

Governors Ritter and Whitman: Risk and Resilience

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Greg Dalton: Welcome to Climate One at the Commonwealth Club, a conversation about America's energy, economy, and environment. To understand any of them, you have to understand them all. I'm Greg Dalton.

Seventy percent of Americans recognize climate change is real; 54 percent says its effects have already begun. That's according to an April poll by the American Enterprise Institute, a conservative think tank. The prospects for a comprehensive national plan to move America from brown to green energy remain grim given the current political stalemate in the nation's capital.

The story in state capitals is more promising. 29 states have goals for generating electricity from renewable sources, though many are considering relaxing those efforts. States are also leading the way in dealing with severe weather, rising seas, fierce forest fires, searing droughts, and historic floods are hitting just about every state in the country.

Over the next hour, we'll look at what states in the country can do to reduce carbon pollution while also preparing for climate impacts that scientists say are coming our way.

Joining our live audience at the Commonwealth Club in San Francisco, we're pleased to have with us two former governors whose states have confronted severe weather head on. Bill Ritter, Jr. was Democratic Governor of Colorado from 2007 to 2011; he's currently director of the Center for the New Energy Economy at Colorado State University. Christine Todd Whitman served as the first woman governor of New Jersey from 1994 to 2001. She was a member of President George W. Bush's cabinet as administrator of the USCPA in 2001 until 2003. She's currently head of the Whitman Strategy Group, a business consulting firm. Please welcome them to the Commonwealth Club.

[Applause]

Bill Ritter: Thank you.

Greg Dalton: Thank you both for coming. Governor Whitman, let's begin with you. And can you tell us where you were when hurricane Superstorm Sandy hit New Jersey and how that affected you?

Christine Todd Whitman: I was home on the farm. My husband has a way of disappearing from major events like these, and he wasn't around. But we had a lot of warning.

However, we don't live anywhere near the shore, we are in central western New Jersey, on a farm, and when it hit, I can - it was really the most interesting thing for me. The day before, walking in the woods, there wasn't a sound to be heard, not a bird, nothing; it was dead quiet, and it was eerie. You noticed it right away, but when the storm hit, we - being as far away from the shore, we still lost over a hundred trees, we had to replace about half the barn roof, and we were off the grid for some 12 days. I say it that way, because we have a generator, so I was able to provide warm meals and showers for a lot of the neighbors and relatives for quite some time. But it was really impressive

when you see what happened as far away as – we were – and there were many parts of that inland part, because we are heavily forested that we're off – without power and off the grid for two weeks or even better. And it was very expensive and a lot of hardship on people, not to mention what happened along the shore. And then of course Staten Island in New York is a community that still has a long way to go to come back. It was major. It was major.

Greg Dalton: And we'll get into more of that – the implications of Sandy and the cost of rebuilding, etcetera. And Governor Ritter, it seems like Colorado's on fire a lot lately or every time we look in the news. How has the forest fires affected you and your state?

Bill Ritter: Well, they have affected the state a lot more than me personally. We had two major fires last year. I had one serious fire when I was governor, a couple of tornadoes, but really last year, two significant fires – one which was a record breaker in terms of homes lost, and then we turned around this year, in fact this month, and broke that record; 369 homes were lost in this most recent fire. So there are huge implications. You lose a home certainly, and that's economically devastating to the communities, personally devastating to the families, and you lose that infrastructure as well and so the counties, the municipalities are out.

And the insurance industry has to really evaluate the loss and – but also re-evaluate the risk based upon two years in a row of serious, serious fires, drought conditions in this part of the state, four million acres of pine beetle killed very much related to drought and dryness, and I would say, climate change.

Our aspen, which aren't impacted by the pine beetle, there's probably a 15 percent kill rate from a fungus there that still has everything to do with climate change and with just being vulnerable because of the dry weather, the drought conditions, the longer seasons for things like the pine beetle now has two life cycles in one season where it used to have one.

So there's a variety of ways to think about this. Actually, the areas that have been victimized by these forest fires are serious pine beetle areas. One of the fires got into some pine beetle, and it burned faster than the rest, but we got a lot of pine beetle kill that's a part of this as well. So it's a combination of drought, dry conditions, a longer dry and warm seasons that really are impacting us in a pretty serious way were fires of this one.

Greg Dalton: And there's been droughts. 2012 was the hottest year on record. There's been floods in some areas. How is this affecting the national political debate of the public awareness, Governor Whitman?

Christine Todd Whitman: Not enough. I mean that's – well, that, to my mind, is what's so frustrating, because you see this happening that the insurance companies called last year and is [inaudible 0:06:00] because of what they had to put out, and that was before – I mean after they had to put it out for major hurricane alert, major storms. We're seeing the hundred-year flood every two or three years now. And so it is – even for people who want to argue over is it climate change or do humans have an impact on it.

At least they've got to start thinking about well, something is happening, and we've got to start preparing for it, but this part of what drives up the cost of the forest fires and of things like the floods and the Superstorm Sandy is the fact that we're building in places, where we haven't built before, particularly in states like Colorado in the west, but also along the shore, we're rebuilding in communities. They've been there for a long time.

I understand how difficult it is to take on this issue, but we're going to have to look at 'should we be rebuilding in some of the places that we're rebuilding?' And if so, 'do we do it in a different way?' And that is something. We're seeing the towns start to take on it. If the local people get it – and that's why the states are the laboratories of democracy, because governors have to deliver, and we see it happening; we have to pay for it. And so governors tend to step up where the federal government doesn't and say, "This is how we're going to address this issue."

Greg Dalton: Well let's talk about the Jersey shore. Is rebuilding happening in places that it shouldn't? And if not, then what about the person who loses some property, do they then get paid by the government for their property?

Christine Todd Whitman: Well, the – right now, the governor is looking at buying out a whole bunch of homes in places where he doesn't think redevelopment should take place. And of course FEMA just came out with their maps. He'd adopted their maps before they were finalized. And what's interesting is the governor adopted the FEMA maps when they were just proposals. FEMA came out with the finalized maps earlier this week, and they took a number of areas out of the flood-prone designations. But people had already started to rebuild based on what the governor had said, so they put them up on stilts. A number of the homeowners who were interviewed saying, "Did you regret having gone ahead and putting them up on stilts when you find you didn't need to?" And they were all saying, "No. No, we get it. We get it that this might happen."

Greg Dalton: Governor Ritter, are people building in places in Colorado where homes in fire zones where maybe homes shouldn't be built?

Bill Ritter: I think Governor Whitman eluded this, and the answer is yes, we have for a long time. And part of it is that's attractive to develop and really to buy a property in sizeable estates even in places that are forested; it really increases the aesthetic value. It's fascinating. One of the things you do as a governor is you fly over these areas, and you look where tornadoes who can surgically wipe out half mile [inaudible 0:08:32] or where forest fires happen, and you can see how the development is in and around forested areas in a very significant way.

And a lot of that development was at the time where there wasn't sort of this concern about drought or that concern at the level that there is now and less of the sense about these really super fires. We're talking about Superstorm Sandy, but there's just something that's done a – not a national radio program where that climatologist from Colorado was talking about his conversation with fire fighters who were fighting these from the air saying these fires are different because of this type of fire at the 1000-foot level, I mean, like flames lapping up at 1000-foot across. And this is about climate, and this is about drought, and people buying homes 20 years ago weren't thinking about that and now some of that's come home to roost and so what we have to do as going forward have plans that are like they're doing in New Jersey that are adaptation plans or mitigation plans, ways to think about building codes, ways to think about clearing spaces.

I just had a good conversation with our present governor, Governor Hickenlooper, on Saturday, and we've talked a little bit about his notion that if places that actually had done clear cutting were saved where others that had not burned in the same neighborhoods.

Christine Todd Whitman: No. Just a standard. In the Netherlands, where so much of the land is under sea level, they now have developed floating homes. They're building floating homes, which people are, apparently, think as a great idea, and I can see. But if different states, different countries are going to adapt in different ways, but there are a whole lot of innovative things that can happen, whether it's clear cutting or building up on stilts, or building floating homes.

Bill Ritter: When I say clear cutting, I don't mean chopping down the entire force but cutting a firewall around your border, it takes trees out, so that you don't have pines that can or are going to burn, that a fire over ten feet away from the house.

We actually put money together as governor did a variety of things legislatively, even in the downturn where we were devoting money to communities sponsoring sort that kind of program, going out, looking at houses that were fire hazard, that were built up against the forest and saying we need to remove this much forest from around your property in order to protect your home and your garage.

Greg Dalton: And really, part of what you're talking about as elected officials going to citizens and voters and saying, "Your costs are going to go up. You're going to either pay more for insurance, or somehow, the government's going to have taxes to pay to take care of these things that we've created, these risks that we've created." Is that fair to say?

Christine Todd Whitman: I think the public is beginning to understand that. I mean we all pay for the rebuilding whether it's in New Jersey, or Colorado, or Oklahoma. It affects and impacts all of us, because these costs are so massive that no locality, no state can do it all themselves. And you do look - this is one of the roles of the federal government. When we have a crisis, when people are devastated, that's one of the roles - that we would step in and help, but guess whose money that is. That's all of our money, so we should want - we have a vested interest in trying to be proactive in limiting and reducing those costs. Again, if you want to just skip the whole discussion of whether it's climate change or not, just say, "We know something is happening, and guess what? We better take some steps. Do the best we can to be proactive in reducing those costs and the impacts."

Bill Ritter: We pay for it during, and we pay for it after. It's county government that's involved at the very first level, and then they call in the state, the state looks and sees if they have their resources to manage their response, then they call in - the governor calls in the federal government and asks the federal government to become involved in that. That's all taxpayer dollars; they're paying for that. And then the ventures companies aren't elevating the risk, because someone's living in a forest, they're living on the coast, they don't elevate the sort of premium for doing that. We wind up paying - because we're part of the same risk pool.

Christine Todd Whitman: Right.

Greg Dalton: Bill Ritter is former Governor of Colorado. Our other guest at the Commonwealth Club today is Christine Todd Whitman, former New Jersey Governor.

At some point, scientists say that Superstorm Sandy is not the norm, that there will be more bigger extreme, so there's more of these to come. At what point can the federal government no longer be bailout states. At some point, there's a real financial risk there where Uncle Sam runs out of money. Governor Whitman?

Christine Todd Whitman: Uncle Sam is out of money.

[Laughter]

Christine Todd Whitman: I mean we're printing money every day, and we have a federal deficit that was going out of sight, so we are already in that position. I mean we do have to start looking at our priorities again and assessing where it is we'd want to spend money, what are the things for

which the federal government's responsible, what's going to fall solely on the states, and what's going to be up to the individual and local government and the individual. But as far as when do we run out of money, we're there. We're there.

And a lot of states, I mean, for instance, New Jersey, we had a lot – in the East Coast, we had a lot snow, a lot of wet weather, and many of the municipalities and state blew through their snow removal budgets mostly proactively, because there wasn't so much snow. What you have – ice conditions and they were out early salting, and so they blew through those. Then when they have Superstorm Sandy, and they've got to respond to that, and then who knows what else we're going to have and look what, we've already had the last week, we had six inches of rain in three days last week. We're having flooding, serious flooding occurring, the opposite of what you're getting in Colorado, but those budgets are done, having to look to come back to the taxpayer and say, "Okay. It's the only way we get money to be able to pay for these things."

Greg Dalton: So we're putting it on our kid's credit card.

Christine Todd Whitman: Yeah.

Greg Dalton: Governor Ritter?

Bill Ritter: Well, that's right. And I think Governor Whitman has just said the states have more loaded budgets, and states, actually, by and large, can't borrow money. We had to balance the budget in Colorado and solve that. Part of the money ran out. You were borrowing money from Peter to pay Paul. It was something having to do with even emergency management, some situations, but responding to disasters or disaster response, you have a limited amount of budget.

You rely on the federal government for that, but if your state responsibility goes over and above what you have available, then you might be carving out something from your higher-ed budget, or from your K through 12 budget, or from your healthcare budget, and it's not a good place to be. Right? But that's the thing I think the place we find ourselves in has increasingly – states are finding themselves in a position not being able to even provide the kind of state of money they once did to this.

Greg Dalton: Yeah. Certainly, the cost of fighting fires has hit California, more fire fighters, etcetera. And responding to these disasters is becoming a bigger job of governors. I'd like to get a response from you both on recent disasters on how you think chief executives of other states have done in terms or responding to what their govern-

Christine Todd Whitman: You are the most recent. You're the fire that was-

Bill Ritter: I work closely with the governor, and he's – I think he does a really good job of responding to this.

Greg Dalton: Governor Hickenlooper?

Bill Ritter: Yeah. Governor Hickenlooper. We – when you show up at a disaster and whether for us it was a tornado or a serious forest fire, there was another incident where there was some loss of life, and it was a place that I went to, he was a governor kind of the crisis manager, and since you're put in charge of the incident, there's also – it's the [inaudible 0:15:40] command and crisis command on the ground that they still look to you in the sense as the leader, the person coming in. And so it does have – give you an opportunity really to be gubernatorial, to lead.

It's different than being in the middle of the capital and fighting with legislators who want to be on the front page of the paper saying something awful about you. This is a place. This is the chance. And now it's a tragedy, and so I'm not making light of that, but I think people do, they form some impressions about their leadership based upon how you respond in these times of crisis. And I think Governor Hickenlooper's done a very good job over the couple of years. These forest fires last year were just awful. These added on to it. It's really devastating to an entire community in Colorado Springs, Colorado.

Greg Dalton: Governor Whitman, how did Governor Christie handle Sandy?

Christine Todd Whitman: Well, Governor is right. It is the time when you are gubernatorial above the partisan politics, because you're dealing with people which you are – should be all the time, and it should be more than about partisan politics. But, anyway, and it's been fascinating to me, because this is where Governor Christie has gotten so much criticism from the far right of the Republican Party, because he acted like a governor.

I mean first of all, he was very, very good about the whole storm. He was out, ahead of it. He was telling people to get the – using Jersey language, "Get blank off the beach, and don't be stupid about it," and when they've said to evacuate, to evacuate. So he was out proactively, because we knew the storm was coming. He was out proactively telling people what they should do, setting up the emergency response. He was right there when it occurred, and then of course where he got all this criticism was when the President came in and he welcomed him.

Well, if you've just had a major storm that has created tens of billions of dollars' worth of damage and killed some people and hurt a lot, devastated a lot of people and communities, I mean men are low key. When you see a house that's been moved entirely in the middle of a highway, into the middle of a highway, on a bridge, you know you're seeing pretty significant damage. And the President had been on the phone with him right away, offered all the assistance that he could, and he holds the key to the kingdom as far as the check book, that he has the pen for check book. You're not going to walk away from him.

And I've talked to Governor Christie about this. He said, "Also, you know, I was brought up with the press in United States. You show difference to that office. That's the way we brought up. It's the President. You cannot like the politics, like the politics, whatever, but you respect the office." And that's what he acted like. And that's why I believe his popularity is so high in New Jersey and nationwide. Except for these few group of people who control a lot of the rhetoric within my party, he is very well respected for having done exactly that, of having acted like a governor, reaching out.

Greg Dalton: Christine Todd Whitman is former Governor of New Jersey. Our other guest today at the Commonwealth Club is Bill Ritter, former Governor of Colorado. I'm Greg Dalton.

Let's talk about your party. There are a lot in your party who don't recognize climate science or climate reality, and do they say one thing publicly and different things privately or –

Christine Todd Whitman: Well, I'm sure some of them do. Unfortunately, a lot of them say things publicly that are pretty bad. I mean, for instance, and this to me epitomizes what I think is wrong with Washington on every subject area. Everything has gotten so divisive, but after Superstorm Sandy, your senator, Senator Boxer, said that this probably was related to climate change. I don't know exactly what language she used or what – how she qualified it, but you can attack her on the science, you can question the conclusion that she drew, but Jim Inhofe, senator from Oklahoma,

stood up and said that was immoral. Actually, it wasn't about Sandy, excuse me; it was about the Oklahoma tornadoes. And he stood up and said it was immoral to have said that. That's not about morality; this is about fact, it's about science, it's about devastation, not about morality. But he made this into a moral issue. And once you do that, you can't find common ground, because if my position is moral, and you're different from me, then you're immoral.

Greg Dalton: Right.

Christine Todd Whitman: And you don't compromise on morality. You can find consensus on a lot of things, but morality sets the bar up to a point where there's little you can do about it. And while I know there are a number of Republicans who, of course, they understand climate change, and they know we need to do some things, allow themselves to be pushed around by the more vocal and extreme who tended to find the party. Because they're in Washington. And that's where all the press is. And they give good headlines when they say things like that.

Greg Dalton: Does campaign funding have anything to do with this?

Christine Todd Whitman: Oh, yeah. I mean campaign-funding finances at the heart of a lot of the problems that we face but you and I were talking about that earlier this morning and I let the governor –

Bill Ritter: Yes. There's a big problem. I do a lot of work with states, the state legislatures, the Center for the New Energy Economy. That's the issue. It's set up.

So with the printers that congress wouldn't act in a big way, and so let's look at states and how can we move clean energy policy at the states. And there are people that disagree with some of my positions on the environmental side, because we're really trying to do state regulation and natural gas extraction in the most environmentally sound way, but I'm not out there holding a banner up that says, "Ban Fracking." Because it's part of what we're dealing with.

So we're working at the state level, but we see even state legislatures impacted by outside money. I think Arkansas is probably a very good example where outside money caused that legislature to become a far more conservative legislature this year and where a lot that was happening on the clean energy side actually was dead in the water because of who the legislators were that were elected. There were still some successes, and I'm partnered up with this group called Advanced Energy Economy, the group out of San Francisco, Graham Richard, its CEO is in the front row here. And so we're working together, and we actually had some successes in spite of that, but we didn't have the big success we would have had except for the legislature turning and that turning had to do with outside money influence.

Christine Todd Whitman: Well, there's also on the other side, just a little bit on these influence groups – its both sides. As I'm on a group for setting sustainable standards for and the highest standards we can for fracking in the Marcellus shale, and it is partially funded – it's half funded by the Hans Foundation, half funded by the industry. Point being, I mean, best of all possible worlds, I would wish we didn't do any fracking. We're going to – fracking has been part of our history.

You can do it right, but it seems to me the most important thing to do is to set the highest possible standards that you can for what would constitute safe fracking since it's going to happen. And it's the environmental groups that are going nuts, and they are putting money in there, they're doing advertising, they're doing attacks on the EDF, which is one of – Fred Krupp is one of the members of this board, and they're coming after it. And you want to say, "But listen, it's going to happen. What

we're doing is trying to set up the highest standards or to do it environmentally safely. Let's try to work together on this, and then if we can attack it at the other end by conservation, by having better green energy, I'm all for that." But let's not say if we – "If it's not going to be perfect, then oh, my Lord, we have some of these energy industries that are part of this; therefore it can't be any good." That's as mindless and they're putting money, and they're putting pressure on, too. So it is outside influence that does affect so much of this decision-making, and that's problematic today. Money really does play a huge, huge role.

Greg Dalton: And what's the solution to that?

Christine Todd Whitman: Well, I think we ought to have campaign finance reform to start with, but obviously, that's a very difficult thing to do. I tried to get some limits put on. Actually, all I wanted to do when I was governor at one point was try to get a bill written that would require the same time release of informations to who gave. And every time we tried to put something together, the Attorney General would come back to me and say, "You can't meet the constitutional test." I mean you just – the right to association has been so broadly interpreted and particularly by this court recently that it's very – going to be very, very hard unless citizens rise up and say, "We want some changes."

Bill Ritter: We did campaign financing in Colorado, and all it did was give more power to the outside money. Where there's governor, you're going to raise – it's a thousand dollars per person or corporate giving. Labor unions have to participate to these things called small donor committees, so it really changed in a very significant way what you could do in terms of financing your campaign.

And my opponent and I together were – this is going to sound small by California standards, but about \$9 million raised and split between us, but the outside money was probably about 18 million. A better example is in the United States senate race, which was 25 million between the last senate race we had in Colorado. Between the two candidates, the outside money was 45 million, almost double what the candidates raised and split. Now, I agree with Governor Whitman.

It's hard to change something that's either constitutional or the court. So the thing that I'd say if you want to ask what we do to change, I'm analogizing this issue around clean energy and climate to integration, where we've seen some movement by a group inside of a political party that seemed to be pretty recalcitrant, pretty unmovable, intractable, and now we've seen some movement, because they start to lose in some elections.

And so we really got to think about what demographics are there that care about climate, that care in a very significant way about what's happening and elevate the political intensity of the issue so that both parties pay attention to their need to compromise, not compromise, but come together with some common ground solutions that really do address change. You got these parties that are sort of in their corners ready to come out boxing, not really to come out with agreement. We've got to elevate the political intensity that really demands common ground solutions.

Christine Todd Whitman: I couldn't agree with that more, because if you look at the history of massive change in this country – well, first of all, unfortunately, I think we're backsliding on the integration now from what I read today and what was said yesterday. But be that as it may, if you look at the history, let's just take integration in this country. It took decades, and it took the public finally getting mad enough. That mean if you think about it, real immigration in the south was when Rosa Parks not just because she was tired that day, had tired feet – that had nothing – she'd been an activist all along, and she just was fed up with being told she had to get up and give her seat to a white man and so she sat on the bus, and that started the boycott, the Montgomery Bus Boycott. But

it was decades after that that we finally got to the point where we actually had true integration in our schools and in our businesses, and it really has become a part of the fabric, so you'd have to. When you talk to people and say, "Well, we didn't get it done this time, so I'm going to give up. I mean I give up. It's hopeless." You have to say no. The only people that can make the change are us. This is a democracy. If you want to know where the problem is, look in the mirror – we don't vote the way we should, we don't get in touch with our legislative leaders. Once we've elected anybody, we start to say, "Okay. That's fine, I've done my bit." And we don't go after them when they do something that we don't like and they don't – we don't go to them when they're doing the things we do like and say, "You're doing a good job." You ought to give them the support that they need to be able to continue, particularly if they're bucking the party organization as it were.

Greg Dalton: The difference in this case is scientist would say, "We don't have decades that if we wait decades, we will fry the planet, and it'll be too late."

Christine Todd Whitman: Right. Even more reason to keep the pressure on.

Greg Dalton: We're doing that now. Let's talk about jobs – that job is an area where many people say promise for a clean technology. Governor Ritter, now, talk about the job creation, etcetera, that this is not a bad thing, that there's opportunity. This is really a lot of economic opportunity in cleaning up the energy economy.

Bill Ritter: And that's – I mean our center's name, Center for the New Energy Economy work with the Advanced Energy Economy Institute out of San Francisco. There is this economic development opportunity here that's global. And if we don't take advantage of it, it's going to be to our detriment as a nation. We, in Colorado, when I was running, I said, "Listen, we think that you could use domestic energy sources that are clean." And so they responded in environmental challenges that actually build the economy and where you can protect rate pair. And so we called it the Four Es, and this is this great framework for thinking about energy policy, so energy that's domestic, environmental issues are solved, economic development and equity for rate pair, so that we're not building out on energy system on the back of middle income or lower middle income or poor people.

We saw job creation in Colorado directly resulting from policy levers around clean energy. I signed 57 bills. We became the number one state in the nation per capita for solar workers. We brought in a major wind turbine manufacturer – the largest in the world at that time, Vestas.

And it's not like this is easy stuff, but we did see during the worst downturns since the Great Depression, we saw our clean tech and clean energy space grow, and so one of the other answers to how we solve this is make the business case for clean energy. And there's a lot of folks out there that are doing it. We're still trying to do it, but we think that there is a business case to be made.

Greg Dalton: Critics would say that a lot of that happened because of federal stimulus dollars, that President Obama went to Colorado to sign the Stimulus Act, and that there's a lot of subsidy in those numbers you just cited.

Bill Ritter: Well, I think the Stimulus Act had a lot in it, but we were already moving on that agenda, and a lot of our success had everything to do with the things we did apart from the Recovery Act.

The Recovery Act brought in clean energy dollars particularly on the weatherization side, the energy and efficiency side. The state energy programs had a lot to spend, but it came, it went, and when it was gone, it was gone. But we've been able to sustain this energy economy, a clean energy economy

even under harsh economic times, so I don't - I would say that the Recovery Act helped, and there were some stimulus effect to that, as a bit of a lag effect, so there are people who were suspicious of it or questioning it but states that are doing this - you look around the country, states are doing it apart from the Recovery Act if they have a serious intent on clean energy policy, you could see the impact on the job numbers. And there's great economic modeling from land grant universities across this country that demonstrate it.

Greg Dalton: Bill Ritter is a former governor for Colorado, and we also have Christine Todd Whitman, former Governor of New Jersey. Governor Whitman?

Christine Todd Whitman: Well, I absolutely agree that the green energy economy has enormous potential at all different levels, and one of those - and I know it's not everybody's idea of green energy - is nuclear. Nuclear - but there are four new power plants. Well, they're five, but one was - had been previously licensed, but four totally new power plants being built today in this country, and they already - each one of them - two are in Georgia, and two are in South Carolina, and they are up to 3000 workers full time during construction.

But once they're built, there'll be 500 to 700 full time permanent jobs there that pay about 35 percent more than a similar job in that area, whatever it is. And that's the whole pipeline. That's everything from sanitary engineers, to nuclear engineers, and mechanics, and everybody. So it's a - there are lots of potential jobs in that, and it's the only form of base power that doesn't release any regulated pollutants or greenhouse gases while it's producing power. So it is something, I think, to be considered and even if we don't bring on any new nuclear energy in this country, there are four reactors currently being built in China. They are using the Westinghouse AP 1000 technology, and those are providing some 19,000 jobs here in the United States.

So as you say, it can be worldwide, and when I look at some of the manufacturing potential we have to produce the various bits and pieces that go whether it's with wind turbines or solar panels, or nuclear reactors, we can do that here. And we have a great potential to do that, so we need to look at the whole. And Governor Ritter and I agree. We're talking about clean energy, clean green energy that's affordable and reliable. That's what we want in this country, and congress has got to do something on the energy.

Greg Dalton: But with nuclear waste, how can you call nuclear acclaim?

Christine Todd Whitman: Nuclear waste right now is - if you took all of the nuclear waste that we have from 104 reactors around the country, and they've been operating for over 50 years, we put them in one place, say put up one football field to the height of the goal post. They are safely stored on site all around the country, unfortunately. And that's another thing that congress needs to act on. Congress decided that there should be one national repository. They said it should be Yucca Mountain in Nevada. We have spent as taxpayers. And as ratepayers, we have spent billions of dollars to get Yucca Mountain ready. As long Harry Reid is president of the senate, it'll never happen.

So the President appointed another commission to look at it, and they've said, "Well, we ought to find a couple of sites then." And they're working on that, and there are actually communities that have come forward and say, "We'll take it."

But the real thing there is that you have between 95 percent and 97 percent fissionable material unused energy in those rods today. You can reduce that as they have in France and Japan through reprocessing to three percent to five percent. So you're dealing with a much smaller amount. Now,

that's highly enriched plutonium at that point, but they have figured out how to – and I'm not a nuclear scientist, so I can't tell you how – ensure that that can never be used for weapons. And so we need to look at this. We shouldn't just close the door and say, "No way, know how." We need to look at it as we look at the whole issue of climate change and clean air.

Bill Ritter: Remember the President's State of the Union in 2011. He talked about trying to reduce – he was talking about reducing our emissions by 80 percent by – or maybe having 80 percent of our energy be produced from clean energy, and he included natural gas and nuclear as a part of that by 2035 [inaudible 0:33:21] and Fukushima happened ten days later. So there's still, I think, a political problem.

California, Southern California with the San Onofre Nuclear Plant is an example of where a plant is shut down, but I think you go back to this framework and say can you do it domestically, can you – does it create jobs, can you solve environmental challenges and hold rate pairs harmless or at least protect them, and then it fits. It fits within that constructive if in fact it fits within a constructive – it could be, it should be a part of a clean energy framework.

Greg Dalton: The reality today though is that cheap natural gas is undercutting the price of nuclear, of coal, of everything. In fact, John Rowe, the retired CEO of Exelon, the country's largest nuclear operators said, "I don't think new nuclear makes economic sense, because gas is so cheap. It's really disrupting everything." So is that – but that may change.

Christine Todd Whitman: Oh, we've seen it before. It has changed before. We've had low natural gas prices, and then we've seen them spike up again. So it's more a question of saying you need all the above. I wouldn't say that there's anything that we can rule out and say we absolutely cannot ever use it.

I'd like to see us use less coal, because we really don't have – we have low sulphur coal; we don't have clean coal, and we'll develop scrubber someday that could really capture carbon, and we'll figure out how to deal with that, but we aren't there. I'd like to see less dependence on coal, but you're not going to find something that is going to supplant 48 percent now of our energy overnight. And we're looking at a 38 percent increase in electricity demand by 2035, which is a 28 percent increase. Excuse me. That's a big amount for a utility, and it is true that natural gas right now is the flavor du jour, but I think we've got to be very careful not to try to say that that's going to solve all our problems, because it's not. There's no one thing that will.

Greg Dalton: Governor Ritter?

Bill Ritter: Well, I – natural gas has replaced a lot of coal in this country, and it's been one of the more precipitous changes in the energy sector in the time, certainly, that we've regulated the energy industry since the beginning of the 20th Century, so it's played that role and to the extent, it's taken coal off the line. It's a good thing we passed a bill of it actually by mandate replaced a thousand megawatts of coal, a gigawatt of coal in Colorado with natural gas, but we also have a 30 percent renewable energy standard, and so there's an integration of coal and gas. That's a good thing.

But I think that we should think about this from an emission's perspective again, and my discussions around this, I'm really biased in favor of finding ways to produce energy that reduce emissions over time in a serious way, so that we can get to this 80 percent reduction. And I think there's probably advanced energy technology across the spectrum. So on the renewable side, on the grid management side, even on the carbon capture and sequestration side, the nuclear side that help us answer that. What we need – what we need most of all is the national energy policy that's a strategy

that says, "Let's go after it around emissions using domestic energy sources, using American technology that we're producing in our labs and really look at how we get to that 80 percent reduction, but have that be our goal and have it be a national goal that we all embrace."

Greg Dalton: Speaking about national energy policy, what grade would you give the Obama Administration on clean energy and climate? Governor Ritter?

Bill Ritter: Well, I'm actually doing all I can to help the President in a variety of ways around clean energy and when you say what grade would you give, I've never – I don't like to give grades, actually, because I got graded as a governor, and I always thought it was pretty unfair, because circumstances mean a lot.

[Laughter]

Bill Ritter: I mean I think this president was handed the most serious economic situation, economic downturn, obviously, since President Roosevelt. I sat with him when I was governor and with the rest of the governors in the country. And I think almost all 50 were there; that's unusual. I keep that meet together. He wasn't president yet, but people sitting there telling him, "Here are the economic straits my state's in, you have to do stimulus." So as an executive, you use up a lot of political capital doing something as significant as a stimulus package in your first month in office. He burned up a lot of his political capital. He was bound and determined to pass healthcare. He spent the next year really spending the rest of his political capital-passing healthcare.

You can question whether or not that was the right thing or not, but he's made a lot of, I think, important strides. Agency authorities had been used in a pretty aggressive way, better variety of things both at DOE, at EPA, at the United States Department of Agriculture, where they've done important things in trying to advance this agenda, but there's been largely an impasse in congress, and that makes it difficult to say this president's done really well or done poorly, because he hasn't had a congress that will work with him on it, and because they've tried to do a variety of things with the executive authority and some of that, in the last part of his term, he did that without much political capital.

Greg Dalton: Christine Todd Whitman, how would you evaluate the Obama Administration on energy and climate?

Christine Todd Whitman: I think it's been stutter starts. He'll talk about it.

And I think it's part of the problem that he has, and a lot of these issues over all is he'll put out an idea. He'll put out an idea of what he wants but not an administration bill and not a really specific framework to say, "And this is how I want you to start to approach this." And that makes it very hard particularly with this dysfunctional a congress, as we have to get a lot done.

And, again, you will hear him say something, and then you don't hear anything anymore about this. Then the President's got a lead. I agree he's used up a lot of political capital; he did right off the start with stimulus but then particularly with health care, and we can disagree or disagree on whether he used that – whether that was capital he was worth using in the way that he did. But I think that it's been starting and stopping. With EPA, you see them. They'll be told and pushed and they'll pull out a reg, and then all of a sudden they'll back off, and you always get sued. Any regulation that EPA puts out, you get sued; there's no question about that. But then sometimes, they don't even wait for that. Now, part of that is, in fairness, a reaction to the congress that won't do anything, and they are trying to do more [crosstalk].

Bill Ritter: But Congress - in 2011, Congress took 191 votes to erode the authority of the EPA.

Christine Todd Whitman: That's been amazing.

Bill Ritter: How many votes did you ever have to erode your authority in 2000 and -

Christine Todd Whitman: Oh, we had quite a few.

Bill Ritter: Uh-huh.

Christine Todd Whitman: We had quite a few, but not that many.

Bill Ritter: How many? It seemed like a lot.

Christine Todd Whitman: Not like - not like that.

Bill Ritter: Yeah.

Christine Todd Whitman: There's no question about it.

Bill Ritter: It became he's focal point.

Christine Todd Whitman: And congress has just become a real road block to progress in this area, but I still think we - I wished we had seen more although I will say they put money in to - a good amount of money now in the research and development from Department of Energy on green technologies, on small modular reactors for nuclear. They're taking these initiatives. They're doing it in a smaller way than the [crosstalk] -

Bill Ritter: Yeah. I would say, or observers of federal spending would say, ARPA-E so the research and development program inside the Department of Energy is one of the most successful things that sort of happened. Interestingly, this week, there was a vote, I think, at the House, to cut this budget.

And so this is this problem we're dealing it. But take the model of dealing with the automobile manufacturers for fuel economy standards. That was really a high point of the administration and their work on emissions, because they work with the industry, got to a place where I think most people in the industry agreed that this was a way they could move forward. There's obviously a social benefit, but there was also an economic benefit that the manufacturers would see over time.

And they gave them enough time to sort of - to face this in. That's a good way; a good model for this administration to think about how to work at these kinds of big problems, and it had to do with working with industry and ultimately backing congress into a corner to do it, because the industry agreed to do it.

Greg Dalton: Governor Whitman, I'd like to just ask briefly about the EPA regulation on power plants. That's been something that's been in the news a lot, and the administration has been - it's that - they've been off and on again on that one, too? Should that happen? Those regulations have been in the works for decades.

Christine Todd Whitman: Oh, I think they should. I mean there's just been no question in my mind that we need to ensure that we are really enforcing the regulations and that they're at the right

place. I mean there was just a study out yesterday on the links between autism and pollution, basically, mercury and particulate matter – diesel fuels, particularly. Although, that, interestingly enough, if they follow up people for a long time, that's one area where we have taken steps.

When I came in, we had a regulation pending from the Clinton Administration to vastly reduce the amount of pollution from on-road diesel engines, and then we took on as – and I took on as EPA administrator, the similar type reduction of emissions from non-road diesel engines, so we've reduced those by over 95 percent. So that's an area where we have taken steps, but it's also you're seeing the constant – you're seeing more and more studies of the health linkages to bad air quality and people's health and then – and we don't.

EPA has a model that they can run through for anybody showing you what the cost avoidance is of increasing a standard on premature deaths, asthma, if something's not – you can call something's not contagious and epidemic. Asthma's an epidemic in this country, particularly amongst children. I mean there's no question that the data is there that we are hurting ourselves if we don't clean up our act in all different ways, and we need therefore to go where they are.

The utilities are doing a much better job than they did, but there's still a lot more that needs to be done, and we need to have the EPA in a position we can regulate.

But as Governor Ritter said, that congress just continuously trying to choke if off, and they're cutting budget again and again and again so that they don't have the funds to be able to implement the regs that they have, much less promulgate the new ones and fight the court battles that inevitably follow.

Greg Dalton: You're listening to Climate One at the Commonwealth Club. I'm Greg Dalton. Our guests are Christine Todd Whitman, former New Jersey Governor, and Bill Ritter, former Governor of Colorado.

We're going to invite your participation. We have a microphone over there. I invite you to come join us with one one-part question or comment. I'm here to help you keep it brief, if you need some help.

Before we that, while we get that going, I'm going to ask one other question. What is your position on the Keystone XL Pipeline? It's expected that the Obama Administration will approve it. The environmentalists have drawn a line on the sand saying it's draining a carbon bomb. Governor Ritter, where are you on Keystone XL?

Bill Ritter: I'm delighted in not having to take a position, because I'm in academics.

[Laughter]

Bill Ritter: Listen. I think the administration is looking at this, and I suspect they may well do that. I can't tell you that I know that for any reason other than just sort of watching politics to this. Listen, I think there are really big things we need to do as a country, really significant things. We need to transform our energy sector. We need to transform our utility sector.

I think the Keystone Pipeline is sort of one issue, but I got to feel, and the governor and I talked about this as well, like it's going to – that the world's going to go somewhere. I actually visited the Keystone – no, I visited the oil sands when I was governor, because we have oil shale – not shale oil – oil shale in Colorado, and I want to kind of look at an open pit extraction operation to get unconventional oil.

And it's really detrimental to the boreal forest around Fort McMurray in Canada, but I still think that it's probably going to happen. And the question is, "Okay, if it happens, are we going to turn our attention to really the other big things in this country that we have to do to address what I think is one of the biggest issues of our times?" I don't think that's the Keystone Pipeline; I think it's about totally transforming our energy sector and our utility sectors over time.

Greg Dalton: Jim Hansen from NASA has said that if we burn the oil in the Alberta tar sands, it's game over for the climate. And that sounds like it's suicide. It may happen, but it sounds like a suicidal mission.

Bill Ritter: Yeah. There's a lot – and I have a lot of respect for Jim Hansen, but I also know what it's like to govern and what it's like to be in a decision-making position, where you're trying to think about how you move this agenda forward and what are the biggest things that need to be done. So I'm just saying I don't think it's game over from my perspective.

There's other people out there that say, "Okay. Look at all the fossil fuel reserves in the world. Eighty percent of them have to stay in the ground for us to reduce global emissions 80 percent by 2050." I think that may be another way to think about it, right? As we can't look at all of the world's reserves and believe that over time we can expend those fully and still be able to reduce emissions at the level that we need to by 2050. So what we have to do again is think about this from an emissions perspective, but I think so much attention's been paid to the Keystone Pipeline that we've lost our focus on these other places that actually are dramatic, in my mind, of things we need to do and do now to transform our energy sector.

Greg Dalton: Governor Whitman?

Christine Todd Whitman: Well, the best of all possible world, I don't want to see it. I would – I hate coal tar.

The extraction – it's dirty, there's no good way to do it; it's bad. But I agree with the Governor, it's going to happen. So if it's going to happen, then you say, "All right. What's the worst carbon footprint or the least bad carbon footprint?" and probably bringing it to the United States through the Keystone Pipeline as long as that pipeline has been moved as it has been several times to avoid some of the most environmentally sensitive areas. That's probably the best we can do, but it's something that I don't envy the President having to address at all, because it's not the way we want to do it.

And I think we've also got to start talking more and more about conservation and empowering people to figure out the ways that they can reduce their input, because people tend to think about just themselves and they say, "Well, I unplug my iPad after I've charged it. What big difference is that going to make?" But you know what, if you do it, and your neighbor does it, and your son does it, and your uncle does it, all of a sudden, you're having an impact. And it's like water and water sheds. We've got to get people thinking about cumulative impact and the actions that we can take individually that actually we'll have some effect. And that's one – another place where government can have a role.

Greg Dalton: And oil demand is down in this country.

Christine Todd Whitman: Yeah.

Greg Dalton: Americans are driving more efficient cars, they're driving less, carpooling/sharing

more, so that's one good story on the demand side, that demand is down.

Christine Todd Whitman: Yeah.

Bill Ritter: And energy demand is down in part because of the downturn of the economy but also because we're using less. We're finding ways to save money, and I just talked to somebody on the phone this morning that talked about a major corporation saving in the hundreds of millions around energy efficiency, using less energy over a several-year period but how there's a culture inside that company to use less and less and less supported by advanced technology that's helped them out a lot, but that's also a part of this picture.

Christine Todd Whitman: That's becoming more and more the standard as well.

Greg Dalton: Let's have our first audience question for Governor Whitman and Governor Ritter. Welcome to Climate One.

Male Participant: Hi, Governors, Greg. My name is Peter Gisella. I have a short four-letter or four-sentence letter from EPA Director Whitman from December 2002 I want to read. And I'm going to read the question first and then at the end. As former governors, how do you prioritize mandatory requirements versus voluntary governance with the hope of creating a more civil sustainable society?

"Dear Mr. Gisella, Thank you for your letter and background material on a proposal for the creation of a national service program for Americans youth. While I appreciate your strong interest in securing my assistance to promote your ideas, I see greater long-term value in encouraging young people through example to consider community service than in mandating that they do so. I hope you are able to inspire others with your enthusiasm to make a difference. Again, thank you for the opportunity and learning about this proposal." That was December of 2002. Again, the question is as-

Greg Dalton: And your question is?

Male Participant: - as former governors, how do you prioritize mandatory requirements loss versus voluntary governance, which, with the hope of creating a more civil sustainable society?

Christine Todd Whitman: I think they both have a role, frankly. You have to mandate some things. Unfortunately, we've seen the track record of just hoping people will do the right thing isn't as universal as we want, isn't as good as we want. I'd love to see it, but I don't think it'll happen completely. So you do have to have some standards, and you do have to have some enforcement of those standards. Much better though and you get much better compliance that happens much faster if you can get people to voluntarily step up and agree to do the right thing, and you can with incentives.

Like the governor, we're just talking about companies, some of the board of companies that have voluntarily set for themselves standards on reducing their energy, reducing their water consumption, reducing their carbon footprint. There's no regulatory demand that they do it, but they're finding that it is in fact beneficial to them, it helps their bottom line, and it is some way - it is a way that they can show that they are different from their competitors.

So it gives them a competitive advantage, and they like being corporate citizens. But you have to have both. I don't think you can walk away from the mandatory completely. I'd rather see more

alliance on voluntary. I think it works better, and you don't end up in court, so you don't fight as much; you don't spend as much money on it, but you have to have some of that mandatory there in order to get people to take that next step frankly and be more willing to embrace the voluntary.

Greg Dalton: Bill Ritter?

Bill Ritter: Yeah. This is an important point, because there's a group of people in the political spectrum and Tea Party Conservatives will say, "I'm really opposed to mandates." And our electricity sector's about 40 percent of our emissions in this country. And we decided in the early 1900s we would regulate this, because we didn't want this to become a monopoly. We were worried about other kinds of things where there was a common interest and not having a monopoly activity, and so we regulate it. So states like Texas deregulate energy production, but they don't un-regulate it. Right? There's still a variety of really significant regulations in place. So if somebody says, "Well, I don't like renewable energy standard, because it's a mandate." Well, that's how we really handled our electricity sector since really the advent of significant electricity consumption in this country, and so mandates or regulations are part of it. The second thing is we had a lot of wind. We have 10 percent renewable of energy standard in Colorado who says it's going to be too expensive, there's not enough out there. And what we found out was we could produce wind particularly at that time at the same level as gas or coal. It's cheaper than gas at the time, a little bit more expensive than coal. So we doubled it and went to 20 percent standard, we put rate cap in place so they can't go over this small rate increase, but we're going to put wind. Wind is now cheaper than coal in Colorado, then we went to a 30 percent standard.

And so there's a lot about creating a market for this where we've seen because of the market creation, the price curve come down and that's not – you're not interrupting a free market, because it doesn't function as a free market.

You are, in fact, having some levers in there that are making some sense to sort of utilities to say, "Ah, we can do this. We could do it a little bit cheaper." And utilities are not themselves agents of change, so somebody's going to have to do it right, and its legislators, or policy makers who say, "Well, a mandate here is useful to sort of address this environmental issue and at the same time find ways to produce energy in a clean air.

Greg Dalton: Let's have our audience question. Welcome to Climate One.

Male Participant: Yes. Thank you for the program. I, particularly, am thinking of climate change as a global concept, particularly relate to China like in the myth of clean coal energy producing so much carbon in the air as well as mercury in the water. In Japan it's very difficult. It's the number 1 cause of the contamination of mercury with the fish. What do you see as a collaborative effort in innovating solutions, educating developing countries and working on this as a global issue rather than just a domestic issue? We haven't spoken to that today.

Christine Todd Whitman: Well, it's hard to do, and we're not doing anything. From a policy point of view, it's very hard for the President to stand up and have any kind of credibility in it.

The first G8 meeting of the environmental ministers that I went to in Trieste was the first time that they've invited all of the developing countries there. And it was – the feeling was very palpable that they thought climate change was really an issue that the developed countries were using to keep them back and keep their economic growth back, because they said, "Look, you guys got to where you are economically with all these polluting. You just don't want us to get there." And it was real. I mean they've absolutely felt that. And the fact that we have not taken – we don't have – we're doing

a lot of things, don't get me wrong. We are doing things to reducing our carbon footprint. We have reduced it. We are seeing emissions come down. We're doing good things. But they're not part of an overall policy, so when others look at us, they say, "Well, how can you tell us what to do when you're not doing it."

And of course we've seen it recently in a couple of other things that we've been doing in trying to tell others not to do. So it makes it more difficult. I think we have to. We have to work as much as we can on technology transfer with developing countries, not just China, but India, which is growing at the same rate as well. I mean those are the economies that are producing and going to produce on per capita basis, China already, India soon, too, more than we are on a per capita basis of carbon. So we've got to work with them, but it would be helpful if we have some kind of a national standard that said, "Yes, we really are serious about this."

Bill Ritter: I think that's right. I spoke in – I was in Denmark as governor of Colorado and talked about the things we've done on a clean energy basis. And you can tell that people in Europe are paying attention to watching to see, paying very little attention to what states are doing. That's 220 million Americans living in the state with the renewable energy standard, but they are not paying attention. They're paying attention to the fact that the congress will not act on this. And so that's, first of all, now, Europe.

But I've been to China a fair amount. I'm on the board of the Energy Foundation. We have a Chinese program that's really trying to work on a variety of issues in China that had to do with their emissions and with pollution and on the transportation side, the building side, the utility side, and really have some sense, I think, about how difficult that is. China, last year, put 50 gigawatts of new coal on its energy sector. So 50 gigawatts, let's say, that'd be ten 500-megawatt plants. That's almost a new coal plant a month. There was a time where they're building new coal plant a week. Now, China's got to do that in part to continue the economic expansion at the level that they need to do and at that level that they believe they need to do, so they've got some pressure.

And we just need to, I think, first of all, governors, is that correct? We have to lead by example. We have to show that there's an energy strategy we can have that really is based around reducing your emissions and continuing to be able to grow your economy by transforming your energy sector.

And second, deal in a diplomatic way with other emerging economies to say, "We're doing it. We're serious about it. We need you to get on board, and we'll find ways in the international community to make that possible." Unless we do the first, it's so much more difficult and I would say virtually impossible to do the second.

Greg Dalton: Welcome to Climate One. Let's have our next audience question.

Male Participant: Yeah. Thank you. You addressed conversation a little bit, and we all heard like the greenest kilowatt-hour is the one that we don't use. So I wanted to get – to ask the question about supply and demand. And when you were governors, do you have examples where you actually reduced the demand like let's say improved the green building standards in your state, or looked at smart cities, or like transit oriented planning, or even like biking. I know like you, Governor Ritter, like do that. So I'm curious to hear some examples of reducing the demands rather than creating green supplies that sort of replace the brown supplies?

Bill Ritter: You know about the biking, because I fell off of a bike and broke my ribs and my sternum and my back.

[Laughter]

Bill Ritter: Well, as governor, when you do that you actually wind up on CNN if you have a bike accident when you're governor. But a lot of states, and we did this in Colorado, have what are called energy efficiency resource standards that actually set and place a way to incentivize utilities, investor on utilities particularly to get their consumers to consume less.

Our big investor on utility is Xcel Energy. They've been a great partner in this. Again, if you look at all the Americans that live in a state with an energy efficiency resource standard, 240 million Americans, we'll be the fifth largest country in the world with those, just the country. And if you just took that part of the country that have energy efficiency resource standards, so that's one way.

Other states have gone through decoupling to try and change the incentives for the way utilities produce power and in charge for power. There are a variety of things happening there. I think governors are also leading by example. We signed a few different Executive Orders that were called the Greening of Governments, so it was transitioning fleet to either use less energy or use a different kind of energy.

On the energy efficiency side, we did performance contracting with municipalities, universities, schools, and hospitals, where you burying in a big ESCO, and energy services company, and they do a performance contract with that governmental entity and say, "We're going to provide you this level of savings. We'll take a small part of this. It'll all be our part for doing the contract, but in the end, governmental entity, you will use less energy, and you'll pay less than you would with the contract plus your reduced cost of energy and the paying for the power." So those are just some examples, but I think this is something that actually has appeal on both sides of the aisle, and there's a variety of ways we've been able to move this agenda using state governors and governments.

Greg Dalton: Christine Todd Whitman?

Christine Todd Whitman: Well, we did, early on in my administration, that early of '94, '95, when we deregulated the utility industry, we were one of the earlier states to put in a standard for green energy. And to - also, we made sure that we were providing incentives for people to find ways to conserve. It is great when governors have accidents, because I had mine on a bike as well.

[Laughter]

Christine Todd Whitman: And it was one of the more satisfying moments though, because all I did was get seven stitches here, and then I chipped a bone on my finger, and they asked me about it on the press conference. I said, "Well, no offense to you, but I did this, and I chipped this finger."

[Laughter]

Christine Todd Whitman: So it was very, very satisfying. It was very satisfying [crosstalk], but one of the things that we did was - also I take a - I'd bike across the state every summer, both to highlight tourism and to highlight the fact that you could bike to places safely.

We worked leading by example, we made sure that we encouraged people to be able to bike to work to - at the state government to give them a place where they could change, a place where they could place their bikes. It's great to say "Bike to work." But if you're a woman, you can't just get off your bike and take a quick shower and you're ready to go; it takes a little bit more than that.

So we tried to ensure that the various departments of government were sensitive to that and would allow people to have this opportunity. We did a lot of rail to trail things to provide more pass, more bike pass for people so that they could get from one town to another using their bicycle rather than having to go in a car. So there are a lot of things like that that various governors do and they're doing all the time. In New Jersey, we are second only to California in the amount of solar power that we have.

Greg Dalton: Who knew? Let's have our next question for Christine Todd Whitman and Bill Ritter at Climate One at the Commonwealth Club.

Female Participant: Hi there. I have two questions. The first is around your fiscal planning for these unexpected devastations. Superstorm Sandy caused over a hundred billion dollars. Right? So how do you plan for these unexpected catastrophes? And my second question is around hydraulic fracturing. And while this is somewhat new and we don't know the ultimate impact on human health and the environment, we know that it's severe, and 38 states are currently new in that. I understand it's been regulated at the state level, but what kind of conversations are being had at the federal level?

Greg Dalton: So first financial planning for bad days, Governor Ritter, [crosstalk] something.

Bill Ritter: Well, every state has, in their budget, a disaster planning, and they may be called something different state to state, but the real money comes from the federal government, quite frankly. I mean you can do a lot to try and support the disaster response, but state budgets are for something like even the wild fires – I won't speak for Superstorm Sandy.

This is no way your state budget is going to touch the real fiscal cost associated with those kinds of disasters, so that's why states have to, in turn, go to the federal government and really ask the federal government to enter and do all they can with respect to federal emergency management, so managing the crisis, and then in the after, response to the crisis trying to provide assistance to people who are somehow devastated by it.

Greg Dalton: Christine Todd Whitman?

Christine Todd Whitman: Well, the other thing you could do, I mean, besides the fact you put a budget aside, you also get to know, and it's one thing you're told as a new governor, get to know your emergency response people really well and find out what their needs are and you look at what the tradition, what's happened in the past, and you say, "What more do you need? What tools do we need? Where do we need to make the investment to try to mitigate the damage here?"

We have some areas, some local towns not too far from where I am that would flood every single time there's a heavy, heavy rain. So we work with the Army Corps of Engineers to put in some dikes to make sure that we were trying to mitigate that. And so you put aside money, you have an emergency response budget, just a budget to do with, whether it's no storms or fires or floods, you have a certain amount. You try to anticipate the best you can, but you're never ever going to have enough to do it all 90 percent of the time. You make sure your emergency response people are set to be able to respond quickly in an emergency, that they have tools, the communication tools and everything else that they need to be able to do their job, and you then set up your plan, so you'll know exactly what you have to do, because in any one of these crisis, the first responder, the primary responder is the locality where it is then it moves to the state and only then does the state ask the federal government to come in, and so you have to have – I can remember when we knew there were big things coming, we have all the paperwork done for me to sign instantaneously if I

needed to declare it a disaster in order to be able to access the federal aid. So you try to make sure that you make these things move quickly as smoothly as possible.

On your second question, and I think probably we're out of time.

Greg Dalton: We're out of time. I want to just close. We can get to that, perhaps afterwards.

Christine Todd Whitman: Right. Sorry. Yeah. We do.

Greg Dalton: I want to close briefly by asking you about 2016. In the 2012 Presidential Election cycle, there were no questions during the presidential debates about climate change; there was climate silence. Looking ahead to 2016, there are several governors that are potential candidates, Jeb Bush, Chris Christie, other perhaps, Secretary Clinton. Who do you think are the candidates who would be really enlightened on climate and energy? Bill Ritter?

Bill Ritter: I don't know that - I have to hear them talk about it. But I think - I'm a Democrat, and I think the Democratic Party is going to demand that there be a conversation about this. There will be a conversation about it in the Primary. I suspect one of the things they'll require is that conversation continue all the way through the General. I think there are a lot of people very disappointed that it wasn't really highlighted during the campaign. It's been highlighted since by President Obama in a variety of ways, but I think that the Democratic Party in the Primary process will demand that there's a conversation about climate change.

Greg Dalton: Christine Todd Whitman?

Christine Todd Whitman: Well, I hope you're right. I doubt it will happen in the Republican side as far as demand, unless we stand up and say this is an issue that's important to us. I mean the only thing that moves people is when the public says, "My vote's going to depend on how you answer these questions." I couldn't possibly pick who is the most informed on this issue today. They come at it from different places, and they have different levels of knowledge and commitment to it, but if we start to say, "This is important. I'm going to base my vote on how you respond to these questions." Then you know what, they're going to start to listen, and they're going to start to get more informed, and they're going to start to take positions, and then we can judge.

Greg Dalton: We've come to the end of our time. I'd just like to close by saying this had been something of an out-of-body experience sitting here with a Republican and a Democrat agreeing so much. It's a little strange. We're happy that it happened.

[Laughter]

Greg Dalton: But Bill Ritter was Democratic Governor of Colorado from 2007 to 2011. He's currently director of the Center for the New Energy Economy, and Christine Todd Whitman was governor of New Jersey and was in the cabinet of President George W. Bush. I thank them for coming to Climate One at the Commonwealth Club.

[Applause]

Bill Ritter: Thank you, Greg.

Greg Dalton: Thank you.

Christine Todd Whitman: Well, always a pleasure. We should take -

[Applause]

[END]