

## Climate deal likely to bear big price tag

*John M. Broder*

If negotiators reach an accord at the climate talks in Copenhagen it will entail profound shifts in energy production, dislocations in how and where people live, sweeping changes in agriculture and forestry and the creation of complex new markets in global warming pollution credits.

So what is all this going to cost?

The short answer is trillions of dollars over the next few decades. It is a significant sum but a relatively small fraction of the world's total economic output. In energy infrastructure alone, the transformational ambitions that delegates to the United Nations climate change conference are expected to set in the coming days will cost more than \$10 trillion in additional investment from 2010 to 2030, according to a new estimate from the International Energy Agency.

As scary as that number sounds, the agency said that the costs would ramp up relatively slowly and be largely offset by economic benefits in new jobs, improved lives, more secure energy supplies and a reduced danger of climate catastrophe. Most of the investment will come from private rather than public funds, the agency contends.

"People often ask about the costs," said Kevin Parker, the global head of Deutsche Bank Asset Management, who tracks climate policy for the bank. "But the figures people tend to cite don't take into account conservation and efficiency measures that are easily available. And they don't look at the cost of inaction, which is the extinction of the human race. Period."

Whatever global warming's effects — and most scientific projections are less dire — there are also varying estimates of the economic costs of failing to act to address the problem soon, some of them very high.

In Copenhagen, some of the most intense and difficult discussions for negotiators center on any potential agreement's near-term financial arrangements. Some of the poorest and most vulnerable nations are calling for a gigantic transfer of wealth from the industrialized world to island nations and countries in Africa, Asia and Latin America that are most likely to feel the ravages of a changing climate.

Many poor nations are insisting that wealthier nations make deeper cuts in their emissions and contribute more money to help the poorer countries, a split that widened in Copenhagen on Tuesday as competing documents of a potential agreement circulated.

Over time, some of the hundreds of billions of dollars the poorer countries are demanding will begin to flow, as global carbon markets become established and governments in rich countries begin to open the spigot of public spending.

But in the meantime, the industrialized countries have proposed a relatively modest fund of about \$10 billion a year for each of the next three or four years to help poorer countries adapt. Even that effort remains the subject of conflict over which countries should contribute how much, what body should oversee the spending and how to determine which projects qualify for finance.

President Obama's spokesman said last week that the president supported a short-term fund to aid developing nations and that the United States would pay "its fair share." In many multilateral efforts, the United States picks up a quarter to a third of the tab.

"Providing this assistance," the White House statement said, "is not only a humanitarian imperative — it's an investment in our common security, as no climate change accord can succeed if it does not help all countries reduce their emissions."

The money would be used to help developing nations reduce emissions by switching to renewable energy sources like wind and solar and by compensating landowners for not cutting down or burning forests, a major source of carbon dioxide emissions. Other funds might be used to adjust to effects of a changing climate, like rising sea levels, by building flood walls or relocating settlements to higher ground.

Mr. Obama will travel to Copenhagen on Dec. 18 to attend the final day of the meeting, a sign that the White House believes that a far-reaching accord, including deals on some of the sticky financial issues, is possible.

"This is the question that is being posed in Copenhagen," said Robert N. Stavins, director of the environmental economics program at Harvard University. "How much money do the developed countries have to put on the table to bring developing countries into the conversation?"

Mr. Stavins said that the bulk of the money would have to come from private investment because, he said, it was "inconceivable" that the governments of the wealthy countries would come up with adequate financing and also because private entities spent money much more efficiently.

The climate and energy legislation passed by the House in June sets aside roughly \$8 billion a year for assistance to developing countries by 2030, Mr. Stavins said. That figure, he suggested, represents the upper limit of public financial support from the United States.

The perspective from the developing world is, not surprisingly, somewhat different.

Álvaro Umaña Quesada, the leader of Costa Rica's climate delegation, said that it was important to the developing world to have early resources and a predictable flow of long-term financing. He said that the \$10 billion in so-called quick start financing that was now on the table was adequate but that such spending had to rise to roughly \$80 billion and as much as \$150 billion a year by 2020.

"That is not very much compared to the size of the world economy or the financial crisis bailouts," he said. "There are great needs for adaptation, where the small island nations are really at risk. Some of them are one severe weather event away from disappearing."

The European Union has endorsed a fund of that size; the United States remains noncommittal. The Obama administration has asked for \$1.2 billion in climate-related financing in the 2010 budget, far below the needs being discussed at Copenhagen. But administration officials said they would seek more money for international climate programs in future years.

Perhaps the most detailed analysis of the financing needs of any climate change agreement comes from Project Catalyst, an initiative of the European Climate Foundation and ClimateWorks, a foundation-supported policy group based in San Francisco. The group's work has helped shape the negotiations in Copenhagen.

The group estimates that roughly \$100 billion will be needed by 2020 to finance climate-change programs in the developing world. About half could come from the growing global market in carbon emissions credits under a cap-and-trade system, which would be worth an estimated \$2 trillion a year by 2020.

A cap-and-trade system is already operating in Europe and is under consideration by Congress. Such a system sets a ceiling on the carbon emissions of a given country or industry and allows trading of pollution permits within the cap. As the overall limit on emissions grows tighter, the price of pollution permits rises, creating a sizable market in carbon credits.

Countries would grant some of the carbon market allowances directly to energy and environmental programs in the developing world, with other funds coming from a relatively small fee on each transaction.

An additional \$10 billion to \$20 billion would come from taxes on fuels used in aviation and shipping. The rest, perhaps \$25 billion to \$35 billion, would be loans and grants from industrialized nations to poorer countries, split roughly three ways among the United States, the European Union and Canada, Japan and Australia.

"The good news is that everybody now is supporting our proposal for financing," said Dr. Umaña, the Costa Rican delegate. "The bad news is that it's happening 15 years too late. Without real money on the table, this will be a disaster."

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