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Brookings Cafeteria: One year after Trump's decision to leave the Paris Climate Agreement

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(MUSIC)

DEWS: Welcome to the Brookings cafeteria: the podcast of ideas and the experts who have them. I'm Fred Dews.

On June 1, 2017 President Donald Trump announced that the United States would be pulling out of the Paris climate agreement claiming that it would undermine the U.S. economy and put the U.S. at a permanent disadvantage. One year later, what are the actual effects of this decision? What is the status of global climate diplomacy? To answer these and related questions I'm joined today by one of the key U.S. leaders on climate diplomacy.

Todd Stern is a senior fellow with the Cross-Brookings Initiative on Energy and Climate. He served from January 2009 until April 2016 as the Special Envoy for Climate Change at the Department of State, and was President Obama's chief climate negotiator. Also on today's show, David Wessel addresses rising housing prices and who is being left behind in his economic update.

You can follow the Brookings podcast on Twitter at policy podcasts to get the latest information about all our shows. And now, on with the interview. Todd, welcome to the Brookings Cafeteria.

STERN: Thanks so much Fred. I'm happy to be here.

DEWS: I'm delighted to have you here, but I'm sorry it's on a not great anniversary. You were the Obama administration's chief negotiator for the Paris Climate Agreement which was adopted by all but two countries on earth in December 2015. One year ago President Trump pulled the U.S. out. Can you talk about the range of your feelings from when it was signed to last summer?

STERN: So first of all I want to just make sure we clarify one thing for all of our listeners which is the president announced his intention to pull the United States out based on the way the agreement was actually set up, the provision for withdrawal in the agreement. The U.S. cannot submit its official notice of intent to withdraw until November of 2019, and then that has to layover for a year so that translates into is US can't actually get out until November 2020. But there's no question that the President announced his intent to do that.

As to the range of my feelings about it, since there had been a lot of discussion about pulling out of the agreement, I obviously anticipated what was coming and what might be coming for some time leading up to it. I think when I was watching the event for the Rose Garden speech I was pretty angry, not surprised but angry, at what I saw. I think it is sort of part of my personality makeup that I don't tend to dwell on those things too much, I don't wallow around in being upset or distressed. I try to switch pretty quickly into 'OK what do we do now'. On that day I had an op-ed ready to go and the Washington Post the next morning, explaining why this was such a wrong-headed and ill-advised decision. Ever since that time I have been working in various ways to try to deal with what we do now.

DEWS: I'd like to take our listeners back just to explain what the Paris agreement actually is and then I want to go back to this very important question of what do we do now. Can you talk about what it took to arrive at the agreement in December 2015? Just briefly sketch out what it is.

STERN: Well sure. In some ways the Paris Agreement was seven years in the making. I mean it was literally four years in the making. There was an agreement, there was a big climate change conference of all the countries in the world at the so-called ministerial level. For these purposes I was the United States minister. So there is one of those meetings at the end of every year. It's called a COP conference (for the conference of the parties). In the COP of 2011 in South Africa there was a mandate agreed to negotiate a new agreement over a four year period that would take us to 2015 and in pretty short order. The French made clear that they were prepared to host that meeting. So that's what became 'Paris', so it was officially a four year negotiation. But really it goes back to the time that President Obama came into office. I came with him, and we started working on the 2009 edition of that big meeting which ended up being in Copenhagen. It was a very difficult meeting a lot of people who thought it was a big failure. But it actually planted a lot of seeds that had found their way into Paris broadly speaking.

What does Paris do? First of all it includes all the countries in the world which is different from previous climate change agreements includes them in the sense that all of them are going to participate. All of them are going to take action. It lays out certain goals that are intended to guide what we're doing with respect to containing climate change. The most important of those goals is to limit the rise of global temperature to well below 2 degrees Centigrade which will be a trick. We're already at an increase of about 1 degree since the roughly the pre-industrial times. So it sets out a guiding goal. It includes a variety of measures to prod countries to act in a strong - or to use the lingo of these negotiations - ambitious way.

For example, every five years countries put forward their own nationally determined targets. That by itself is also another innovation of this agreement. It's not a negotiation between countries where everybody has to sign off on everybody else's target it's nationally determined which was critical for getting all countries to participate and there are cycles every five years to review those with the intent to push them up to you know to write up them kind of onward and upward. There are strong provisions on transparency so everybody can see what everybody else is doing. This is very important - countries report on their inventories of greenhouse gas emissions and report on their action toward realizing, toward meeting their targets. And again that applies to everybody. The agreement is has a subtler, less absolute means of differentiating between countries. One of the bugaboos of climate negotiations going back 25 years has been the kind of very sharp divide between what developed countries do on the one hand and developing countries do on the other. No matter how big and advanced those developing countries are: like China and others. There is still differentiation in some respects, which is appropriate but it's a much sort of softer kind of differentiation. The nationally determined nature of targets is a good example of that instead

of ‘everybody on one side does X and everybody on the other side does Y’, countries are making their own decisions. You have a whole spectrum of differentiation across different countries and there are other elements of the agreement that take a softer approach to that issue.

There's also still another innovation of the agreement is it's a kind of a hybrid in terms of its legal character. Some very important elements are not legally binding including country targets. They're not legally binding for very good reason: that countries wouldn't have agreed to that. And indeed if somehow they would have agreed to it, it would have ended up driving the ambition of countries downward because countries would have been nervous about ‘what happens if I have this legal commitment and I don't quite meet up to it?’. On the other hand, accountability elements those transparency the transparency provisions that I was just describing that is legally binding because we need to be able to see what people are doing. So there's a whole lot of elements the core of it is countries are supposed to be working to reduce their emissions, doing that on a nationally determined basis, re-upping on cycles that are determined in the agreement. And then there are other important provisions. There’s financial assistance of very poor countries for what's called adaptation in this business, which is that countries build resilience against the impacts of climate change which are already happening. So the agreement has a number of elements, importantly a number of really innovative elements that made this possible.

DEWS: So notwithstanding President Trumps announcement a year ago and then what you said about the US is still in the agreement until at least 2020. The agreement is still in effect then even with or without the United States is that correct?

STERN: The agreement is absolutely in effect. The agreement took effect very early for an agreement like this in 2016. So less than a year after the agreement was initially agreed to in Paris it had entered into force. That's kind of unheard of and it wasn't an accident. We in the United States with President Obama's leadership and Secretary Kerry at the State Department worked with countries push countries to try to get this done straight away, right up. Rhere had been participation from leaders all over the world. Of course we had a very important and powerful collaboration with China during this whole period. We agreed with China early on, it was the last thing that I negotiated before leaving the State Department in the spring of 2016. It was an agreement with the Chinese that we were both going to formally join the agreement. That needed to happen for entry in full force. And that happened in many other countries so it went into force. I had predicted in various op-eds where I wrote about this question of U.S. withdrawal. I predicted that other countries would not walk away, and they have not walked away.

DEWS: And it's my understanding that when the agreement was originally reached in Paris in 2015 two countries did not agree at the time: one was Syria embroiled in a civil war, the other was Nicaragua. And Nicaragua didn't think that the agreement was strong enough. But now I know Nicaragua has since

joined the agreement, has Syria joined the agreement?

STERN: I believe so. I believe Syria recently joined. So you have basically everybody except for the US leaning to leave.

DEWS: What I mean what would happen in the future if after November 2020 the U.S. formally is out of the agreement, how important is U.S. leadership and participation in this global moment?

STERN: Look I think it's critical it was critical to reaching the agreement. I mean virtually every one of those provisions that I just walked through with you a minute ago were provisions that were arrived at through substantial U.S. leadership in some cases they were literally our ideas. In other cases there were the ideas of another country which we thought were made sense and we worked with countries all across the board every different category all spectrums big developing countries small ones islands Latins, Africans, developed countries, all across the board. We were obviously wasn't all up to us we didn't do this single handedly but we were critically important. I think countries around the world saw that you had in the Obama administration from top to bottom a real commitment not just on getting the thing done internationally but we were walking the walk. Acting at home in very strong ways to reduce our own emissions. We put forward a very strong target. So in all sorts of ways we have really built this up, thanks to President Obama, and Secretary Clinton and Kerry, and all the others who were part of the climate team we've built up a lot of credibility.

When thinking about the experience that I had in the seven years that I was there, I go back to that famous comment by Madeleine Albright that the U.S. is the “indispensable nation”. And in my own experience that was absolutely true. I mean people look to us. It's not that they sit around doing nothing if we're not there, but they really look to the United States for leadership. These issues are not simple that's why it took so long to get a operational agreement that followed the original treaty which goes all the way back to 1992. These are tough issues and U.S. leadership is critical. You know I think if the U.S. pulls out it'll be very damaging. And I have been participating as much as I can from the sidelines in the discussions that are going on this year. This is actually a quite important year because in a number of places there are implementing measures guidelines and such that were agreed on to be negotiated to essentially flesh out and follow on the Paris Agreement itself. Those are supposed to get done by the end of this year on a whole host of issues including transparency and compliance and other things. I spent several days at a big climate meeting of negotiators just earlier in May and also went to the COP in in last year in November and in my observation, we were missed. We were missing a lot and we are missed. And people are angry. I mean the United States was a big part of the reason why this agreement came out the way it came out. A number of countries extended themselves a little bit outside their comfort zone trying to accommodate positions that we were putting forward, I think inspired by seeing that the United States and China were

together. So China sort of the leader around the developing countryside side a lot of countries thought 'Well if China is OK with this and the U.S. is pushing we're going to swallow hard and you know and take this step' and then the U.S. walks away. So it's a difficult situation right now.

DEWS: I recall that back in the earlier days of the global climate negotiations, after '92 when Kyoto was one of the big agreements, one of the worries and sources of opposition was that states said 'well we're not going to reduce our emissions if a global polluter like China is not going to reduce its emissions and they're responsible for a lot more of it now'. Then the developing world will say 'yeah but over the last hundred years the United States you and the developing countries have polluted a lot more'. And those kinds of issues seem to be really at the fore then but not so much now.

STERN: Well they have been at the fore since the climate discussions began in the early 1990s. They haven't gone away now, but I think we found a way to manage them and to work more together than had been the case in the past during the discussions that led up to and included Paris so. You're absolutely right. On the one hand, one can be quite sympathetic to the perspective of developing countries who say 'look we didn't create this problem, we're trying to develop and grow and to lift ourselves out of poverty. You guys didn't have to worry about this climate change stuff when you were developing. You could use coal or fossil fuel or anything else and nobody was yelling at you so now you're looking to us, and we don't want to have requirements imposed upon us that are going to interfere with our ability to develop and grow'. I think you can be completely sympathetic with that, and structure an agreement to take that fully into account. Again you think about what what we agreed to do: nationally determined. That's the key on this. Targets are nationally determined, so by definition we are not forcing you to do what you don't think you can do. Yet here's the deal: climate Change are really really big problem. It is a metastasizing danger and developing countries now account for well over 60 percent of global emissions probably 60 on the way towards 65, et cetera. Which is not because they're doing anything wrong, it's because they're developing and mature economies are more mature and we're using much more renewable and non-fossil energy.

So you see for example the kind of iron link historically between economic growth and emissions growth has been broken and the United States. Over the last number of years we have taken our emissions substantially down while our growth has gone substantially up. And that's where we have to go. To get back to your question, yes you can understand why developing countries have that perspective but you can't solve this problem without getting everybody on board. The politics of this thing in the United States and other countries are such that you just can't say 'this is all supposed to be done on the backs of countries that account for 35 percent of global emissions'.

DEWS: And now here's senior fellow David Wessel with his thoughts on the housing market.

WESSEL: I'm David Wessel and this is my economic update. The bursting of the housing bubble in 2006 and 2007 was one of the triggers for the worst recession in generations. Today though conditions vary from place to place, the average house price has risen 50 percent since the housing market touched bottom in 2012. In most places house prices are back to where they were before the bust- often a bit higher. That's great news for those of us who own houses - nearly two thirds of American families. But not so good for folks eager to buy their first house. With house prices rising faster than wages, houses are increasingly unaffordable for many particularly in the nation's hottest real estate markets. So who's being left out? Well younger people among others. Homeownership rates among the under 45 crowd have been falling for well over a decade. So they haven't benefited from the recent run up in house prices according to new data from the New York Federal Reserve Bank, people under 45 had 24 percent of the nation's housing wealth in 2006 but only 14 percent of the housing wealth today.

That has long lasting implications because home equity can be an important way to build wealth and owning a house makes it easier to borrow cheaply for other things. A recent St. Louis Fed report said that Americans born in the 80s are “at substantial risk of accumulating less wealth over their lifespans than members of previous generations.” So what's behind this trend? Actually it's not completely clear. Surveys suggest that folks including renters still see houses as a good investment, but builders aren't building as many starter homes as they used to. Construction of new homes particularly single family homes hasn't recovered from the recession. Also some younger Americans are having trouble getting launched in the job market which of course makes it harder to get a mortgage and there there's evidence suggesting that heavier student loan burdens are a factor. Even though the financial system has largely healed, getting a mortgage remains harder than it used to be. You have to have a better credit score to get a mortgage than you did 15 years ago. And now on top of that mortgage rates which have been at rock bottom levels for years are rising they're now at the highest level in seven years likely to keep climbing. That's just one more obstacle.

Now all this may have political ramifications. In places (California for instance- where housing prices are particularly strong and the number of renters is rising) there's more pressure for rent control. In Seattle where house prices are soaring, the city has imposed a controversial tax on big employers to raise money to fight homelessness and build affordable housing. Around the country, there's increasing attention to zoning restrictions that constrain new building particularly of apartment houses, and some pressure to change them though actually not much action. And in another way builders are complaining of labor shortages and this could add to their resistance. Business resistance to President Trumps anti-immigration stance since many construction workers are immigrants.

One final thought even though housing prices are back to where they were before the housing bust we are not back in a housing bubble territory… yet. Lenders are still more picky about who they lend to. Mortgage debt is rising but not at a very fast pace. As a nation we have a lot more home equity than we did five years ago and people aren't using their houses as ATM's - getting home equity loans and the like as

much as they did in the bad old days. And in many places prices are rising for houses because we aren't building enough of them to keep up with growing populations that supply and demand, not a bubble. A bubble is when prices move up faster than one can explain by the fundamentals of supply and demand.

I'm David Wessel and this is my economic update.

DEWS: I want to ask you to explain something that that really struck me as super important when I was doing the research for this. You've written and said and that's the role of norms in propelling countries to do this work, to adopt their nationally determined target. So we know there are no sanctions to say that you have to do it this way. So there's some role that norms are playing in the functioning of the Paris agreement. Can you talk about what that means?

STERN: Yeah and I think Fred I think this is actually a really important element. It's something that I was thinking about a lot during the years that I was there and I tended to give a big speech or two every year and I remember I think it was 2013 at Chatham House I gave a speech quite talked quite explicitly about this particular issue. Look, people often and still say 'well but wait a minute your targets aren't legally binding so it doesn't really amount to anything. Why didn't you do why didn't you do a binding agreement then that it did have real teeth that would be tough?' Well the reality is, as I sort of alluded to before, you couldn't get that kind of agreement in so far as you are trying to deal with this problem through the full U.N. setting, 195 countries. This is what we should do if it's humanly possible. If it turns out that that whole effort breaks down, you've got to try to work with a smaller number of big countries.

But that is very much less attractive and less advantageous than having everybody on board because everybody's involved here. Everybody is both a part of the problem (some countries a very small part but they're growing) and people are vulnerable, snf countries are vulnerable. So we want everybody engaged. You can't you can't get a binding agreement a legally binding agreement with everybody involved. So the notion that it will be really tough, it won't be tough. And as I said before if somehow you could wave a wand and get all those countries who say we're not doing that to say 'well OK we'll do it'. You're just going to drive down ambition you're not going to drive it up.

So what Paris is really dependent on in effect is the is the gradual development. And I don't mean gradual in a slow sense. I would hope it's that steady and strong development of norms and expectations where countries understand that they their international reputation the way people look at them is going to be based in part on whether they are stepping up to this big challenge. And there will be a sense of countries goading each to do more do better and move us all in the direction. That needs to happen. You know and another thing that I said in a recent speech I gave is that the sort of the essence of Paris was to try to find a sweet spot between the necessary and the possible. Necessary is to deal with this problem. Possible is to not sit there and recite things that can't get done. You know in theory you could you could say 'let's reverse engineer this, we know how much we have to reduce by, we'll have a legally binding

agreement. Everybody will be assigned this much reduction in order to meet that.' Good paper for graduate school. You can't do it. So that's why we built Paris the way we did. And yes it is dependent on the progressive development of norms and expectations. And if those don't work we're going to have to end up doing something else. But that's the only way we could see doing a multilateral agreement that brought everybody in and it and it can work. But again having the United States as the biggest player in the world the biggest historic emitter, just a world leader in general having us step back is really very undermining.

DEWS: If the United States at a national level under the Trump administration is not going to participate in the Paris agreement. What about what some U.S. states or other localities are or can do to participate?

STERN: Well I'm glad you asked that Fred because that's a really good news story in all of this. So disappointing that that the Trump administration indicated they want to pull out, but virtually immediately upon the president's June first Rose Garden speech there was a large scale mobilization at the subnational level. So the first manifestation of that was a movement called 'We Are Still In' WASE.

It started off I'd say two or three days after that speech. There were already 1500 or more entities that were part of that. Now I think there's something like 27 hundred that includes states and cities, companies and universities, and other institutions. They have all raised their hand and said 'we are still in Paris we are still committed to Paris. We are still going to take action notwithstanding what President Trump has said.'

There has then been also all sorts of other efforts and action. There is a sort of related effort called America's Pledge. It is meant to not just say 'we are sort of still in you know as a matter of spirit but actually here is what our own commitments are'. So we're a city and we're saying 'we're going to reduce our emissions by 15 percent by 2030'. 'We're a state and we say we're going to do X Y Z'. Or a company or other entities. America has pledges of collecting all of those doing their best and this isn't easy to kind of figure out the metrics that allow them to look and say 'all right based on this kind of action where do we think we can get to by 2025?' which was the date of our target that we took in the Obama administration. Our target for the record was 26 to 28 percent reduction as compared to 2005 levels by 2025. So we're not going to get all the way there without the federal government playing a strong role. But how close can we get? How much can we do? So there's that effort going on.

There's a U.S. Climate Alliance which is made up of 16 or 17 states maybe even a little bit more than that. Since I looked last there's hundreds of cities that are in a conference of mayors climate change and on and on and on. And so I think this is very important for kind of two related reasons. One is to take as much action on the ground reduce emissions as much as possible to drive forward the transformation to clean energy which is how the emissions come down. So that's the solution side of climate change. That's very important. The other thing that's important is to convey a message within the country that despite President Trump there is all sorts of dynamism and action going forward on climate change, and to convey that same message to countries around the world. So the United States America has not gone dark. There

are pockets and not just small pockets big pockets. California, New York states all over the cities all over the country and companies all over the country. I think in the neighborhood of 50 percent of our population are covered by these. Probably 35 or 40 percent of US emissions are covered by this, so there's action. America has not pulled back, the White House has pulled back.

DEWS: Let's talk for a few minutes about the climate change threat itself. You said a few minutes ago that it is metastasizing. What do you mean by that?

STERN: Well look I don't mean to quote the various nonbelievers who preface their comments by saying 'I'm not a scientist'. I am a believer. I'm also not a scientist, but I am quite familiar with what's going on. And there are demonstrations of the impacts of climate change going on all over the world. For starters the basic facts of a greenhouse effect and of the fact that that emissions are rising, carbon is rising dramatically in the atmosphere and the rise of carbon increases temperature. That is just absolutely, undeniably, factually true. There are graphs that go back 400,000 years that show that show over time a lockstep move up or down in temperature and carbon. So there isn't any doubt about that. There's all sorts of interesting research questions scientists are working on all over the world but those basics are just true.

So what do we see? We see rising temperature it's about 1 point 1 degrees centigrade. Already we see we see huge flooding all over the world. We see droughts all over the world. We see super storms all over the world. We see we see melting glaciers and disappearing ice in the Arctic. We see sea level rising at twice the rate that rose even two or three decades ago. And on and on. We can be looking at in California, we can be looking at wildfires in the West, we can be looking at Superstorm Sandy, we can be looking at the hurricanes and in Texas and Florida last year, we can be looking at heat waves in India and Pakistan and Thailand. It's all over the world. There are enormous floods in Colombia and South America that nobody is escaping this. You can look at the insurance industry's own statistics that show a dramatic increase in mega events now as compared to 20, 30 years ago. And this is all happening at about half the level that scientists said we need to we need to limit temperature too.

So it's you know in any other circumstance to see this level of risk and to see people on the other side saying 'well I'm a skeptic I'm not sure. I don't have proof positive that this is going to happen.' It's honestly, it's madness. I mean if you if you think about what people do to insure their homes from fire where there's maybe a point zero something percent chance of that? I mean that's that's what you do in ordinary non-politicized cases. So this is happening all over and it's going to get worse going to get worse no matter what we do. It's just the question is can we can we keep it at a containable level which we can if we do this right. And we really can. We really know what to do to contain this, or we let it get completely out of control.

DEWS: I want to stick on that maddening point for a second, because I was really struck by news of

a congressional hearing that happened in Washington earlier in May. It was the House Committee on Science Space and Technology. One of the expert witnesses was Dr. Phil Duffy who was the president and executive director of the Woods Hole Research Center. And some of the members of the House committee members of Congress suggested to Dr. Duffy that sea level rise could be caused by sediment falling into the oceans. Also that Arctic ice is actually increasing, and that maybe you know rising temperatures could be a good thing because the earth used to be warmer than it is now. How do you deal as a citizen with that kind of line of questioning to somebody who is clearly an expert in climatology?

STERN: Well look, unfortunately we have had this form of kind of climate denialism with us for the last several decades since climate change started to come up on people's consciousness and started to be identified as the kind of serious problem that is. It's not responsible. I mean it depends who you're talking about I think a lot of people just don't know. If they hear these kinds of claims they're liable to believe them. The people who are making who are at all trained it and are making these claims should know better. I mean the vast majority I think the number that tends to float around is something like 97 percent of scientists who are knowledgeable in the area understand and accept the consensus. You know there was there was a scientist from I think Berkeley who was hired a number of years ago to do a study meant to debunk climate change. And he was a serious scientist, he was hired by the Koch brothers. He did a serious either Stanford or Berkeley report over a period of about two years, and then wrote or not wrote an op-ed in The New York Times saying: 'I started out as a skeptic. And we did our research and we did our study and this is totally real. This is a serious threat. We've got to act, and we've got to act to deal with it.'

So if you are if you're not bought and paid for, if you're serious about this then you then you know it's real. I mean there's only there's only so much you can do about people like this. The premise of a fact-based world has been more under assault in the past 17 months than it has been before. We do live in such a world. And we have to make decisions. Businesspeople make decisions on the basis of facts or they'd be out of a job. Military leaders make decisions on the basis of facts or they would also be in serious trouble. We have a problem which is which is a manifestation of scientific processes, and we have to look at that for what it is. The other thing I would say in terms of sort of how do you deal with this, how do you persuade people, is that if anybody had any doubt about this before again the last 17 months or so of our political life in America should have taught us that we all live in a world which is which is more tribal in its in its makeup than maybe we recognized before.

And so I think it's I think who the messenger is. Talking to people is every bit as important as what the message is. So you know I could go in. People could send me in to talk to various communities of people who are represented by leaders who try to debunk climate change and I'm probably not going to be very effective no matter how accurate the words that I speak are.

It is much more important to get people who are more trusted and have more credibility within the given community, whatever that community is. There are people in all of those in all of those communities

who can talk to people there and say ‘listen this actually is a real thing’. We have to stop playing games here, and we have to try to find reasonable ways to deal with it. Let's just try to get a fact based: it's real. It's happening. It's a threat now. It's a threat to you. It's more of a threat to your kids. It's more of a threat to their kids. So what can we do about it? And then we can have a debate about which specific actions to take. But let's get past this you know sort of make believe.

DEWS: It just strikes me as so obvious the science the evidence of climate change. And yet as you say still so many people deny it either in their official capacities as maybe elected politicians or just regular people. And you've suggested you know maybe there's money behind that denialism side, or there's tribalism. I mean are these you think these are the explanations for why people continue to resist ideas and actions that would mitigate the climate crisis?

STERN: I do think that there are significant reasons, there may well be others. I'm not saying they're exclusive, but I think they are significant contributors to that.

DEWS: I’m going to try to end on a more hopeful forward looking note. You said in the recent speech that you referenced it was at Yale. It's on our website. You said that Paris was a beginning not an end. What do you mean by that?

STERN: Well I mean that that Paris after more than 20 years of trying in one way or another was the time when the entire world community, all 195 countries that are parties to the UN climate agency, finally agreed on an operational agreement to carry forward. What was that original just sort of framework agreement that set forth sort of broad parameters, but didn't really tell anybody to do anything per se a concrete way. That was a big step. And countries put forward their own targets, initial targets and in 2015. We knew those weren't enough. We knew those weren't strong enough but we didn't know also that they were a start. As I said Paris has built a sort of cyclical repeating theory. So every five years starting in 2020., countries are supposed to take another look at and hopefully reshape the targets they put forward.

A second five year cycle starting in 2023 is an aggregate look how is the world doing against those targets. Two degrees and so forth targets that have been agreed to. So Paris is meant to go on and on and on in a cyclical way for well out into the future. It's a beginning in the sense that this was the first moment when we got an agreement to an operational way forward and now we have to do the hard work to keep to fulfill that. To keep cranking it up on a regular basis, and to do the work at the national and subnational and research lab, and company level- to create and disseminate the clean energy means of carrying our economy forward. As well as various other things that are also important such as reducing deforestation and other things like that.

So Paris was a moment when I think all over the world from you know from universities to

boardrooms to civil society sort of stopped and said: 'Wow. World leaders have agreed we're going to do this. That's a big start. Now we've got to make good on that and carry it through going forward.' Again it's by no means an all bad picture now. Very positive. And all sorts of aspects of the United States that we've already discussed and tremendous things, positive dynamic going on in terms of clean energy development dramatically lower prices of wind and solar. Dramatic increases in their penetration in the economy. Tremendous research going on and all sorts of other related clean tech ways both here and around the world. Tremendous action going on in China for example and in Europe and other places. There's a lot that's positive. It is a setback that the president current president of the United States saw fit to say that he wanted to pull out. But it's a setback that we've got to get past.

DEWS: Well Todd I want to I want to thank you personally as a citizen for your hard work thus far and in the future on addressing the global climate problem. And also thank you as the podcast host for sharing your time and expertise today.

STERN: Thanks so much Fred appreciate it.

DEWS: You can learn more about Todd Stern and his work with the cross-Brookings initiative on energy and climate on our Web site at Brookings.edu.

Special thanks to Mark Hoelscher for running the audio booth this week. Our producer is Gaston Roboredo. Brennan Hoban and Chris McKenna are the producers. Bill Finan does the book interviews. Jessica Pavone and Eric Abalahin provide design and web support. Thanks to Camilo Ramirez and David Nassar for their guidance and support.

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Visit us online at Brookings. Until next time, I'm Fred Dews.