

Climate reality: Voluntary efforts not enough

Seth Borenstein, Associated Press, 12-20-09

COPENHAGEN—Around the world, countries and capitalism are already working to curb global warming on their own, with or without a global treaty.

In Brazil more rainforests are being saved, and in Chicago there's a voluntary carbon pollution trading system. People recycle, buy smaller and newer cars, and change light bulbs.

But the impact of such piecemeal, voluntary efforts is small. Experts say it will never be enough without the kind of strong global agreement that eluded negotiators at the U.N. summit this past week in Copenhagen.

Emissions of greenhouse gases keep rising and so do global temperatures.

Dozens of countries—including the top two carbon polluters, China and the United States—came to the climate talks with proposals to ratchet down pollution levels.

But analysis by the United Nations and outside management systems experts show that those voluntary reductions will not keep temperatures from increasing by more than 1.3 degrees Celsius (2.3 degrees Fahrenheit) compared with now. That's the level that scientists, the United Nations, the European Union and the Obama administration have said the world cannot afford.

Good intentions aren't enough. The deal forged by President Barack Obama with China and several other countries sets up the first major program of climate aid to poorer nations to help them deal with climate change. But it offers few specifics and goes no farther than emissions curbs already pledged.

More negotiations are planned for next year.

"It just underlines the heroic effort here that the science says needs to be done; it's not easy," said Alden Meyer, policy director at the Union of Concerned Scientists. "If it were easy, it would have been done. This is a daunting effort."

And no one knew that more than a weary Obama, who 14 hours after arriving in Copenhagen, unveiled the political agreement by saying "more aggressive" emission cuts were needed and so were still-unseen scientific breakthroughs.

"But this is going to be hard," Obama said in a news conference late Friday. "This is hard within countries; it's going to be even harder between countries."

"Hard stuff ... requires going ahead and making the best of the situation that you're in at this point, and then continually trying to improve and make progress from there," Obama added.

Upon announcement of the deal, a team of experts led by an MIT professor made quick calculations: The average global temperature is likely to rise 3.2 degrees Celsius (5.7 degrees F.) above current temperatures.

So the response from many, but not all, environmental activists and poorer nations was "not enough."

That's not for lack of trying.

The U.S. private sector already has invested hundreds of billions of dollars to cut emissions, and that is probably just the beginning no matter what happened in Copenhagen.

Between 2007 and 2008, energy-related carbon dioxide emissions in the U.S. fell 2.8 percent, though part of that was related to the recession.

A study this year by McGraw Hill Construction said between \$36 billion and \$49 billion of eco-friendly buildings are under development. That figure is expected to triple by 2013.

The owners of New York's Empire State building spent \$13.2 million on environmental retrofits to draw new tenants.

Wal-Mart Stores Inc. retrofitted about 500 buildings this year. Part of the project included installing skylights with the goal of cutting up to 75 percent of the energy used to light stores.

In Chicago, a company started a voluntary commodities market to trade credits for reducing carbon pollution. It has reduced carbon dioxide pollution by the equivalent of 400 million metric tons in the six years since 2003. That sounds like a lot, but the U.S. emitted 7.05 billion metric tons of carbon dioxide equivalent last year alone.

But the broad range of voluntary carbon reductions falls far short of what's needed to address climate change, energy experts emphasize. To approach anything near the 17 percent reduction in emissions by 2020 that the Obama administration has targeted, a price must be put on carbon emissions, most energy expert acknowledge.

"If there was an easy answer, the countries could agree on it," said Gregg Marland who keeps track of worldwide carbon dioxide emissions at the Oak Ridge National Lab. "There is no easy answer. And there is not a cheap answer. I don't see people going very far voluntarily without incentives to do it, and that comes from government."

In much of the developing world, the biggest carbon problem is destruction of forests. Brazil, a top 10 carbon dioxide polluter, is also one of the leading countries in losing forests, which suck carbon dioxide out of the air.

Mostly by slowing deforestation, Brazil has already pledged to reduce carbon emissions by about 36 to 39 percent by 2020. Last month, Brazil reported its biggest annual decline in deforestation in two decades.

The problem, Obama said, is that "the science compels us to move as rapidly as we can."

That's where 450 parts per million of carbon dioxide comes in. The United States and European Union are aiming not to exceed that level—which corresponds with the projected temperature rise—because it's too dangerous. Some scientists point to 350 ppm as a safer level. This year the world pushed beyond 390 ppm for the first time.

Going above 450 parts per million "will change everything," said NASA climate impacts researcher Cynthia Rosenzweig.

"It's not just one or two things," Rosenzweig said. "There will be changes in water, food, ecosystems, health, and those changes also interact with each other."

At that point, among other things, millions of people would be subject to regular coastal flooding, droughts would cause food shortages, coral reefs would dramatically die off affecting the ocean food chain, and about 20 percent of the world's known species would be significantly endangered, according to Rosenzweig and other climate scientists.

Systems dynamics experts John Sterman of MIT and Andrew Jones of the Sustainability Institute in Vermont compare our carbon problem to a bathtub. Each year we pump carbon dioxide into the atmosphere, much of it remains there. It lasts for about a century, although about half of the carbon dioxide produced is removed each year by forests and oceans.

Sterman and Jones figure the world can afford to churn out another 920 billion metric tons of carbon dioxide between now and 2050. Holding emissions to that level offers a better than even chance at keeping the world under 450 parts per million and avoiding a crucial temperature rise.

But that will be a challenge. Forty years of pumping emissions at the level we have now would exceed the safe level by more than 50 percent. And that doesn't even account for future levels of greenhouse gases from booming economies like those in China and India.

Ideally, the world should produce 80 percent less in greenhouse gases than we do now, Jones said.

Technically, the delay of at least one year in implementing strict emissions limits—thanks to the nonbinding deal in Copenhagen—may not hurt. But it's a momentum issue and a compounding interest issue, said Achim Steiner, head of the United Nations Environment Program. It's like debt on a credit card: Every time a person puts off paying the balance, it grows bigger and harder to resolve.

Every year of delay means the chance of achieving a stable and healthy climate "is getting smaller and smaller," said Yvo de Boer, head of U.N. Framework Convention on Climate Change, which ran the Copenhagen negotiations.

But as difficult as changing the momentum of atmospheric physics, the political challenge may be worse.

Think of it this way: More than 110 world leaders, an unprecedented number, convened here, with roughly two dozen crafting a weak agreement in less than a day. And yet that deal, the Copenhagen Accord, is the basis for next year's effort which will try again to reach more concrete and dramatic steps, de Boer said.

"We should be conscious of the huge challenge that lies ahead of us," de Boer said. He doesn't expect the hands-on help of world leaders next year.

Yet de Boer is optimistic.

"I think science will drive it," de Boer said. "I think business will drive it. I think society will drive it."