

Featured Article from ISSP Insight newsletter dated May, 2008

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Eban Goodstein on Climate Change: What we have to do **NOW**

By Darcy Hitchcock

Dr. Eban Goodstein is Professor of Economics at Lewis and Clark College in Portland, Oregon. Goodstein is the author of a college textbook, *Economics and the Environment*, (John Wiley and Sons: 2007) now in its fifth edition; *The Trade-off Myth: Fact and Fiction about Jobs and the Environment* (Island Press: 1999); and *Fighting for Love in the Century of Extinction: How Passion and Politics Can Stop Global Warming* (University of Vermont Press: 2007).

Goodstein's current research focuses on the economics of global climate change, a subject on which he has spoken widely. His research has been featured in The New York Times, Scientific American, Time, Chemical and Engineering News, The Economist, USA Today, and The Chronicle of Higher Education. From 2006-2008, Dr. Goodstein is directing Focus the Nation, a national educational initiative on global warming solutions for America, involving over a thousand colleges, universities, high schools and other institutions nationwide.



For information on Focus the Nation, go to www.focusthenation.org.

Darcy: What are the most startling new findings related to climate change that you think people should be aware of?

Eban: Most people now seem to get that climate change is real and bad. But very few understand the short time line we have to take action, to hold greenhouse gas levels down to avoid catastrophic consequences.

Dr Rajendra K Pachauri, Chairman, of the Intergovernmental Panel on Climate Change recently said that if we wait till 2012, it will be too late. What that means is if we're going to hold warming to the to 3-4 degree F range, then the US and other industrial countries have got to stabilize and begin to reduce greenhouse gas by 2012-13. Developing countries would have a 10-year grace period and then they also would need to reduce dramatically.

You see, every 1/10th of a degree matters. We are at risk of crossing major thresholds like melting

the Greenland and West Antarctic ice sheets, thawing the arctic tundra which would release massive amounts of methane, or burning down the Amazon rainforest, releasing billions of tons of additional carbon into the atmosphere.

Darcy: 2012. That's just a few years away. How realistic is it that we can do what you say?

Eban: Actually, it's quite easy to do. I often say that the 20-year-olds are the greatest generation because they'll have to cut 20 percent per decade for 4 decades running. Our generation, we only have to stabilize and then begin to cut. We need to invest \$30-40 billion in the US in clean tech per year. This would enable our kids to rewire the world, to bring an end to fossil fuels. It's not technical. It's an issue of political will.

To put this into perspective, Californians use only 55 percent of the energy an average American

uses. So we only have to live like Californians. That's a pretty nice lifestyle. We can make these near-term goals without changing lifestyles much.

Darcy: Why are Californians so much more efficient than the rest of the country?

Eban: They've had a very smart energy efficiency policy for 30 years. They use a lot less electricity per capita than anyone else.

Darcy: There have been a lot of targets flying around lately for how much and how fast we need to reduce greenhouse gases. I saw recently that some scientists now think the 80 percent reduction by 2050 even isn't enough. Which targets are best supported by science? How well are they being supported politically?

Eban: I think it's easier to think about what target should be for the atmosphere than how much we have to cut. We've been creating a blanket of greenhouse gases over the planet. Before the Industrial Revolution, CO₂ levels were 280 ppm. If we work really hard and stabilize at 450 ppm, then hopefully we'll only see 3-4 degrees F rise and with luck, avoid catastrophic consequences.

Jim Hansen from NASA recently said we'd eventually need to get back down to 350 ppm, but he's talking over 150 years. That's almost not worth talking about right now.

Darcy: It still seems scary to me that we just accept we're going to 450. If 280 was 'normal,' then why is no one talking about getting back to that? Is it just politically unworkable or does the science say that 450 is just fine as a goal?

Eban: I think we all assume that it's politically and economically infeasible to get quickly back to 280. We're facing another 50 percent increase in population. And developing nations have aspirations to live a better life. It's hard to image this happening without the use of fossil fuels in the next couple of decades. You have to be realistic. You have to imagine how real people and

politics can get you to a target you're seeking. It's not likely we'll have a mobilization similar to what we have had in wars. It's more realistic to think of this like the moon race in terms of mobilization of capital. In poor countries, they'll continue to use fossil fuels until renewable technologies are cheap enough.

Darcy: But China is building the equivalent of one or two coal fired power plants a week and will want to run them for 40 years. We have debt for nature swaps. Shouldn't we have a massive technology transfer process?

Eban: Actually, that's part of the Kyoto Protocol. The Clean Development Mechanism allows countries to get carbon offsets by transferring technology. We need to subsidize this transfer as we did with the Montreal Protocol and ozone depleting substances. We subsidized that to the tune of about \$1 billion in aid for China and India.

All this assumes the US will get on board.

Darcy: Clearly this is a political issue. I don't want to get into which candidate you think is best right now, but how confident are you that the US is soon going to have the political will to take on climate change in a meaningful way?

Eban: It does matter who is in office. But it matters most at the congressional level. We need about 15-20 more supportive representatives in the House and 5 in the Senate. I tell people this is the most important election in human history. Focus on Congressional elections. This isn't a partisan issue—McCain and Schwarzenegger for example have been Republican leaders calling for action. But it is political. A precondition for stopping global warming is US legislation in 2010.

Darcy: Do you think these targets are realistic (i.e., do we have a prayer of reaching them)?

Eban: From an economic and technical point of view, I think it's very doable. I'm less optimistic politically.

Darcy: Do you mean globally or in the US in particular?

Eban: In the US. What we do here is really important. First, the US is one of the two biggest GHG polluters, far and away on a per capita basis, and if we don't address the problem here, it could be too late. We also have incredible flexibility and markets and research engineers and wealth to solve this from a technical point of view.

Things can change really fast. I like to use a Civil rights analogy. By 1960, most Americans thought Jim Crow and segregation were wrong, but they were fatalistic. They didn't think anything could be done. Then came the Civil Rights movement and in 1964 we outlawed segregation. You can see how that played out over the last 40 years. Things certainly aren't perfect, but we have had a massive shift in culture and we have an African American man as major contender to the Presidency.

It's hubris to say what the world will be like in 50 years. Maybe someone will invent cheap solar cells, and in 10 years, we'll all look back and laugh about being so worried. Fatalism isn't helpful though. Not to try is crazy. Things can change rapidly, but that doesn't free us from an obligation to try as hard as we can.

I have real hope that this clean energy vision can capture the American imagination. It ties concerns about national security, leveraging US technological leadership, and environmental concerns into an attractive bundle.

Darcy: You've led a large grassroots campaign in the US called Focus the Nation. Tell us a little about what you did, how effective you think it was, and what your plans are for the future. What have you learned about mobilizing people around this issue?

Eban: Focus the Nation is an educational initiative around climate change. On January 31, 2008 we held the largest national teach-in in history. Over 1900 colleges, universities, high schools, middle schools, faith organizations, civic groups and businesses sponsored panels,

workshops, theater events, technology fairs, poetry readings, keynotes, sculpture displays, poster sessions and debates on the topic of Global Warming Solutions for America.

At Focus the Nation Young, people engaged 78 members of the US Congress, the US Senate, and Governors — one third of this group were Republicans — and hundreds of state representatives, mayors and city councilors. We worked through Pelosi's office to set up a bank of computers in the Capital so Congressional leaders could engage in video dialog with campuses in their district. It's a great, low-carbon way to communicate.

Young people have moral authority. They can turn fence sitters into advocates. It's about their future, not the left and right. Getting Congress engaged in conversation with young people is a powerful tool to drive progress and get beyond partisanship.

Darcy: So what's next for Focus the Nation?

Eban: In 2009, we're going to do similar events but this time we want to involve half of members of congress and half of our governors, increasing our reach by a factor of 5.

Darcy: What else needs to happen for us to reach the targets? Be specific about policies, practices, technologies or strategies that you think we should be pursuing.

When I talk, people usually want to know what can they do in their personal life. Right now, it's not so much about that, instead it's about getting those extra votes in the House and Senate. Right now, we need two things:

First, we need a cap-and-trade bill that reduces greenhouse gases each year, similar to the Warren Lieberman bill but with some changes.

Second, we also need very large scale in renewable energy investment bill where we invest between \$30-40 billion per year in things like sustainable biofuels, wind, solar, etc. It takes about 20 years to make new technologies fully viable. We need to start making investments now.

Darcy: I know the Dept. of Energy has been investing in these technologies to date. How do their current investments compare to your \$30-40 billion target?

Eban (snorts): So far the amounts have been pathetic. We only invested about \$100 million per year in wind. That's like one jet fighter. Total expenditures in research and development have been about \$2-3 billion in the US. So we need ten-fifteen times that.

Darcy: What's your position on nuclear power? Some are arguing that it's a reasonable transitional fuel and we should be building more of them.

Eban: The real challenge is to invest in technologies to rewire the entire world. Nukes can't be spread rapidly and cheaply across the planet, because of concerns about security. The technology doesn't fit the bill. We're screaming about Iran. If you're going to spend a lot of money subsidizing an energy source, nuclear is a loser. And that's over and above issues about the cost, storage of waste and terrorist targets.

Darcy: ISSP members are largely sustainability directors and other sustainability professionals. What should individual organizations (or the professionals within them) be doing in the next 2 years?

Eban: People in that position have unique responsibility to truly push the envelope. It's a lonely job in many places but we need successful demonstration projects. We need to show people how far and how fast we can move in a short time. They need to have the courage to move far and fast.

Webinar Schedule for 2008

(All are 1 hour long and \$25 each)

May 21: Product Certifications: What do they mean? With Dr. Chet Chaffee of Scientific Certification Systems

The heightened interest in "green" products has caused a proliferation in product certifications. But what do they mean? Can they be trusted? Which claims are meaningful and which and just plain misleading? Scientific Certification Systems is a leading third-party provider of certification, auditing and testing services, and standards, and has played a key role in providing scientific input to many certification schemes. Dr Chaffee of SCS will explain how terms are being used and misused in the market place, how certification schemes are created and used and how third party verifications are performed. You will learn not only how to become a more discerning consumer, but also how you might get your own products certified.

June 12: ESG (Environment, social, governance) Criteria: how they are used by the investment community to screen organizations

July 17: Product stewardship: An update on the field

August TBD

September 10: Sustainability Assessments

October: Update on climate change

November: Green purchasing

December: Alan AtKisson

To register, go to

www.training.sustainabilityprofessionals.org