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Featured Speaker:

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Lead Climate Change Negotiator
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P R O C E E D I N G S

MS. SIERRA: Good morning to you all and welcome to Brookings. My name is Kathy Sierra. I'm a senior fellow here at the Global Economy and Development Group at Brookings.

And it's my great pleasure to welcome you and to welcome Pascal Canfin, who's the deputy minister for development and the lead climate change negotiator of the government of France, who will be here to talk to us about the roadmap to a new international agreement that we are hoping to see by 2015 to help us solve the global climate challenge. We know the international community is meeting next month in Warsaw, in Poland, and then the year after that in Peru, but the whole discussion is supposed to cumulate in 2015 in Paris, in France. And so we all are hoping and looking for leadership from the French towards that goal.

Today we have -- the minister is going to outline the challenge as well as the roadmap as he sees it, and then followed by Andrew Steer, who's the president and CEO of the World Resources Institute; by Elliot Diringer, the executive vice president for the Center for Climate and Energy Solutions; and Vicki Arroyo, the executive director of the Georgetown Climate Center.

As I hope you know, the minister, who has been really responsible and is responsible for pushing the climate change agenda here, is here for the Annual Meetings of the World Bank and IMF. So, hopefully, making some progress there. Before that, he served as minister of a number of parliament -- in the European Parliament, excuse me, representing the Greens in 2009 and

2012. And before that, was a journalist for the monthly magazine *Alternatives Économiques*, which specializes in economic and social issues and corporate social responsibility.

Andrew Steer, as I said, is the CEO and president of the World Resources Institute. He has more than 30 years' experience in development. Before joining WRI, he was the special envoy for climate change at the World Bank. Before that, he had a senior position in DFID in the United Kingdom. And he's a very longstanding colleague of mine at the World Bank for many years, working in many different important operational capacities.

Elliot is the executive vice president of the Center for Climate and Energy Solutions. He manages their day-to-day operations and helps direct the policy, research, outreach, and communication. He previously served as the vice president for international strategies at the Pew Center, which was the C2ES's predecessor, and continues to focus on international programs.

Vicki Arroyo is the executive director of the Georgetown Climate Center. She's also assistant dean for centers and institutes, visiting professor, and environmental law program director at Georgetown Law. She oversees the center's work on climate change, mitigation, and adaptation, and teaches experiential courses to law and policy students. And today she's especially going to bring the United States' perspective to the conversation.

So with that, let me now to turn to the minister to basically outline the issue and the challenges. Thank you.

MR. CANFIN: Thank you to you. Thank you for your invitation.

First of all, I'm sorry for not being as fluent in English as you are, but I was told that American people like the French accent in English like we like the English-American accent in French. (Laughter) I hope so.

MS. SIERRA: Well, since I did my butchering already, it's okay.

MR. CANFIN: Okay. So you know that France offered to host the COP in 2015. As we are the only candidate, we should win this competition. (Laughter) For the worst or for the best.

I would like to present to you some figures you all know, so I will make it very quickly. The first thing is the last IPCC report. I assume I don't have to come back to the report; you are all aware of it. Let's start by the bad news. The bad news is that current trajectory leads us to 4 degrees. And as the World Bank recently demonstrated, a world with a 4 degrees rise in temperature means the main threat for development, the main threat for child mortality, and a world with 4 degrees is a world where more children below 5 years old do not reach 5 years old. So that's why there is a connection, a clear connection and a deep connection between the issue of development and the fight against climate change, and I will go back to that because it's at the heart of the potential success in Paris.

But there is also good news. The good news is that it is still possible to stay below 2 degrees. It's ambitious, but it is still possible. That's why one key thing we have to make sure and it's happening in Paris is that we do not renegotiate, we do not reopen the negotiation about the target of 2 degrees. I know that countries would like to do so for some of them will want to be more

ambitious, 1.5 degrees. Some of them would like to be less ambitious and tend to say, well, you know, 2 degrees, it's too late; 2 degrees, it's not possible, so let's start again a new process to find a new target. Our view is that if we go down that line, we start for a new decade of discussion only on the target and not on the means, on the implementation, on the benefits, and so on and so on. So we need to stay on the 2 degrees.

The second slide is showing what I would call the landing zone, and it's in green, of course, the landing zone of the century. You know, here are the countries with the human development index and the greenhouse gas emission per capita. If you take the countries beyond 0.8, which the level agreed to be the level where there is a pertinent level of human development, and you add the (inaudible) for the GHG per capita emission -- so on the left it's sustainable; on the right it's not sustainable -- you have the green zone and it is empty. It is empty. It means no country -- no country -- at that time is above 0.8 in terms of human development and sustainable in terms of climate emission. I'm not even talking about other sustainability issues. So we need to innovate, we need to be creative, we need to face this challenge. This is the challenge of the century, innovate and reinventing prosperity.

You know, one of the key things for the agreement in Paris is that we should talk about the co-benefits of climate change or the co-benefits of the fight against climate change. If I take one of them, I could talk about jobs and so on and so on, but let's talk about air quality. This is the NOx concentrations in the world, so it dates back to 2007. My feeling is that it gets worse.

You have in China, in the U.S., in Europe, and I would like to focus on China, a huge problem. And what is new between Paris -- between now to Paris and Copenhagen in 2009 is that environmental issues have become political issues in China. You know, the main purpose, the main objective of the Chinese government is political stability. And if environment is a threat, the degradation of environment is a threat to political stability, then it starts to be a real concern. And it is exactly what is happening not due to climate change per se, but due to air pollution, due to air pollution due to coal. And we all know, we all have in mind the pictures of Beijing last winter. So that's why we need to focus also on the co-benefits of the fight against climate change. If you want to fight against climate change, you have to have a coal agenda. And if you want to improve air quality in Beijing, you have to have a coal agenda as well. So even if you do not pursue per se the objective of climate change, then you have a co-benefit targeting air quality on climate change. So that's why we need also to shape the discussion, not only talking about climate, but talking about air quality and climate benefits.

Same for India. When you talk with India about climate, the doors are closed. When you talk with India about access to energy, the doors are open because you know they have 500 million people who are seeking access to energy and there are two ways: either it's low carbon or it's fossil fuel. If it's fossil fuel, it's not just sustainable for green reasons, but it's not financially sustainable for Indian. So that's why the agenda for how to provide access to 500 million in India with a low carbon trajectory is key for India in terms of

national interest. And if you address this issue, if you provide a solution, then you have dramatic benefits for climate even if you never talked about climate in the discussion. So that's why we need to think also climate in a larger context.

That's what I said about India. And here you have on the -- I don't know if you can see. No, you can't. On the left side, you have the price of PV in the next three decades. And in the second graph, in the medium you have coal and gas. What you can see is two things.

The first thing is that in 2030, coal, gas, and PVs will be -- including all the price and so on will be at the same level of competition. It will be as cheap as coal. But it's only in one decade and it will be too late because we all know that the investment that will provide effects on climate change has to be decided now for the next decade. So that's why we need to have a coal agenda and that's also part of the potential deal in Paris.

You know, you can shake every Polish leader as strong as you can, whatever the political color is. If you are not able to show that there is a pathway out of coal dependency or there is solutions provided to reduce carbon intensity of coal -- let's say both -- you can shake it very, very strongly, it will not deliver capacity to agree on the commitment that we are seeking inside the European Union of -40 percent of CO2 emissions compared to 1990 in 2030, which is the trajectory to -80 percent in 2050. So we will deliver that inside the European Union only if we are able to address the coal issue in Poland.

And the issue in Poland is also true, as I said, in China, for very different reasons. We are talking about the geopolitical dependencies on Russia,

one for Poland, and on the other side air quality in Beijing. But at the end of the day, technical solutions are quite close. So we need to build, and the U.S. could be a key player in that, we need to build a coal agenda driven by solutions. Because even if in two decades or in one decade PV and coal are on the same level of price, it will be too late. It's good news. It's very good news, but it's too late.

So let's conclude on the key blocks and principles for Paris agreement and just a message that it's clear that if we fail in 2014, both in Lima and in September with the General Assembly summit of leaders, it will be harder in Paris. So we are not considering Paris as separated from Lima and from Ban Ki-moon's efforts. We are, on the contrary, working all together very, very closely. We have started to work together.

So the first line is the commitment by all countries. We could get back to that around the figures, the timing, and so on. That's for ambition.

We need also, of course, to take care of (inaudible). That's the equity issue. And we have started to work and I'm not so pessimistic about our capacity to find an agreement which relies on the new world, not on the 1990 world when you have annexed and non-annexed one, but when you have a spectrum of commitment taking into account the level of development, but moving from the world divided into annexed one and non-annexed one. I think the informal discussion we had are quite optimistic.

So that's maybe one of the most important things is the legal agreement. We all know that a couple of countries, including the U.S., a legal

agreement on binding targets internationally binding targets, which we are ready from a European perspective, will be very, very difficult for political reasons, legal reasons, and so on. But, on the other hand, if there is only a bottom-up approach without any kind of top-down and legal constraint, it will be very disappointing for public opinion and it will be very hard to have the developing world on board. So that's why we need to find a balance between what could be international treaty with legal binding targets and a pure bottom-up approach with only let's say loose things.

One of these potential lending zones is domestically binding targets, so a political commitment based on domestically binding targets, which does not require ratification by parliaments; and a legal agreement based on transparency, measurement, and reporting and verification of emissions, so that you could have something which is politically manageable, both from a U.S. perspective and from a developing world perspective, but also from a European perspective. So that's the first thing which we are thinking about as a potential compromise. And, of course, I'm open to the discussion on that.

Then some classical things about boosting the division of a green tax, which requires what failed in Copenhagen and we need to understand why it failed in Copenhagen. I'm talking about sectorial approach. If I talk about cement, about steel, about cars, about coal, we need sectorial approaches to have sectorial targets, sectorial objectives in terms of carbon intensity, for instance. For the time being we failed to deliver that and both business communities and politicians failed to deliver that. We need to understand why

and we need to overcome the obstacles.

And the last issue which will be the key issue for Africa, for instance, and for (inaudible) is adaptation. Because as time goes, the issue of adaptation becomes maybe the first, the top priority for development countries. So if you take the five lines -- ambitions; equity; agreement; incentive to a green economy, both financially speaking and technologically speaking; and solidarity through adaptation -- you have the mapping of what could be financed by public money, what could be financed by private money, leveraged by public money, the issue of tech transfer, the core of the legal agreement, and the equity and ambition.

So that's the very first step we are in and that's why I would like to share these first thoughts with you to have your feedback. I hope positive feedback. Maybe a negative feedback, so I will come back in six months time in order to show you other slides. Thank you. (Applause)

MS. SIERRA: Thank you very much. So Andrew and then we'll ask the other panelists, but we'll start with Andrew. So the minister has laid out a roadmap, talked about some of the issues, but also the opportunities, but has asked for feedback. So Andrews, over to you.

MR. STEER: Great. Thank you, Kathy. Mr. Canfin, I agree with what you just said, so we can relax. (Laughter)

Kathy, thank you for hosting this. It is a pleasure for the World Resource Institute to work closely with Brookings. You guys are doing a great job and thanks for convening this. Minister Canfin, genuinely, what you said was

extremely helpful, I believe.

The first point we have to make, especially in this country, is that we really, really do need a deal in Paris. It's become sort of almost conventional wisdom in the last couple of years as this UNFCCC has been so frustrating to sort of say, look, you know, there probably are some other ways. Look at these great initiatives over there. Maybe we could get there. We can't. We can't. And it is extremely important for the future of the entire development endeavor that we have a serious deal in Paris. And we are deeply grateful to you, Minister Canfin, and the French government for really leading this.

What do we need to get to where we need to get to? I think we need several things, but let me suggest four. First we need a new narrative. Most negotiators are going to UNFCCC negotiations believing it's a win-lose. It isn't. And yet we have failed to convey what the most modern economists in the world are now telling us. We at the World Resource Institute have spent quite a bit of time over the last six months, together with seven countries, putting together a Global Commission on the Economy and Climate Change. Yesterday we had a meeting of the Economic Advisory Group chaired by Lord Nicholas Stern. Some of the best economists in the world there: people like Philippe Aghion from Harvard; we've got people like Dani Rodrik, one of the leading growth economists in the world; Kaushik Basu, chief economist at the World Bank; and a whole range of them.

What they are telling us and what empirical evidence and theory is telling us is actually there is a lot bigger space for a win-win than we thought; that

actually directed technological change can lead to increased growth. And the reason that China this year is embarking upon cap and trade is not because anyone's telling them to do it. It's because they actually think it's in their own interest. And we failed to capture this new narrative which the leading scientists, the leading economists, and the leading practitioners are now telling us is true.

This particular commission will be delivering a report in time for the high-level meeting at the U.N. next September. Felipe Calderón, because of the great work he did in Cancun and the great work he did chairing the G-20, is chairing that commission. Nick Stern is vice chair together with Luisa Diogo, who was the prime minister of Mozambique. So that's the first thing that's needed.

The second thing that's needed is discipline and drive. And we really admire the way you're going about it, Minister Canfin. We simply cannot wait until the middle of the night in a hotel room to make our offers. Negotiators love to keep their cards close to their chests. It's not going to work.

So next week, we're going to be bringing out Jennifer Morgan here who leads our work on climate and energy. We're going to be bringing out a paper suggesting the kinds of approaches, the kinds of timelines that are going to be required. Now, whether that's in the Peru meeting, but offers need to be really put on the table, or whether it's a little bit later, the plain fact of the matter is there needs to be time for review of the various offers that are put on the table. There needs to be a process and there needs to be a disciplined -- whether you call it an MRV or whatever.

We in WRI are now merging all of the work that we do on measurement. As you know, we are the keepers of the greenhouse gas protocol, so 86 percent of the Fortune 500 companies in the world report greenhouse gases using our protocols. We're now putting that together with our cities work and our national work, so one can't kid anybody that we can't measure. We can measure. It's well known and it needs to be measured. And as commitments come forward, and there'll be apples and oranges, quite frankly, we need to get a look at them across the piece and make judgments. So the second thing then is discipline and drive.

The third is smart, firm political leadership with flexibility. Now, those of us that come from a European heritage we would love a legally binding international treaty that everybody, you know, that doesn't honor it, you know, gets set to prison kind of thing. (Laughter) But, you know, not all countries, you know, think like we do. And we've got to -- and I'm sure Elliot will come in on this a little bit later -- we've got to be a little bit flexible. What does matter is that there is a degree of bindingness and we need to think very hard what that means.

But also, we've got to think of different paths to get there. There can be lots of paths to get to an agreement. The agreement must be strong. And some very exciting developments, and, again, we really like the way you and the U.N. are going about this. I mean, for example, in putting together the Heads of Government Meeting next September, some very interesting ideas. I mean, Ban Ki-moon doesn't want all these leaders to sort of discuss, you know, every jot and tittle of an agreement. Instead he's trying to sort of raise the spirit, so

he's saying what are some of the big initiatives that could be launched that will bring hope? Could be, you know, on energy efficiency, for example, on deforestation, a whole range of sort of issues that could be raised. We've got to be really smart. We've got to get out there.

One of the things that we're doing with seven other institutes around the world is looking at three different scenarios as to what the deal might look like with the aim of being helpful to the French government and UNFCCC to sort of recognize out there, there are a number of paths that could get us there.

And the final thing is we really, really do need to understand the issue of equity and fairness and justice. It's very tempting for us where we sit to say, well, yes, you know, of course the developing world is raising this issue. We have got to look that issue in the eye. One of the things we're doing with the Mary Robinson Foundation is a major project on climate justice. We're trying to rescue that term. Some of us who were at the original signing of the UNFCCC in the original Rio in 1992, we watched leaders of the world sign with actually a real sense of moral purpose. That moral purpose has evaporated. And the job of political leadership is to rescue that moral purpose. And a word like "equity," which originally was a word that inspired, is now a word in the context of the negotiation that de-energizes. And we've got to change that calculus. So we're going to be working very hard on that.

And it's a wonderful thing, Minister Canfin, that you are the minister of development cooperation and you're the person who's leading the negotiation. This is an amazing thing actually because we have to demonstrate

that actually for the 1.3 billion people who don't have access to electricity, for the more than 1 billion who don't have access to clean water, that actually this deal is going to be in their interest.

So, for example, in Africa, you think of the fact that the soils of Africa could be absorbing millions and millions of tons of carbon and increasing yields and increasing resilience. There are fantastic opportunities. There are 2 billion hectares in the world today that are degraded. That's bad for the economy. It's bad for the poor. It's extremely bad for climate change. Why not restore them? Why not pick 150 million hectares that could be restored? This could be dramatically good for poverty reduction and it could be dramatically good for carbon. That's the kind of sort of inspiration that we need that will lead us to the kind of deal that we require in Paris.

Thank you.

MS. SIERRA: Thank you. (Applause) So now we have another optimistic view.

And Elliot, I'm not telling you not to be optimistic, but I'd like to see your perspectives on where we're going and how easy it's going to be to get there. Thank you.

MR. DIRINGER: Well, it may not be easy, but I'll have to jump in on the optimism actually. (Laughter) And first, thanks to Kathy and Brookings for hosting, and thanks to Minister Canfin for bringing this conversation to Washington. Frankly, since Copenhagen, most people in Washington have completely tuned out the international climate negotiations, may have forgotten

that they have continued. So it's great that you're here helping to inspire some fresh thinking and conversation on this topic.

We have continued to remain very focused on the negotiations. And I have to say that based on the conversations over the course of the year that I've witnessed in the negotiations, the conversations we've had with negotiators, I am, in fact, encouraged that we will be able to deliver a reasonably solid deal in Paris. Again, it's not easy, but I think already we're seeing a fair degree of convergence two years out among governments on the character, if not the details, of the kind of deal that might be delivered. So I agree with a great deal of what's already been said.

I'd like to distinguish among different elements here. There is the shape of the deal and within that I would distinguish between the agreement per se and the broader package. So there may be other things delivered in Paris beyond the agreement per se. And then there is, of course, the question of how we get there. What is the process? What is the sequencing between now and Paris to deliver that deal?

In terms of the shape of the deal there is a structure to be decided, a structure to be established, then there is the content, the commitments that individual countries plug into that structure. When we think about what would be a workable structure, we now have two decades of experience within the UNFCCC to draw on. And the minister mentioned top-down and bottom-up and, in fact, parties have experimented with both approaches now over the past two decades: the Kyoto Protocol being a more

top-down approach and then emerging from Copenhagen and Cancun, we've had a much more bottom-up approach. In fact, parallel structures now established under the UNFCCC.

Both have strengths. Both have weaknesses. Both have thus far fallen short. The top-down structure provides us some rigor, some legal rigor, some technical rigor, but has not delivered broad participation. If anything, it has been shrinking participation under the Kyoto Protocol. The bottom-up approach conversely has enabled very broad participation. More than 90 countries have come forward with pledges under the Copenhagen and Cancun agreements. But those pledges, unfortunately, are weak and don't put on the 2 degree pathway. But what that has achieved is a degree of flexibility that enables that broad participation.

So the challenge, I think, for Paris is to see if there is a third way, a way that draws on the strengths of both, a hybrid approach, if you will; one that does introduce some degree of rigor, some degree of bindingness, as Andrew said, but, at the same time, does provide the degree of flexibility that enables broad participation. That's what we need to aim for.

And in the discussions already over the course of this year and the negotiations there has been a fair degree of agreement, I think, on the notion that the commitments within a new agreement will be self-defined. We will not be negotiating numbers among countries. Countries will define their commitments for themselves. Effectively, what we will be delivering is a structure that stitches together national programs. We see programs emerging all around the world

and they are driven not by an international agreement, but rather by the imperatives perceived within domestic context, whether they be climate-driven or driven by other objectives. Nonetheless, they are leading to action and now we need a means of stitching together that action at the global level.

The real challenge in this new approach I think will be how do we build ambition into it? One of the things being discussed, which Andrew alluded to, is the notion that countries will put forward their numbers ahead of any agreement and subject them to some sort of scrutiny at the international level, some form of *ex ante* review. This is a new concept within the climate negotiations. The idea is that if countries know that their commitments will be subject to that form of scrutiny, they are more likely to put forward ambitious numbers, some even hold out the hope that countries would adjust their numbers up as a result of that kind of *ex ante* review process.

But that only brings us up to 2015. I think what's really essential is that there be a mechanism in this new agreement to continually elevate ambition, some kind of ratcheting mechanism. What we need to inspire really is a continuous cycle. The agreement in 2015 will not be the grand solution, but what we must do is establish a durable structure that will continually elevate ambition.

In terms of how we get from here to there, obviously there's much work to be done in terms of working out the architectural issues, but there is the question of numbers and the sequencing of numbers. When will countries put them forward? And when they put them forward, how will they be understood? Are they the numbers to be entered into an agreement? Are they the numbers to

be considered internationally and then perhaps adjusted before 2015? Will the numbers in the 2015 agreement actually be a starting point and, perhaps between 2015 and 2020, will continue to work to elevate those numbers?

So I think those are questions that countries are wrestling with. If countries are forced to come forward with numbers too soon, there is a risk they will be weaker than they might otherwise be. But we need to demonstrate a growing critical mass of ambition toward Paris, so, clearly, we'll need to have numbers on the table in the run-up.

As always, the really essential precondition for an ambitious outcome is growing political will at the domestic level. I think that by deciding now that commitments will be self-defined rather than negotiated, you are perhaps removing some of the leverage that countries have over one another to try to drive those numbers up. But at the same time, I think it reduces some of the opportunity for brinksmanship, so, in a way, I think might ease the path.

Overall, I'm encouraged because I feel there's a greater sense of realism in these negotiations in the wake of the failure at Copenhagen. And I, again, am reasonably confident that we will deliver an agreement. Again, the essential point is that it must be durable and it must build ambition over time.

One note of caution. The numbers are important, but there's great risk in allowing the numbers alone to be the measure of success in Paris. I think, unfortunately, there is a likelihood that, again, the numbers we see on the table will not in the aggregate put us on the pathway to 2 degrees. And we have to be careful that that, in 2015, does not brand the outcome there as a failure. If, in

fact, we can put in place a structure that will continually elevate those numbers, there still remains the opportunity to stay within 2 degrees, but we must define success in a way that avoids the perception of failure if we're unable to put in place the numbers in 2015 to put us on that pathway.

So just to conclude, again, I think the outlook for a solid agreement, if not a grand solution, is a good one.

MS. SIERRA: Thank you, Elliot. (Applause) So what we've heard is a pathway. We've heard encouragement and real optimism on the part of our two subsequent speakers. But what it's going to depend on are actual country actions from the United States, from China, from many different parties. So I'm going to turn to Vicki to give us a quite rundown on, you know, can the U.S. deliver?

MS. ARROYO: So thank you, Katherine, and it's really great to be back here at Brookings. I have to say that I'm different in many ways, I think, from some of the speakers you've heard from in one respect: the domestic focus of our center and the subnational focus. But, also, I'm probably unique in that I met my husband here at Brookings at an event. So any of you who are eligible, look to your left and look to your right. Good things happen here at Brookings. (Laughter) But it's truly an honor to be here with Minister Canfin, Elliot, Andrew, and Katherine.

As I said, our center has a more domestic focus. We work at the nexus of state and federal climate policy here in Washington with offices actually at the Hall of States, so we mostly are in regular contact with state and federal

policymakers. We also are at Georgetown Law. We work to inform the federal dialogue with the lessons of the states and to serve as a resource to these states. But I think that there's an interesting parallel between the bottom-up approach that we've seen at the international and what's been happening domestically.

So I want to speak briefly about our ability to aggregate the work of cities, states, and regions, which really directly and indirectly affect our ability to reach the international commitments that the U.S. is taking on, the 17 percent below 2005 and beyond that in Paris. For Paris, I think it's going to be really important because what the U.S. is credibly able to commit to will be greatly informed and shaped and bolstered by the subnational efforts. And, of course, what the U.S. is able to commit to is really vital to getting an international agreement, as Katherine just said.

The dip in U.S. emissions in recent years has been attributed to a lot of things, including the sluggish economy for a while, the shift to natural gas, federal programs like stimulus spending and efficiency standards that help to decouple economic growth with emissions. But it's also in no small part due to state efforts and the leadership that states have shown. And it's important for participants in the international discussions and for this audience, I think, to recognize how much is happening at the state level and how vital it is for whatever the administration moves forward with to support and build on those programs, and to continue to allow the states to get out front to ensure that real reductions are taking place on the ground and will achieve the ultimate goals.

We're already, of course, as you heard from the minister, seeing disruptive impacts of climate change, and these are being felt at the local and state level: record rainfall; flooding like we see in Boulder, I just came back from there; hurricanes like Sandy, which will have a one-year anniversary soon; and the enormous personal and economic toll of these intense storms which will be more frequent in an era of climate change; drought; fires. So the states are on the front lines for that, too, and they're very interested in adaptation.

A look at some of the state programs to reduce emissions, though, since that's the focus today, 40 states have renewable, alternative, and energy-efficiency programs in place. Colorado's Clean Air, Clean Jobs Act is driving investment in cleaner power. It will achieve a 29 percent carbon reduction from that sector by 2018. The nine-state Regional Greenhouse Gas Initiative, or RGGI, has been a successful, functioning cap and trade market in this country with the auction back in 2008, and it's been going strong since 2009. It's raised 1.35 billion in revenues from the auction. And independent analysis suggests that the combination of price signal and the investment of those revenues has created over 1.6 billion in net economic value, creating 16,000 region-wide jobs. They've recently tightened the cap, of course, or announced that the cap will be tightened by 45 percent in 2014 from 165 million tons to 91 million tons that are on a declining path each year at 2.5 percent.

California, of course, has a comprehensive program to meet its statutory obligations of returning to 1990 levels by 2020 through cap and trade, through aggressive efficiency efforts that really started decades ago. And

they've already held energy usage flat at a time when the economy and population there has been booming, a renewable portfolio standard of 33 percent, that is requiring one-third of electric power to be from renewable resources -- they're already at 23 percent -- transportation measures; car standards; fuel standards that are driving the next generation of technologies; land use planning; and more.

So why are these important? Why am I talking about this in an international discussion? Well, first, some individual U.S. states would rank in the top 20 global emitters if they were countries in their own right, so they're important just directly. But they're also key partners in federal standards. They catalyze real progress. For example, the two key sectors that are responsible for the vast majority of emissions here in the U.S., about three-quarters of the emissions, are transportation and electric power.

So just taking them in turn, the administration built on California's hard-fought car standards that were signed on to by another dozen states in developing the single harmonized standard that saves a lot of oil, money, and reduces emissions tremendously that you've heard about, you know, from the administration since a lot of this was accomplished in the first term. Now, in the second term they're shifting focus to the electricity standards. And under the Clean Air Act the EPA has to set a standard for power plant emissions as they just announced a proposal last week for the new sources. But for the existing sources, which is really where the action is because a lot of people aren't building coal plants anyway, regulation under Section 111(d) of the Clean Air Act

requires close cooperation with the states. The states actually are the ones that have to submit plans to show how these reductions are going to happen.

And so how does this all add up to something? Well, first, the light-duty vehicle standards, the cars and trucks, will have a fleet-wide fuel economy of 54.5 miles per gallon by 2025. So here we're going outside of the 2020 timeframe already, saving 6 billion tons of greenhouse gas emissions, which is comparable to the U.S. total CO₂ emission in a given year, like 2010.

In the electricity sector, EPA is developing proposals, as I said, for existing sources through an extensive public input that actually was shut down when the government was shut down, but, hopefully, will start taking place again. But developing these depends very much on whether or not they're going to rely on the state programs that I talked about; whether or not they can get significant reductions through latching on to opportunities like we've seen with the RGGI states -- California and cap and trade -- or if they're going to go in the direction of more traditional command and control standards, in which case they might have more modest reductions from that sector of about 5 percent.

One current proposal -- I see folks from NRDC here -- that promotes a broad definition of best system of emissions reductions by NRDC provides for flexibility in reaching a target and getting more aggressive, therefore. And that achieves a 26 percent reduction of CO₂ by 2020 from 2005 levels, and 34 percent by 2025. Again, outside the 2020 range.

So these are really impressive reductions. And when couple with steps that the federal government is taking to reduce methane leaks from oil and

gas production, landfills, to shift away from refrigerants like HFCs that contribute to warming, to continue to improve lighting and appliance efficiency standards, it can collectively put us on track to reach the 2020 target and secure for the reductions that go beyond that 2020 timeframe, which is, of course, going to be the focus in Paris.

So our goals at our center is to allow the states to continue to have the support they need to push beyond just the status quo, and to better attempt to quantify how all of these efforts add up. This is going to be important both domestically for showing compliance with the federal standards that I just mentioned as well as internationally, as the international community will demand to know how solid and credible are these estimates and projections given that we do not expect to have a federal bill any time soon, but using the existing authorities and the agency action and the state leadership that the president emphasized in his climate policy speech at Georgetown this summer. Thank you.

MS. SIERRA: Thank you, Vicki. (Applause) So my panelists have done an excellent job of basically outlining the issues of the tremendous amount of substance. I've done a lousy job of keeping everybody on time, but I think the substance trumps the shortness. I've learned a lot from all the presentations, so we have a very short amount of time for questions. And so, yeah, we're going to get mics. And if you can identify yourselves. I'll take two and then we'll go from there.

MR. LIEBERTHAL: Ken Lieberthal at Brookings; already married.

(Laughter) This has been a terrific set of presentations. I just have one question.

As we all know, 8 countries account for about 60 percent of emissions. Add another 7 and you have accounted for more than 70 percent of emissions. That, to me, has always been kind of the ballgame for how effectively we can move forward here. So it's great to have 90 countries with targets. It's 15 countries that are most of the game. How do you see the discussions within the MEF relating to the process that you've been describing leading up to Paris? You know, how do you capture that and really build it into something that becomes more serious and has a greater impact? Thanks.

MS. SIERRA: Thank you. Second question, I think we had -- yes.

MR. MARSH: Thank you. Duncan Marsh from the Nature Conservancy; available. (Laughter) Thanks for the inspiration, Vicki.

MS. ARROYO: A really nice guy. (Laughter)

MR. MARSH: My question is on equity to Andrew and to everybody. So yes, equity has certainly become a big political issue, but there are those who suggest that equity plays out in the form of a negotiation and, by definition, countries that agree to an agreement of any sort agree because they find it in their interest to do so, which means that it's addressing their necessary needs for equity to some degree. And so at the same time, it's become this significant political issue with sort of informal workstreams by a lot of organizations being dedicated to it in a way that suggests that, you know, there may be additional dimensions to it that play out in the negotiations.

I'd just like your comments on to what extent that additional work

is necessary or would it be much better to just take that energy around equity and just focus it on the negotiations, just say that this is going to play out in the negotiations? Everybody should be seeking their own interests here and let's let the negotiated agreement define the equity that is necessary. Thanks.

MS. SIERRA: I'll take one more (inaudible) and then we'll turn to the panel.

MS. FRIEDMAN: Hi. Thanks. Lisa Friedman from *ClimateWire*. This is a great panel. Thanks for doing this.

For the minister, you know, I think I have a pretty good idea of what, you know, folks like Elliot and Andrew think were the sort of pros and cons of Copenhagen. Can you pinpoint for us what is the thing you most want to avoid from the experience in Copenhagen?

Also, if you can, I mean, I've heard a lot of talk about this sort of continuum of Lima and the Ban Ki-moon summit and Paris. Is everyone just writing off Warsaw?

MS. SIERRA: Thank you very much. So let me turn to the panel and I think we have questions on how to integrate the MEF and other multilateral/trilateral/bilateral discussions. Some question about, you know, how does the equity discussion play into that. And the third is Copenhagen.

Minister, I'm going to turn those to you because everyone hears from this crowd all the time, but they don't get a chance to hear from you.

MR. CANFIN: And I'm married. (Laughter) So the MEF, it is one of the forums where informal talks could happen and could start to deliver. So

we will host -- I attend all the MEF meetings and we will host a MEF in Paris in 2014. And we really want to connect the mindset of the MEF to the negotiations, and that's not easy, but that's the way we want to work. And it's clear that we need the MEF mindset in 2014 and we will make sure that it will deliver. For instance, there have been a lot of talks on the building initiatives in the MEF, and I think we could deliver at the end of the year or next year on something substantive on that. So that could be plugged then into the UNFCCC framework.

On maybe more general -- on Warsaw, what we really seek is an agreement on the process on the figures. Meaning, okay, we agree that we need to put real figures in 2015 in Paris -- or we need to agree in Paris, okay, on figures; not in 2018, in 2015. And we agree on the process, maybe a two-step process, as it was mentioned, first stage 2014, then sort of peer review, let's say, or ex ante review. And the final step in Paris. So what we seek is that kind of agreement in Warsaw.

I agree that, if I go back to Copenhagen, we maybe rely more on interests than on moral values. You know, the way the Danish put the thing was, well, it's our responsibility, it's humankind's responsibility to agree, and so on and so on. Well, I'm not saying that public opinion, NGOs, moral values, and so on won't play any kind of role for success in Paris. But the key driver will be interest, economic interest. And that's precisely why I go back to the study you mentioned, that we need to demonstrate and we have started to demonstrate that climate change adaptation and mitigation measures are good for jobs, are good for sustainability in terms of financing. When you look at fossil fuel

subsidies in Morocco, for instance, it's 6 or 7 percent of GDP each year. How can a country could have this unsustainable way of subsidizing fossil fuel up to 7 percent of its own GDP? So look at the ways to build some interest coalition.

And that's why I kept my last slide, and it's very much in line with what you said. We need to create a new narrative, but not only a narrative, a new substantive, but also a new narrative on climate. Because the capacity of humankind to share a burden peacefully at 193 countries around the table is close to zero, and I'm optimistic. So we need to change the narrative in Paris to share -- not to burden, but to share opportunities in terms of jobs, in terms of growth, in terms of prosperity, in terms of development, in terms of fight against poverty, in terms of food security and so on and so on -- all things that are threatened by climate change and a 4 degrees world.

So that's why we see that as a solution-oriented agenda. And you mentioned all the key issues of this flower. Local authorities, you mentioned subnational. We fully agree and we are ready to say that Paris will be maybe the first international conference where local authority will be at the heart of the solutions. And they have been seeking for that and looking for that for years. They were denied that access, I would say, we are ready to offer. So now the issue is not are we ready to offer what kind of role are you going to play, but, okay, what solutions are you going to bring? Because it's true that local authorities, local governments, are at the forefront of the fight against climate change because they are experiencing the impact, the negative impact of climate change, more than the national government.

So they are more aware. And I take the French example, 70 percent -- 70 percent -- of the total investment needed in transportation, in building, and so on, so in sustainable cities are in the hands of local government. So for those two reasons -- awareness and advancement -- we need to build coalitions with local authorities. But we still need to figure out how to plug that into the UNFCCC process, which is, in turn, a governmental negotiation, old style I would say, but that's the way it is.

So don't hesitate to help us with solutions. We have the political willingness to do what is necessary to do with the local authority, but we still don't know how to make a living. The sectorial agreements, I mentioned that (inaudible) adaptation.

Sustainable energy for initiative, you mentioned the energy access. I did it for India; you did it for Africa. It's clear that this kind of initiative is here for all. It's very, very interesting. For the first time it was designed with three pillars, from scratch I would say, from the beginning. The first pillar is access; the second one is efficiency; the third one is renewables. So we are not talking anymore about, well, let's provide access, whatever the source is. And then we will start talking about energy efficiency and green energy when everybody will have access. But we start talking about how to deliver access in a green and efficient way for Africa, for the 1.3 billion people who don't have access to electricity.

That's precisely the kind of positive agenda, solutions-driven agenda, which should be at the heart of the Paris negotiation. And for the time

being, it started to change, but for the time being when you -- this goes inside the UNFCCC framework. Nobody talks about EC for all. And when you are in the EC for all forum, nobody talks about UNFCCC framework and the agreement (inaudible). So that's the kind of bridge we have to build in order to find that kind of agreement. So not only, as you said, the UNFCCC agreement, but the package in Paris, including some sort of agreement, of course, inside the UNFCCC framework -- for instance, the legal agreement based on measurement verification and so on, but also a package of initiatives that make the level of ambitious credible.

And that's the trap which is in front of us. That's the one that you mentioned. That's the only thing which will be looked at by the media is the figure. And we all know already, even if we need more ambitious rigor, we all know that the figure at the end of the day will not deliver the 2 degrees. We all know that.

So the issue is thanks to sectorial initiatives, thanks to concrete solutions-driven agenda, thanks to commitment of local authorities, and so on and so on and so on, how to raise the level of ambition, including in the figures. And then one thing we don't know and we have still two years to find out the solution, so that's why it's interesting to share both the vision, but also the problems we have to overcome, is how to manage the national figures and the capacity of different actors -- business community, local authorities, and so on -- to raise the level of ambitions. Because you can double-count the commitments or you can disconnect the commitment. You have the national commitment from

the EU, from the U.S., and so on, and you have some positive actions from business sectors, from local authorities, but they are not plugged into the level of ambitions and how to do so. So for the time being, we don't know because it will be the first time that that could happen. So don't hesitate to help us.

And my conclusion will be that the last time we host not a COP, but a cup, it was a soccer World Cup. (Laughter) And we won it. We won it. So this time, we will win it as well. (Applause)

MS. SIERRA: Well, our time is up, so I just want to conclude very briefly, first by thanking the minister for, as Elliot said, really bringing to a Washington audience sort of the spark of the negotiations that are going on. And many people are busy working on this. It's not been part of the Washington agenda, though many people in this room have been working on it. But I think it is time for us to kind of reenergize the conversation in the United States so that we are in sync with the rest of the world.

I also heard a roadmap, which is built on both ambition, but also on interests with a very strong focus on economic interests, on interests of human development, and how to really bring the more positive agenda, as well as some of the stories that we heard from other panelists about how the recognition of the need to marry the climate imperative with the development of energy access, with reducing pollution, with things that are really are in the interest of people maybe are changing the narrative and maybe changing the conversation and giving us the sense of optimism that we heard here.

We also heard, you know, from the United States that there's

action on the ground with or without current issues. We need to encourage those things at the state level, but really bring them forward to the international community so those are well understood as part of the narrative.

Finally, I think that we heard some discussion on how to turn the issues of equity from, as Andrew said, something that takes away energy, like a classic introvert into an extrovert. You know, something when you're talking about those interests really energize people and some of the stories that we heard about what you might be able to start envisioning in terms of food security and the links in terms of biodiversity and human development, and like maybe that sweet spot.

So with that, I want to thank the minister for taking time from his very busy schedule here in Washington during the Annual Meetings of the IMF and the World Bank. And thanking our panelists for joining us. And please join me in a round of applause for them. Thank you. (Applause)

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