrost. In short, passing such a tipping point would set the planet on an all-but-unstoppable path to high concentrations of GHGs, destroying the planet's livability for centuries if not millennia, according to the latest research.

So we must sharply reduce emissions even as the population keeps growing, and do it in a way that increases, rather than hinders, economic development, particularly in undeveloped nations already wracked by poverty, disease, dirty water, hunger and other scourges.

This necessitates deploying all existing or near-term clean energy technologies today as rapidly as possible, while shutting down or capturing the emissions of at least half of the dirty technologies. At the same time, we must accelerate the development and introduction of the next generation of clean technologies, which can ultimately take global emissions as low as possible by century's end.

A mandatory GHG control system that establishes a price for carbon dioxide emissions, such as a cap-and-trade system, is necessary. Both Clinton and Obama endorse a cap-and-trade system, requiring an 80 percent reduction in U.S. GHGs by 2050 compared to 1990 levels, much deeper than McCain has so far endorsed and close to what is currently believed necessary for our country and planet. Recently, McCain has also begun waffling about just how "mandatory" his program would be. Voluntary caps don't work and must be rejected.

Yet cap and trade is not enough. The next president has a great many important calls to make:

- Appoint judges who will uphold laws to reduce emissions against challenges from the big polluters.
- Appoint leaders and staff of key federal agencies who take climate change seriously and believe in the necessary solutions.
- Embrace an aggressive and broad-based technology deployment strategy to keep the cost of the cap-and-trade system as low as possible.
- Lead a change in utility regulations to encourage, rather than discourage, energy efficiency and clean energy.
- Offer strong public advocacy to reverse the years of muzzling and misinformation of the Bush administration.

McCain is unlikely to do any of these five things. Obama and Clinton are likely to do them all. In particular, at least from my perspective as a former Energy Department official, the most important news is that both of them understand the necessity of the technology side.