

Educating the Greatest Generation

by Eban Goodstein

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In February, 2006, the head of the NASA Goddard Space Research Institute at Columbia University, Dr. James Hansen, said this:

“How far can it go? The last time the world was three degrees [C, 6 degrees F] warmer than today - which is what we expect later this century - sea levels were 25m higher. So that is what we can look forward to if we don't act soon...

How long have we got? We have to stabilize emissions of carbon dioxide *within a decade*, or temperatures will warm by more than one degree [C, 2 degrees F] That will be warmer than it has been for half a million years, and many things could become unstoppable... *We don't have much time left.*”

This was the top US government climate scientist, speaking in plain language about a crisis without precedent in human history. When I read this I thought, Americans do not know this. Increasingly the public accepts that global warming is real, and scary, but very few people understand how critical are the policy decisions that will be made in 2009 and 2010. In those two years, we will either pass laws that will stabilize and begin aggressive cuts in US global warming pollution, and fund large scale investment in clean energy technologies—or we won't. Either way, the decisions will have profound impacts, not only on our own lives and the lives of our children, but indeed, for every human being who will ever walk the face of the planet from now until the end of time.

While most Americans were failing to hear our leading scientific voices, many educators were not. At every high school, community college and university I knew there were faculty, staff and administrators who understood the unique historical moment in which we are living, and who felt – as I did – that we owed our young people a focused, national discussion about the decisions we as a nation would either make, or not make, in the next few years.

And so, with the encouragement of my President and Dean, fifteen months ago, I helped launch Focus the Nation, a national educational initiative on “Global Warming Solutions for America”. Focus the Nation grew rapidly to become the largest teach-in in US history. On January 31st, over 1300 institutions – colleges, universities, high schools, middle schools, faith organizations, civic groups and businesses – held simultaneous educational symposia in a national brainstorm on solutions to global warming.

On the campus of almost every major four-year college and university, and at hundreds of community colleges, teams of faculty, students and staff sponsored panels, workshops, theater and music presentations, technology fairs, poetry readings, keynotes, sculpture displays, poster sessions and debates. Tens of thousands of educators engaged close to a million students in a conversation that—if continued-- can help move America beyond the uncharacteristic fatalism that has gripped our country, towards a determination to face up to this civilizational challenge.

Many Focus the Nation teams built real “teach-ins”, educational events that focused the entire campus on the issue for a single day. The key here was faculty involvement. By engaging dozens of faculty on each campus, Focus organizing teams insured that thousands of students were involved.

At Lewis & Clark, for example, in a session on “Obstacles to Change” a psychology professor talked for ten minutes about denial; a communications professor talked about the media, and an economist, about technology obstacles, leaving a half an hour for discussion. In “Life Without Polar Bears” (a recent study forecasts the possibility of an ice-free summer Arctic *within five years*), an artist talked—not about global warming at all – but about what makes these beautiful creatures such powerful iconic images. A philosophy professor discussed the moral implications of mass extinction. And an ecologist gave us some hope, that if we do the right thing, perhaps there will be remnant habitat for these bears in the Arctic region.

Focus the Nation featured both education and civic engagement. Hundreds of members of congress, senators, mayors, and city councilors sat down for non-partisan, round-table discussions of global warming solutions. And across the country students and citizens are participating in an on-going, on-line vote on global warming solutions. Technology allowed us to tie the events together, with a live, launch web-cast and interactive, map displays of Focus the Nation activities from Florida to Oregon, from Arizona to Michigan to South Carolina.

Focus the Nation has put a lie to the idea that today’s young people (and educators) are apathetic and unengaged. Focus started with two full time staff – and barely a year later, over a thousand teams in every state in the country have been hard at work. Complimenting our efforts, across the country tens of thousands of students are engaged in independent campus and community activism, implementing local solutions, and demanding state and national responses to global warming. We are all, however, in a race against the physics of heat-trapping gasses.

Last month, Dr. Rajendra Pachauri, head of the UN’s Intergovernmental Panel on Climate Change said this: “If there’s no action before 2012, that’s too late. What we do in the next two to three years *will determine our future*. This is the defining moment.”

What Pachauri meant is that after 2012, a window will close, forever. The IPCC has shown that if we are to hold global warming to the low end, 3-5 degrees F, then emissions in the industrial countries must stabilize and begin to decline rapidly in the

next few years. If not, then the *best* our kids will be looking at will be global heating of 4-6 degrees F.

And as Dr. Hansen told us two years ago, the last time the world was 6 degrees F hotter than it is today, sea levels were 75 foot higher and the island of Manhattan was largely submerged. Every tenth of a degree matters, because it raises the possibility that we might cross some emissions threshold that would lock in a temperature increase that would trigger some catastrophic outcome—not only massive sea level rise, but also, potentially, fire-driven deforestation in the Amazon and elsewhere, or large scale methane releases from the tundra. The full impact of crossing these biophysical tipping points might take several hundred or thousands of years to be completely felt, but once set in motion, they would be unstoppable.

Where does this leave our students? Many people refer to my parents generation—who were raised in the Great Depression and fought and won World War II-- as the Greatest Generation. But in fact, today's young people must become, quickly, the Greatest Generation.

To hold global warming to the manageable low end, by the time today's students reach my age, they will bring a close to the fossil fuel era. Within the next decade, they must begin to rewire the entire planet with clean energy technologies; redesign every city on earth; reimagine the global food system; reinvent transportation. In so doing, they will create tens of millions of jobs, stabilize the global climate, and lay the foundation for a truly just and prosperous future.

Where does this leave us as educators? Of course, we must prepare young people for the heroic task ahead. This means, across the curriculum, giving them the tools to think creatively and practically, to solve the complex engineering, ecological and social design problems that they must solve in the coming decades.

But in the very short run, we have another job to do. As did my parents' contemporaries, today's young people must assume the mantle of the Greatest Generation at age 20— in this case, not on the beaches of Normandy, but rather in state capitals across the country, and in Washington, DC. Only young people possess the moral authority to demand the kind of action from our government that will be needed in the next three years: laws stabilizing and then cutting global warming pollution, and channeling tens of billions of dollars into clean energy research. It is their future, and no one else can speak for them.

In October I addressed several thousand young climate leaders in Washington DC, who had gathered there for a weekend of training, followed by the biggest youth lobby day in the history of the US. Students fanned out across the capital visiting the offices of over 300 congresspeople and senators. These are impressive young people, among the best and the brightest, the most sophisticated and capable, that America has ever produced. Our primary job as educators now is to help them be – very quickly – the leaders that they must become.

Since Plato's founding of the Academy, promoting civic leadership has been integral to our mission. Today, cultivating leaders is an unusual focus for educators, buried as we are under piles of papers. These are, however, unusual times. Two decades of peer-reviewed science, producing thousands of publications, all synthesized by the IPCC, has laid out the extraordinary challenge.

None of us asked for this. And yet, here we are, over the next few years, demanded to show of what grace and intelligence the human species is capable. With our help, today's young people can gain the wisdom to carry us towards a stable climate, and a just and sustainable future.