

***Envisioning a global campaign to accelerate investment in renewable energy  
in developing countries ... and everywhere else***

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It is both an honor and a pleasure to speak to you today.

The core of my message is simple:

We need to push hard, *very* hard, to dramatically increase and accelerate investment in renewable energy, especially in the developing world. If we do not, there is little hope for a sustainable and secure future. But if we do, if we all push together, we will wake up one fine day, a couple of decades from now, and say to ourselves, “We did it. We transformed the world.”

That’s the day I’ve been dreaming about, throughout my first two decades of work on sustainable development, climate change, and related issues. Of course, two decades from now, we will still have problems, including problems we cannot now predict. But I believe it must be possible to avoid the nightmare scenarios currently attached to our reliance on fossil fuel — if we just push harder.

Before I tell you why I believe that, let me briefly introduce myself. Like many of us, I wear different hats, at different times. At heart, I am a writer and musician. By profession, I am a consultant, working on sustainable development strategy with companies, governments, and international initiatives.

But today, as you’ll note in your program, I am speaking to you in my capacity as a member of the Balaton Group. What this means is that I am speaking to you as a volunteer. The Balaton Group is 30-year-old, volunteer-driven network of sustainability researchers and practitioners, which I serve as co-president. The job of president is an entirely volunteer position, and the campaign idea I am about to introduce to you — and indeed invite you to help envision — is an entirely volunteer undertaking.

The origin of this campaign was my growing concern about the gap that exists between how fast renewable energy is growing around the world, and how fast it actually *needs* to grow, if we are to avoid a wide range of human and ecological catastrophes. I became painfully aware of this gap while preparing a strategy paper for the United Nations in the run-up to the Copenhagen Climate Summit. The gap between what we need and what we are likely to get was, and remains today, absolutely enormous. Whether or not we close this gap is likely to be a deciding factor in whether or not we successfully make the transition to a sustainable global civilization.

This is an unusual moment to be worried about the pace of growth in the renewable energy sector. After all, this is the World Renewable Energy Congress, and this moment should be one of triumph for renewable energy. Production of wind and solar is exploding, and prices continue to fall, faster than predicted. In February of this year, for example, Bloomberg New Energy Finance declared that the price of new wind-powered electricity was now cost-competitive with coal — at least in some

regions of some countries, including Brazil, Mexico, and the two countries in which I am proud to hold citizenship, Sweden and the United States.

But the good news about renewable energy, which we are gathered here to celebrate, should not blind us to a very worrying set of very worrying facts and projections, which can be summarized in three points:

- 1: Renewable energy is not growing anywhere near fast enough to replace fossil fuels in time to meet Nature's non-negotiable deadline for achieving climate stability and avoiding runaway climate change.
- 2: Renewable energy is also not growing anywhere near fast enough to ensure access to clean, affordable energy for the world's poorest people. In fact, we are losing ground.
- 3: Current levels of investment in renewable energy, including future investment commitments, remain far, far too low. Market forces alone will not deliver the growth in renewables that we actually need. An additional push is needed — a very *big* push.

Let's consider these three points in turn.

### **1. Making the global transition to climate-safe energy**

The good news is that the world is beginning to envision, quite formally and seriously, a sustainable energy future. For example, the IEA's recent World Energy Outlook 2010 considered, for the first time, global energy from the perspective of not just the policies and investments are happening now, but the policies and investments that *can and should* happen in the future.

The IEA considered three possible futures. One is called "Current Policies," which could also be called business-as-disastrously-usual. The second scenario is called "New Policies," and is both more promising, and a bit disappointing. Only the third scenario actually envisions a future where the levels of CO<sub>2</sub> in the atmosphere come anywhere near the safety zone defined by science.

That scenario is the called the 450 Scenario — and the fact that the IEA's most optimistic scenario aims to achieve 450 and not 350 is already a signal that we have an enormous challenge ahead of us. Because even to meet that 450 target, the IEA projects that by 2035, fully 45% of all global power generation must be from renewable sources.

What happens if we continue down the "Current Policies" path? If you will pardon the pun, the phrase "unmitigated disaster" jumps immediately to mind. Let's not even consider it.

What about "New Policies"? This scenario imagines a future, unfolding between now and 2035, where the nations of the world come together on "cautious implementation" of the Copenhagen Climate Accord. They also end fossil fuel subsidies after 2020 (these currently amount to hundreds of billions of dollars every year), establish cap-and-trade schemes throughout the OECD+ nations, and extend the lives of current nuclear plants.

As I said, it is rather optimistic. If we do all that, says the IEA, we can stabilize global CO<sub>2</sub> at 650 ppm. And yet that is a level, as most of you will recall, that still condemns the world to climatic changes that will be deeply disruptive, not to say extremely dangerous, for both human civilization and ecosystems.

As a world, can we say that we are firmly on the "New Policies" path? The answer is a clear no. The world needs to push harder — just to get securely on a track that is still relatively inadequate. That's point one.

## 2. Closing the energy poverty gap

On page 238 of the World Energy Outlook 2010, there appear two very remarkable sentences:

**"It is the alarming fact that today billions of people lack access to the most basic energy services, electricity and clean cooking facilities, and, worse, this situation is set to change very little over the next 20 years, actually deteriorating in some respects. This is shameful and unacceptable."**

To repeat, the IEA concludes that without additional action, this "shameful and unacceptable" prognosis for energy poverty described above **will not improve over the next twenty years**. The year 2030 will arrive, and 2.8 billion people – one hundred million more people than today – will *still* be dependent on firewood and other biomass just to cook, while 1.4 billion will still lack any access to the most basic benefits of electricity.

The implications of this prognosis for global security and sustainability are enormous. Human health, and the lives of billions of human beings (especially women and girls), will be greatly diminished. The negative environmental consequences will compound every major ecological crisis, including climate change, biodiversity loss, and water scarcity.

This is not a future we can allow to "just happen." What is needed? The IEA's conclusions can be easily summarized as a *very big push*: more money, more technical support, more help of every kind, focused on the poorest regions of the developing world.

Which brings me to my third point.

## 3. Investing in energy transformation

Now we come to the real leverage point in the global energy system: money.

If we are to achieve the more ambitious and necessary goal of 450 ppm, the IEA calculates that the world will need to invest about 18 trillion dollars between now and 2035 in energy transition, *over and above* current policies and investment patterns.

Moreover, every year of delay is terribly costly. After the Copenhagen Climate Accord, the IEA recalculated the cost of making the transition to a sustainable energy future, taking into account the disappointing results of that historic meeting. The resulting delay in implementation, what the IEA called "the cost of Copenhagen," is already an additional trillion dollars.

In other words, the longer we wait, the harder it gets to push.

But numbers like "trillion" are mind-numbing. So here's another way to look at this.

First, let us assume that the world *does* follow the IEA's New Policies Scenario. As already noted, this is already quite optimistic. But it has the advantage of being considerably less expensive than the 450 Scenario. What is the difference between that scenario, and the 450 Scenario, in pure dollar terms?

The answer is something over 13 trillion dollars. And how much additional CO<sub>2</sub> reduction does that buy? Something over 13 gigatons.

In other words, an additional trillion dollars of investment in sustainable energy removes an additional billion tons of CO<sub>2</sub> from the planet's future atmosphere.

We can simplify that still further: What does this mean in terms of the cost per human on planet Earth? Roughly 2,000 dollars per person — if we use current population numbers, and take unborn children out of the picture, which only seems fair.

Now let's assume that only the richest 10% of humanity can, or should, be expected to pay this "premium", or make this extra investment, in order to upgrade from the "New Policies Scenario" to the "450 Scenario." That makes our investment figure \$20,000, for each of those relatively wealthy 700 million people. And let's say that it takes a few years, until 2015, to get all the programs in place to move that additional investment money around. So we spread out that \$20,000 investment over 20 years ... which translates to something around \$1,000 per year.

That's less than \$100 per month, per person.

Of course, some people are richer than others, even in the top 10% of humanity. Some could afford a whole lot more than \$100 per month. For others, coming up with an extra \$100 every month to finance a global energy transformation would be a big stretch. But on average, this is clearly doable. People spend more than that sum on their mobile phones or cable television subscriptions.

And that's the conclusion, once you wade through the math: if the wealthiest 10% of humanity were to invest, on average, less than \$100 per month in the transition to a new energy future, we could dramatically upgrade our sense of hope and vision from 650 to 450 — that is, from a very warm future, with all the human misery, ecosystem loss, and economic cost that goes with that, to a bearably warm, albeit still risky future. That \$100 per month is still not enough to return us to the climate in which our species recently matured, the 350 ppm figure put forward by James Hansen and others. But getting to 450 reduces the losses considerably, in economic, ecological, and human terms, compared to being satisfied with 650.

So imagine this scenario: what if the wealthiest citizens of the world — and by that I mean largely middle class individuals and families in the OECD nations, together with the very large and wealthy citizens we call corporations — made the following offer to the world's governments. "You keep your agreements, and follow this New Policies roadmap described by the International Energy Agency. We know that's already hard enough to do, both economically and politically. But we also know that it's not enough. So we'll pick up the difference. We'll mobilize the extra investments required for getting to 450 ppm."

Believe me, I know how wildly visionary this sounds — millions of people voluntarily investing \$100 per month. But vision is what we desperately need, if we are going to beat the clock on climate change and energy poverty. And at the moment, lacking a global agreement on policy levers, voluntarism is the only tool we've got to get more people pushing.

So that's the vision I want to introduce here: a vision of millions of individual people, organizations, communities, schools, and institutions of all kinds, voluntarily contributing to the kind of Big Push we so urgently need. And helping to prove what's possible.

### **Introducing The Big Push**

When I was working for the UN at CoP-15, it was my job to assemble a number of big ideas that were floating around in a variety of very complex reports and intelligent minds within the UN system, and package them up into a strategy paper. We called that strategy The Big Push. The central proposal was a massive investment in renewable energy in the developing world, coupled with a globally coordinated system of national feed-in tariffs and "Green Revolution"-style technical assistance.

But as we all know, the Copenhagen and Cancun meetings can hardly be described as accelerators of global action on climate change. Big ideas like The Big Push are applauded by experts and ignored by negotiators. So at the end of 2010, I began researching the possibility of creating an

independent campaign to promote the ideas in The Big Push. I recruited a number of very smart and experienced analysts to help, who also worked initially as volunteers. And earlier this year I asked for and received the informal blessing of my UN colleagues to proceed.

And so now I stand before you, inviting your participation in envisioning an independent, participatory campaign, The Big Push. What should that campaign look like? How could we mobilize millions of people and institutions to voluntarily increase their investment in renewable energy, with a focus on the developing world? What would it take to succeed, and to change the politics of energy, world-wide?

To make this more concrete, let me describe two examples of projects that go a long way toward modeling what I am talking about here.

The first is a small pilot project in Senegal, created by a French cooperative, Cabinet Espere. The project directly links salaried employees in public and private firms in France to development projects in Senegal. The employees invest in micro-carbon offsets, which go into a micro-finance fund, which helps women in Senegal create jobs recycling plastic, for example, powered by renewable energy. That program was already self-sustaining after just one year. A new pilot program is helping women replace inefficient wood stoves. The people in Senegal get jobs, improved health, and a more sustainable forest. The employees in France get the satisfaction of knowing they are directly contributing to sustainable development, while offsetting their carbon emissions in very tangible ways. This is what “hope” looks like.

The second example comes from Bristol, UK. An NGO called “The Converging World” decided to put “Contraction and Convergence” into practice. This is the notion that the over-consuming parts of the world should reduce their energy use, while the poor ones increase it, until both reach a level that is equitable and sustainable for the planet in the long term. Through The Converging World website, anyone in the UK can donate, or invest, or purchase carbon offsets — you choose whatever term you like! — and that money then gets invested directly in wind turbines in India’s Tamil Nadu region. The electricity from the turbines gets sold to the grid, and the money goes into funds that are split between building more wind turbines, and funding other sustainable development programs in the local Indian community, such as schools or agricultural projects.

Two small initiatives. But there are many more where those came from, examples of pushing to make clean, renewable, and affordable energy available and accessible to all.

In closing, let me make a confession. I do not actually know how to dramatically accelerate investment in renewable energy, to reach the levels we actually need. But here is what I do know: if enough people come together to start thinking about it, and to start doing it — to start pushing — we will find a way. Many ways.

So I invite you to join me and my colleagues in envisioning this campaign, this Big Push ... and then to participate in making it a reality.

Thank you.

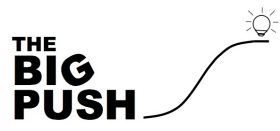
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