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## Power Failure

**Politicians are fiddling while the planet burns. What's a voter to do?**

By **James Hansen** | NEWSWEEK

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Planet Earth is in imminent peril. We now have clear evidence of the crisis, provided by increasingly detailed information about how Earth responded to perturbing forces during its history and by observations of changes that are beginning to occur around the globe. The startling conclusion is that continued exploitation of all fossil fuels on Earth threatens not only the other millions of species on the planet but also the survival of humanity itself—and the timetable is shorter than we thought.

I believe the biggest obstacle to solving global warming is the role of money in politics, the undue sway of special interests. "But the influence of special interests is impossible to stop," you say. It had better not be. But the public, and young people in particular, will need to get involved in a major way.

"What?" you say. You already did get involved by working your tail off to help elect President Barack Obama. Sure, I (a registered independent who has voted for both Republicans and Democrats over the years) voted for change too, and I had moist eyes during his Election Day speech in Chicago. That was and always will be a great day for America. But let me tell you: President Obama does not get it. He and his key advisers are subject to heavy pressures, and so far the approach has been "Let's compromise." So you still have a hell of a lot of work ahead of you. You do not have any choice. Your attitude must be "Yes, we can."

I am sorry to say that most of what politicians are doing on the climate front is greenwashing—their proposals sound good, but they are deceiving you and themselves at the same time. Politicians think that if matters look difficult, compromise is a good approach. Unfortunately, nature and the laws of physics cannot compromise—they are what they are.

In 2001, when I spoke to Vice President Dick Cheney's cabinet-level Climate Task Force, I was more sanguine about the climate situation. It seemed that the climate impacts might be tolerable if the atmospheric carbon dioxide amount was kept at a level not exceeding 450 parts per million (ppm; thus 450 ppm is 0.045 percent of the molecules in the air). So far, humans have caused carbon dioxide to increase from 280 ppm in 1750 to 387 ppm in 2009.



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During the past few years, however, it has become clear that 387 ppm is already in the dangerous range. It's crucial that we immediately recognize the need to reduce atmospheric carbon dioxide to at most 350 ppm in order to avoid disasters for coming generations. Such a reduction is still practical, but just barely. It requires a prompt phaseout of coal emissions, plus improved forestry and agricultural practices. We need to acknowledge now that a change of direction is urgent. This is our last chance.

How, though, can today be a critical moment when we do not yet observe great changes in climate? So far, the effects of climate change have been limited because of climate-system inertia, but inertia is not a true friend. As amplifying feedbacks begin to drive the climate toward tipping points, that inertia makes it harder to reverse direction.

Heat is pouring into the ocean, and ice shelves are starting to melt. We must remember that the human-made climate forcing—changing the planet's energy balance in a way that alters temperature—is not coming on just a bit faster than the natural forcings of the past; on the contrary, it is a rapid, powerful blow, an order of magnitude greater than any natural forcings that we are aware of.

Qualitatively different storms will occur when ice-sheet disintegration is large enough to damp high-latitude ocean warming, or even to cause regional ocean cooling, while low latitudes continue to warm. Global chaos will ensue when increasingly violent storminess is combined with sea-level rise of a meter and more. Although ice-sheet inertia may prevent a large sea-level rise before the second half of the century, continued growth of greenhouse gases in the near term will make that result practically inevitable, out of our children's and grandchildren's control.

Several uncertainties will affect the speed at which more obvious climate changes emerge. One is uncertainty about whether and how solar irradiance will change during the next few years and the next few decades. As of October 2009, the sun remains in the deepest solar minimum in the period of accurate satellite data, which began in the 1970s. It is conceivable that the sun's energy output will remain low for decades. But, contrary to the fervently voiced opinions of solar-climate aficionados, such continued low irradiance would not cause global cooling and would not stop the continued progression of global warming. Indeed, if the sun pulls out of its current minimum soon, resuming a typical solar cycle, there may be an acceleration of global warming in the next six to eight years. But whatever happens with solar irradiance, the world is going to be warmer during the next decade than it was in the present decade, just as the present decade is warmer than the 1990s.

You need to be well informed to understand these matters, because you cannot count on governments to deal properly and promptly with the climate issue. The problem with governments is not scientific ability—the Obama administration, for example, appointed some of the best scientists in the country to top positions in science and energy. Instead, the government's problem is politics—politics as usual.

U.S. government scientists, at least those at the highest levels, cannot contradict a position taken by the president. And President Obama's assertion that he would "listen to" scientists did not mean that he would not listen, perhaps with even sharper ears, to political advisers.

When you learn of a lightly publicized agreement with Canada for a pipeline to carry oil squeezed from tar

sands to the United States, when the president advocates an ineffectual cap-and-trade approach for controlling carbon emissions, when our government funnels billions of dollars to support "clean coal" while treating next-generation nuclear power almost as a pariah, you can recognize right away that our government is not taking a strategic approach to solve the climate problem.

Our planet, with its remarkable array of life, is in imminent danger of crashing. Yet our politicians are not dashing forward. They hesitate; they hang back.

Therefore it is up to you. As in other struggles for justice against powerful forces, it may be necessary to take to the streets to draw attention to injustice. Civil resistance may be our best hope. It is crucial for all of us, especially young people, to get involved. This will be the most urgent fight of our lives.

*From "Storms of My Grandchildren" by James Hansen. © 2009 by James Hansen. Reprinted by permission of Bloomsbury Publishing, Inc.*

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