

## The Scouting Report: Clean Energy Innovation

Following a narrow House vote to pass climate change legislation that included a cap-and-trade program to limit heat-trapping gas emissions, President Barack Obama called on the Senate to follow suit. Despite this, hurdles still remain.

Brookings expert Adele Morris and Senior *Politico* Editor Fred Barbash took questions in the July 1 edition of the Scouting Report.

The transcript of this web chat follows.

**Fred Barbash-Moderator:** Adele Morris is our guest today, talking about the Waxman-Markey bill. She will join us shortly. You are welcome to submit questions in advance.

Adele is a Fellow and Deputy Director for Climate and Energy Economics at The Brookings Institution. Her expertise and interests include the economics of policies related to climate change, energy, natural resources, and public finance. She joined Brookings in July 2008 from the Joint Economic Committee (JEC) of the U.S. Congress, where she spent a year as a Senior Economist covering energy and climate issues. Before the JEC, Adele served nine years with the U.S. Treasury Department as its chief natural resource economist, working on climate, energy, agriculture, and radio spectrum issues. On assignment to the U.S. Department of State in 2000, she was the lead U.S. negotiator on land use and forestry issues in the international climate change treaty process. Prior to joining the Treasury, she served as the Senior Economist for environmental affairs at the President's Council of Economic Advisers during the development of the Kyoto Protocol. She began her career at the Office of Management and Budget, where she conducted regulatory oversight of agriculture and natural resource agencies. She holds a Ph.D. in Economics from Princeton University, an M.S. in Mathematics from the University of Utah, and a B.A. from Rice University.

**12:30 Fred Barbash-Moderator:** Welcome Adele. And welcome readers. We'll take the first question now.

**12:30 [Comment From Erin]** What are some of the trade offs between energy independence and climate protection?

**12:30 Adele Morris:** About 98% of the fuels used in U.S. electricity production are domestic, or at least North American. It's misleading to link controlling greenhouse emissions from electricity to achieving meaningful energy independence. Oil, and transport fuels more specifically, raise the real energy security concerns. At least one domestic alternative to oil, coal-to-liquids, is bad for the climate, worse than oil. Better choices include electric vehicles and certain biofuels.

**12:31 [Comment From Alvaro (Detroit)]** Even with a Democratic majority in the House and the full backing of the White House, the climate change bill barely passed. With all the hurdles in the Senate, what are the chances that something substantive is actually passed?

**12:32 Adele Morris:** I hope and expect a version of the bill will succeed in the Senate. It's likely to be a bit different than the House version. I think it will be substantive, but it might offer more cost containment than the House version.

**12:32 [Comment From Fred]** I've read stories that quote scientists – like James Lovelock - saying it's just too late to stop climate change. Should we be trying to adapt our technology instead?

**12:33 Adele Morris:** It's not either/or. It's both/and. Given the lags in the climate system, we will need to adapt to a changed climate even if we stopped emissions tomorrow. Adaptation is perhaps most critical in very poor countries whose populations are already vulnerable to adverse weather. We also need to control the risk of disrupting the climate by cost effectively reducing emissions – the sooner the better. This involves both making emitting more costly with a tax or cap and trade program and making not emitting cheaper through technology research.

**12:33 [Comment From Karl Knapstein]** Ms. Morris, I feel "climate change" and "global warming" muddle the issue and we should focus our rhetoric towards National Security. Your thoughts?

**12:34 Adele Morris:** I think protecting the environment is a valid goal in and of itself. It may overlap with some national security concerns, such as energy security or the concern about climate refugees, but the climate needs protecting for ecological reasons that simply aren't national security issues.

**12:34 [Comment From Elizabeth]** The bill does not provide for other energies like nuclear. Do you believe this should be accounted for in a Senate version?

**12:35 Adele Morris:** Nuclear power will become more cost effective once there is a price on carbon. It's not clear to me that you need additional subsidies for nuclear once carbon is properly priced. The Senate may take up such subsidies, however.

**12:35 [Comment From Alfonso (Jackson, Miss)]** If the Senate is able to pass some form of climate change legislation, how will that help the US going into Copenhagen in December. Does it matter that the legislation is much weaker than what the Europeans have called for?

**12:37 Adele Morris:** The EU is calling on the US to take such stringent targets that even if we agreed to the targets in Copenhagen, the treaty would be unratifiable here. It's really important that the US stick to a pragmatic position, even if it means that talks are not particularly cordial. Legislation helps because it stakes out the politically feasible set of treaty outcomes for the US.

**12:37 [Comment From Jen]** The Waxman-Markey bill strikes many--including those of us who support strong action--as a recipe for bureaucratic and regulatory gridlock, with the beneficiaries being the lawyers who will spend the next fifteen years making careers out of it. Isn't there a simpler approach?

**12:38 Adele Morris:** There are innumerable ways to make the bill simpler. This is sausage-making at its pinnacle. It's not surprising though, given the trillions of dollars in emissions rights at stake.

**12:39 [Comment From Vincent]** There are reports that the "cap and trade" program would only reduce carbon emissions by .02% and China and India are not reducing their emissions, so what is the justification for substantively raising taxes with no veritable effects on emissions.

**12:40 Adele Morris:** As the largest historical emitter and the second largest current emitter, the US has to be part of the solution. The bill would clearly drive the US to do its part, reducing US emissions by 83% by 2050. That's a vast transformation of our energy system, and indeed our economy. And if we don't do that, how can we ask anyone much poorer to do their part?

**12:40 [Comment From Jeff Rozman]** I work for Congressman Wu who supported HR 2454 The American Clean Energy and Security Act of 2009. However, we are continually attacked that creating a 'cap and trade' system will result in job losses and higher taxes, how do you feel on this argument?

**12:42 Adele Morris:** Cap and trade will cost jobs in the short run. It's time to stop arguing that on net it will create jobs. However, the labor market will adjust and there are ways to provide a safety net for displaced workers. The point is to protect the environment. It's not a jobs program.

**12:42 [Comment From Gary]** If the bill doesn't get through the Senate this year, is there any chance it could pass next year, as we're headed for the mid-term elections?

**12:43 Adele Morris:** If the leadership pushes a bill that can't pass in an election year, then it's likely the wrong bill anyway. To protect the climate, it's vital that the legislation (or a future incarnation of it) endures over generations. Democratic Party leaders seem primarily focused on getting something passed in the first place, but to properly protect the climate, the bill has to survive the next election cycle, the next economic downturn or oil price spike, and the next Republican Congress and Administration.

**12:43 [Comment From JD]** With the presentation of this bill, do you believe that the United States will move to ratify the Kyoto Protocol?

**12:44 Adele Morris:** No. The Kyoto Protocol covers the years 2008 to 2012. That ship has sailed for the US. However, we could become a party to the next treaty, to be negotiated in December in Copenhagen. It will likely cover 2012 to 2020.

**12:44 [Comment From Adrienne]** Not a jobs program? President Obama has continually promised creation of new jobs to go along with all of this spending, are you not concerned with that?

**12:47 Adele Morris:** The stimulus spending will help create, or at least offset reduction in, jobs during a period of high unemployment. Regulatory programs like cap and trade, however, might create jobs in some sectors, but other sectors will lose jobs. I think our priority should be on helping displaced workers and protecting the environment cost effectively -- even if this means a small net loss of jobs in the short run.

**12:47 [Comment From Lester T.]**

What's the point of funneling the "tax" from cap and trade to a new carbon market instead of creating just a straight up tax? Why should investors get all the money?

**12:48 Adele Morris:** A carbon tax would create revenue, and a cap and trade system creates valuable allowances. Either way, you have to decide how to allocate that value. Personally, I favor auctioning most allowances and using the revenue to protect the poor and reduce the deficit or other taxes that burden the economy.

**12:49 [Comment From Carmen (Tuscaloosa)]** Your recent report with Warwick McKibbin and Peter Wilcoxon was recently cited by Republican leadership in their arguments against the House legislation. Are they correct when they state that the Waxman-Markey bill will decrease US GDP thereby resulting in job loss?

**12:50 Adele Morris:** It's interesting to see the political spin put on objective research. It's not a news flash that cap and trade results in GDP losses relative to the case where we don't constrain emissions. The question is whether the losses are reasonable. I think the fact that we might get to the projected GDP of 2050 in 2051 a really modest result considering the vast transformation of the economy that we modeled.

**12:51 [Comment From Sue]** Could this bill help us avert catastrophic global warming? I mean, we have so little time to act. Is this enough?

**12:52 Adele Morris:** This bill is the US contribution to what must be a global effort. Even if the US drives its emissions to zero, the earth will warm dangerously without actions by other major emitters.

**12:52 [Comment From Ramon (Atlanta)]** Republicans have been framing the cap-and-trade legislation as an energy tax that will cost American's their jobs and increase energy costs for the average American household, is this true? With the economy in such a dire state, how does the Obama administration expect Americans to make even more sacrifices, even if it is in our long term interest?

**12:54 Adele Morris:** The program won't kick in until 2012, which will likely be well beyond the current recession. But your point is important. We have to have a policy that will endure past any number of future downturns, so the policy should be flexible.

**12:54 [Comment From elizabeth]** Do you feel that politicizing science is dangerous? As Alston Chase put it, "when the search for truth is confused with political advocacy, the pursuit of knowledge is reduced to the quest for power."

**12:55 Adele Morris:** It's important to know when science stops and policy begins. Science can help tell us what risks come with what levels of atmospheric concentrations. It cannot tell us what level of concentration balances the costs and benefits of mitigation.

**12:55 [Comment From Jeremiah]** I work for a retail company that ships out of a warehouse. Will we be directly affected by the cap and trade legislation? Will we have to buy credits?

**12:58 Adele Morris:** You probably won't have any direct regulatory requirements on your firm (same for households and small businesses). However, if you purchase fuels, the price of fuels will reflect the price of carbon. If you buy other energy-intensive goods and services, you'll feel the effects through those prices, too.

**12:58 [Comment From guest]** Is there any successful model of emissions trading that you can highlight as an example?

**12:59 Adele Morris:** The sulphur dioxide trading system (to reduce acid rain) is often cited as a successful precedent. It did go well, but the scale of greenhouse gas regulation is much greater, and the economic stakes are much higher. It behooves us to take extra care to do this right.

**1:00 [Comment From Gladys]** What possible leverage do we have with a country like China, with abundant resources and a huge population – where's the economic incentive for the Chinese to develop clean technologies and control greenhouse gases?

**1:01 Adele Morris:** The U.S. has as much or more leverage with China than any other country, which might not be saying much. China has enormous domestic energy needs and is focused on building its economy. That said, China could suffer significantly from a disrupted climate, and its air pollution problems are legion. To the extent that they can control both greenhouse gases and ordinary pollution with the same technologies (such as carbon capture and storage), incentives could align.

**1:02 [Comment From Frank]** With a global problem like climate change, who ultimately determines if countries are living up to their promises?

**1:04 Adele Morris:** The treaty will have compliance provisions that describe how parties must monitor, verify, and report their emissions and activities to show compliance. The U.S. does a terrific job with its data, and most industrialized countries' numbers are pretty reliable. The UN Framework Convention helps developing countries improve their efforts on this score.

**1:05 [Comment From CHARLIE]** How do we prevent a "global catastrophe" -- as Barack Obama put it -- if we're the only ones working for change? How do we convince other countries to take the same measures? Will our efforts be neutralized by their actions?

**1:06 Adele Morris:** Serious US action is a necessary, but not sufficient, condition for global progress. Only when we take action can we be in a valid position to ask poor countries to take a hit to their GDP to reduce emissions.

**1:06 [Comment From Debbie]** Following up on China - I see a real competitiveness problem if we limit our emissions and economic growth and they don't do the same. Why should we continue to let China, India, Mexico and other developing countries evade environmental standards?

**1:08 Adele Morris:** I don't see us as "letting" China do anything. We can't force them to clean up their environment. We have to work with them and make it in their interest as best we can. Technology cooperation and heavy duty diplomacy are our best assets there. The competitiveness problem really pertains to very narrow, highly energy intensive, trade-exposed industries. We can address those concerns without chucking the whole deal.

**1:08 [Comment From Jane]** In your opinion what changes should the Senate make to the bill passed by the House of Representatives?

**1:09 Adele Morris:** Congress is concerned about the cost of the bill to American households and certain industries (though most members are focused on policy impacts in their districts rather than the broad economy). A straightforward solution to the problem of cost across the economy is to

bound the range of allowance prices, putting in both a price floor and a ceiling, both of which would grow over time. This “price collar” would help prevent wild swings in energy prices and provide more investment certainty to innovators and emitters alike. The Senate should definitely consider a price collar.

**1:09 [Comment From Nathan]** You seem to discount the economic modeling that would forecast a drop in national GDP because of the "spin" placed on it and the assumptions inherent in any future modeling of any subject. Yet, much of the information that is used to support man made global warming is based on future modeling. This environmental modeling is also prone to the subjectivity of those conducting the tests. So, how can you discount the consensus of economist who predict the damage this bill will do to the economy while basing your argument on data using methodology that is also open to subjectivity?

**1:12 Adele Morris:** We did some of that economic modeling, so I hope I don't sound like we're discounting it. Economists (like us) widely acknowledge the costs of climate policy, and we certainly acknowledge the hubris in projecting GDP to 2050. The question is what's the alternative to modeling if you want to know whether the benefits justify the costs of a particular bill? I'd be more comfortable with Waxman-Markey if it had a reasonable price collar.

**1:13 [Comment From Peggy (South Dakota)]** As a housewife, how is this going to effect me? There are reports that it could increase the price of gas by as much as \$0.88 which would seriously affect our household expenditures.

**1:15 Adele Morris:** Peggy, you are asking a very reasonable question. You're going to face gradually increasing energy bills, particularly if you use electricity generated with coal and drive a gas guzzler. The good news is that with the right policy these changes will occur gradually, so you'll have some time to adjust. Years.

**1:15 [Comment From Chico]** What is the evidence that a cap and trade system will actually bring emissions down? Is there some sort of historical precedent?

**1:17 Adele Morris:** Compliance with the cap and trade program in the US is likely to be high. EPA will likely do a good job ensuring regulated firms report what they are supposed to report and offer up valid allowances when they are supposed to. The sulphur dioxide cap and trade program is the best domestic precedent we have.

**1:17 [Comment From Jerry (Houston)]** I understand your comment on a price collar, but given that energy prices are now set by Middle East countries and not US Producers aren't we severely limiting our ability to compete in a Global Economy. A large share of our refined products are being shipped out of the country due to our federal restraints. It seems this bill will exacerbate this issue and cause US shortages in gasoline and diesel in the near future.

**1:19 Adele Morris:** A price collar on emissions allowance won't do anything to buffer price swings caused by outside factors. We have those already and will continue to, at least until we use a lot less oil. What the price collar will do is help avoid amplified energy price swings as a result of swings in allowance prices.

**1:20 [Comment From Tom]** Can you explain the "price collar" idea in more detail? Has anyone in Congress signed on to that idea?

**1:20 Fred Barbash - moderator:** And we have time for a just a couple of more questions, folks....

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**1:21 Adele Morris:** Senator Bingaman had a version of price boundaries in a bill he sponsored last year. I am not aware of a bill with a price collar like I am advocating.

**1:21 [Comment From Candy]** I agree that something needs to be done about global warming, however, a lot of what you're saying is NOT provided for in the current bill. Do you believe they should pass this hastily considered bill as is? Or should they reconsider and provide for those things which you have suggested?

**1:23 Adele Morris:** I'm torn. On one hand, I'd hate to see the US delay curbing emissions in a serious way. On the other hand, I think Congress can significantly improve the bill. I want to be supportive and critical at the same time. Call it constructive criticism, maybe.

**1:23 [Comment From LaSarah (Detroit)]** Re: Charlie's question. Disregarding "poor" countries, I think our main concern is China, Mexico, etc. We are taking a very big risk with no promise of anything and with perhaps no significant effect on the environment. And the problem is that those concerns were NOT addressed in the bill.

**1:24 Adele Morris:** I think it's a huge mistake to delay action because we think we won't be competitive. There are a lot of trends driving trade and a price on carbon will be only one of many. Better we should take modest sustainable action and do our best to convince others to join us in our efforts.

**1:24 [Comment From Nathan]** The President wished to sell all of the initial emission permits. However, the current bill gives 85% of those permits away for free. Are you concerned with the political favoritism that has been shown in the allocation of these permits and the economic distortion it may cause?

**1:25 Adele Morris:** It seems like at least some of the allowance have to be given away, at least for a few years, in order to achieve consensus. My view is that this should be kept to a minimum, and that any free allowances should be taxed as corporate income.

**1:25 [Comment From CHARLIE]** Do you consider this action modest? Or rather liberal in nature?

**1:27 Adele Morris:** The Waxman-Markey legislation is ambitious but doable. A more modest approach would be to explicitly control the downside risk to the economy by adopting a reasonable price ceiling, and to prevent undue downside risk to green innovation a price floor is in order.

**1:28 Adele Morris:** Thanks everyone for your excellent questions. I couldn't get to all of them, but I do appreciate the interest.

**1:28 Fred Barbash-Moderator:** That's it for today. Thank you Adele for all your smart answers. And thanks to all our readers for the smart questions.

Bye for now.