Clean Cloud

Greg Dalton: I'm Greg Dalton and today on Climate One we're going to Silicon Valley to ask if tech companies can be cool and green. As the web moves to the cloud, there's growing interest in how internet data centers are powered when you visit a webpage. Does a poof of black smoke go up somewhere from a coal fired power plant? Over the next hour, we'll look into how clean your clicks are and hear what grades Apple, eBay, Facebook, Google and Yahoo get on renewable power. We also will discuss green energy moving into red states and whether environmentalists and technology executives are shouting at each other or sitting down and having a beer together. Along the way, we will also include questions from our live audience here at the Commonwealth Club in San Francisco.

This program tonight is sponsored by Carbon Five, a boutique software consultancy that recently remodeled the new Climate One website. On the show today we welcome four guests. Gary Cook is senior policy analyst with Greenpeace International. Lori Duvall is global director of green at eBay and Christina Page is global director of energy and sustainability strategy at Yahoo. And Bill Weihl is a sustainability guru at Facebook. Please welcome them to Climate One.

[Applause]

Gary Cook, a few years ago Greenpeace launched an Unfriend Coal campaign aimed at Facebook. So tell us why you did that and how that campaign unfolded.

Gary Cook: Sure. Thanks very much. About 2009, 2010 we were looking at how do we get off of coal. So looking at, who are the big drivers of electricity demand. And some of what came up in our radar was that the fact that the IT sector is a -- has a huge energy footprint. And it was growing very rapidly if you aggregate all the, from our analysis, if you aggregate all the demand of electricity from the cloud and so just for the data centers and the networks, ranking among countries, we would rank in about 5th or 6th in the world, so it's quite significant. And we saw many companies in the sector were growing very quickly as we might expect.

And were actually going to places that that where actually increasing demand for coal. Facebook actually happened to be one of those companies when -- this is like 2010. And so we were concerned about this and thought it was a real opportunity to challenge Facebook to do better without their IT company. Very iconic brand that people are very emotional about, you know, sharing their lives with, they could do better. And so we challenged our supporters and challenged Facebook users to ask Facebook to Unfriend coal. And had a quite a bit of uptake and, you know, ultimately it led to a, you know, as part of the campaign engagement with Facebook. And they I think, you know, had a different perspective at first and then realized that we in many ways had a very similar analysis on what the opportunities were and have seen real change from them in the intervening time.

Greg Dalton: And they became the first company to go 100% renewable power on their data centers, is that right?

Gary Cook: They were the first one to commit to be 100% renewable powered. And so they sort of set a bar for others to follow and we followed up. And so in the end, we're having -- have seen Facebook embrace that challenge. Challenge other major companies in the sector to also embrace

that. And so in 2012, we were knocking on Apple's door and asking them, as they were growing many the same places that Facebook was growing. Well, look Facebook has done this, they, you know, not saying it's going to happen overnight. But they said this is important and this is some -- as a guiding point for us, a North Star and we're going to start to work on these goals, why can't you do the same? And actually they -- it took a few months but they also embraced the challenge, became the second one to commit to be 100% renewable.

Greg Dalton: And Bill Weihl, I'm not sure if you were actually at Facebook. You might still have been at Google. But what was your response when Greenpeace started putting this pressure on Facebook, and you can -- in words you can say on radio, what was your response?

Bill Weihl: So first thanks for having me here, having all of us here. So I was not at Facebook yet when Greenpeace started that campaign. One of the, I think the wonderful things, maybe ironic things about it, is the fact that they used Facebook extensively for the campaign.

[Laughter]

And it was very effective. So those of you who are looking to run campaigns, Facebook is a great way to do it.

[Laughter]

So -- but I think that one of the things to start with is I think we actually agreed on the problem and on a lot of the things that were needed, even before they started the campaign and before we started talking with them, on what a lot of the potential solutions are. We'd started before in fact that campaign started, we'd started down the road of, how can we reduce our footprint. And the place to start if you're building infrastructure and using energy, using electricity, is to first ask, how can I use less? So we spent a lot of time going about how can we make our infrastructure much more efficient? We designed and built our data centers and our own servers. We now design and build our own network hardware as well as data storage hardware. And as have a number of our other peers in the industry over the last number of years, we then open sourced those design so that others could take advantage of them. What we hadn't done at the point that Greenpeace started the campaign was really begin to look seriously at where does the energy we still consume, even though we're really efficient, come from?

It's not just about our mix. I mean as Gary said the IT industry is significant in its energy consumption. But it still depends on how you count but, you know, single digit, 2%, 3%, 4% of global energy consumption, electricity consumption. The big consumers are still industrial operations and so on. And, you know, transportation and things like that. So there's a lot we can do but really we need to move the entire economy to a lower carbon.

Greg Dalton: And so Facebook has pledged to be 100% renewable. How much is it renewably powered today and when will you get to 100?

Bill Weihl: We haven't put a date on 100% but we are committed to getting there at some point. And we're not talking about 40 years from now so, 10 years, 15, I don't know exactly. And part of the reason for that is we don't want to compromise and say we're at 100% by doing something that actually doesn't really change the mix on the grid. So we're really focused on trying to make sure when we do it, we do it in a way that has very strong additionality, that if we're going to contract for green energy that in the process we're actually putting new window of energy on the grid as much as possible. We did set a goal two and a half years ago to be at 25% clean energy for 2015. And as of the couple months ago it's now 2015 so this is the year to see how we're doing. I think we'll

surpass that. And our goal is to then increase that in the coming years, and hopefully very quickly.

Greg Dalton: Lori Duvall, Greenpeace gave fairly low marks to eBay, a D for renewable energy commitment and a C for deployment. So I'd like to hear your thoughts and what you're planning to do in response to those grades and from Greenpeace, if you agree with them and what your plans are for getting greener.

Lori Duvall: Well, you know, like Bill explained -- I mean really the history of eBay and now as we've expanded our footprint, a lot of effort went into data center consolidation. Really pushing the envelope on how you even measure the efficiency, not just of the entire building that houses the entire data center, but actually looking at what kind of work your data center is doing and how you can optimize. You know, when you buy something on eBay how much carbon does that use? How does it generate, how much energy does it use? How can we change our coding infrastructure to make things more efficient? You know, we store all of these pictures and descriptions and all these things, and storage is an enormous part of our footprint, so how do we optimize that. And, you know, in fairness and I think, you know, eBay has only just dipped its toes in the water as far as sourcing cleaner energy specifically for the data centers. I mean we have a history of green building and have some nice installations on site at some of our campuses here in California. That, granted we were actually, you know, incented to do that and we took advantage of those incentives. But over time, you know, we have looked at ways that we can really focus on the data center both, you know -- and again, I agree very much with Facebook's approach of, yes we could go out and buy, you know, certificates or green power options from utility providers. But what we really want is to be adding new, cleaner power when we can. So that's a bigger investment and it has been a more complicated and difficult sell into the company as this has happened. Plus, you know, all of us in the data center business are changing the tires on the car as it's rolling down the road. I mean you make some progress but then you go and open another giant data center. So then you kind of have to start all over again. I mean we did, I think one of our biggest accomplishments in the last few years has been the last data center that we opened, we actually put in onsite installation running on fuel cells that are not a 100% carbon free but significantly lower carbon than the grid power, which was not only a great investment on our part to lower our footprint but to also increase the reliability of the power going to our infrastructure.

Because, you know, like all of us, we, you know, those are our factories, our data centers. They must continue to run and they must provide a level of reliability to keep the business successful. So, you know, yes eBay could definitely have bigger, and I have on eBay's behalf aspirations for us to make bare commitments, but I also -- it being as -- when you're in our work and you're trying to get a company to make public commitments, it's also important to stretch yourselves, but also make it something that the company can achieve. And demonstrate, yes, okay we set a goal, we actually achieved it, everybody thought that was good, now let's set a bigger goal.

Greg Dalton: And is it helpful or is it a nuisance to have a pest like Gary Cook sitting next to you from Greenpeace? Banging on, creating external pressure.

Lori Duvall: No, it's incredibly helpful for people in my role to have people outside of the company. You know, they may be saying exactly the same thing I'm saying every single day. But especially when you are a consumer-facing company, it's really valuable to have those outside voices, you know, bringing that to your executives. Because one of the things that they value very much is the quality of our brand and how people perceive us. And so that can be incredibly powerful.

Greg Dalton: Christina Page, Yahoo has been through lots of ups and downs. I think you've had six CEOs since you've been at the company. How is it possible to stay green when there's so many more pressing things going on with the bit, the company - maybe it'll be bought by Microsoft, when

is it going to happen -- so what happens to the green commitment when there are sort of those overarching corporate concerns?

Christina Page: I think over the last seven years we've seen everybody having some pretty significant economic roller coaster experiences. And I think the proof point for us is, you know, in 2008, in the middle of the recession, we built and designed our most efficient and energy and water efficient data center to date, which is called the chicken coop. And we did that at lower cost, we did that -- and we built it in Western New York which was in desperate need of jobs then. And it runs on about 40% less energy than a conventional data center does. So and the way we do that, basically it's a passively cooled data center. Its long narrow building, looks kind of like a chicken coop. And we opened the windows 90% of the year. And there is conventional wisdom with data centers, up until very recently, is seal it up as tight as a drum and blast a whole bunch of cold air mechanically generated in it. And you're consuming as much energy to keep the servers cool as you are to run the servers.

So I mean, for me a big part of the value proposition for green, that makes it really robust is, can you make an argument for it in favor of the bottom line even in tough economic times? And the other side of it, I agree with everybody here in terms of, we're all looking to drive new, clean energy as much as possible and the different strategies for doing that. One of the ways we do it, we most recently signed a contract for a brand new wind farm. Community based, in the Great Plains area which is in desperate need of cleaner power, it's still very dependent on coal. And we do three things: we're driving new development of wind. We're supporting local economy; it's a fourth generation family in Kansas that owns that. So the benefits from this project is going right back into the community. And it's good for our bottom line.

What we've decided is, this is a good bet against future price increases for power in our data centers in the area. So that's something that's important, a little kind of triumvirate for our sustainability strategy is, can you make a business case for it? And something like that is going to survive all sorts of roller coasters in terms of internal and external economy.

Greg Dalton: The thinking often is, whether it's electric cars or more energy efficient light bulbs, that green costs more than conventional or dirty, is that still true Christina Page?

Christina Page: I think it's a common mental model. I think a lot of people, they assume that a greener building is going to cost more. And what's really exciting about this period is I think you're seeing amazing new innovations around financing, which is not the sexiest thing in the world. But it's something that Silicon Valley is really good at. Bill was talking that, that it used to be your options, if you wanted solar panels on your roof, were either just pay for it outright and look at a really long payback, or take out a home equity loan. And now you can sign any manner of contracts to get power without an upfront cost from solar. Same thing with wind, there are whole bunch of different options for financing wind projects that could be attractive to CFOs who don't necessarily have, you know, sustainability front and center in their mind.

Greg Dalton: Bill Weihl, is clean always more expensive than dirty conventional? How is that changing?

Bill Weihl: Absolutely not. I think that there are two broad ways to be cleaner. One is be more efficient, so use less energy, the other is make the energy you do use greener. And being more efficient in many cases saves you money. Sometimes it requires capital upfront but then you save money on the operating costs over the life of whatever the asset is, the building, the server, whatever. Usually, the total cost of ownership is less if you make it more efficient. And sometimes, actually and I think in the case of the chicken coop design or the way we designed our data centers

it's actually cheaper to build the building. So it's lower capital and lower operating cost. So it's just a win no matter how you look at it. On the green energy front, five years ago, in most places it would cost you more to use green energy.

Today, with the cost declines we've seen in solar and what we've seen in wind as well, which is partly through technology improvements, partly through in economy's scale, in many places, it is cheaper to use clean energy than it is use the sort of standard grid mix.

Greg Dalton: Lori Duvall, if this is an economic case these days. Seems like that's a pretty good case to go to the CFO of eBay and say "Hey, we could do this."

Lori Duvall: Well, and certainly in that installation I talked about, when we did our last data center in Utah, actually, that saved an enormous amount of upfront cost in the construction. Because normally, you build these buildings and you put this equipment in there and you buy all these infrastructure and batteries and uninterrupted power supplies and generators to make sure that if the grid goes out the data center keeps running. But in this model, we actually use the grid as backup and have a different primary power source. Which saved us, you know, millions in capital cost upfront because there was a whole floor of the building we didn't even have to build. And so and, you know, something Bill said that has really I think been essential in changing this conversation is really getting people to look at total cost of ownership and lifetime operating cost. That's how you get a lot of green buildings built. Because you show people that over time, yes, maybe you're investing a little more in a couple of features in the building and construction. But if you look at the operating cost, much, much lower over time. So that's, you know, being able to have these more sophisticated conversations with the business side, and really showing them all the different aspects that go into the true cost of these facilities, has become a much more robust conversation. In the old days, you know, we were sort of Balkanized and they thought of us as the crazy tree-hugger people over there. And getting a meeting with the finance people was pretty difficult. And now, it is has become a much more normal part of the business.

Greg Dalton: Same is true for people who have electric cars. Electric cars, it's cheaper to run on electricity but you don't have transmission fluid, oil change, spark plugs, all those maintenance costs, you don't have for electric cars.

Gary Cook, let's talk about some of the companies that didn't score so well from Greenpeace in terms of Silicon Valley. Those are the IBM, HP, Cisco -- they are companies that tend to do more business to business. Why do you think those companies don't fare as well when it comes to clean energy?

Gary Cook: I think, you know, the companies you just named, I think all of them are looking at how they can become more sustainable. They just haven't had the same sort of commitment and the same -- they haven't put their money where their mouth is, to be honest. It's really been -- and I think that's starting to change for some companies like HP I think who is, you know, starting to make more moves.

The company that I would think of it as probably being the most falling -- furthest behind has been Amazon, unfortunately. They're partially here, partially in Seattle. But they, you know, as many people may know, Amazon for the retail side, they actually host a huge part of the internet. So companies that we use all the time, brands like Netflix and Airbnb and Yelp and --

Greg Dalton: Formerly Climate One, no longer, but yes go ahead.

[Laughter]

Gary Cook: Yes, you know, good job. You know, rely on Amazon for their infrastructures. They don't own their data centers, they just go to Amazon. So people may remember last week, we had the big online debate about what color is that dress, the clearly blue and black dress. That was on Tumblr and that's an Amazon company. So where that, you know, what that was actually driving, where most of Amazon has their footprint in the US, it's in Virginia which is, you know, has single digit renewables and so you're increasing demand for coal and natural gas in that state. So that's an indication of, it really matters where the cloud touches the ground and whether these companies have commitments to renewables.

Greg Dalton: Bill Weihl, one other way that companies can advance clean energy is using their financial money, their treasure.

The companies in Silicon Valley have massive amounts of cash. Google used some of its balance sheet to directly invest in clean energy. Is that something that Facebook might do one day to directly invest in technology, or in companies, like Google does?

Bill Weihl: We might do it someday. We are still quite a bit smaller than Google in terms of the size of our treasure, as you put it. As well as the number of employees. I think we're maybe a fifth or less the size of Google. So we're growing really fast. We are still very early in the journey on many parts of our business including the sustainability side. And at the moment in terms of staff resources, it would be I think not the most cost effective, most impactful place for us to put our resources, to focus on investing in either renewable energy projects in a major way or in clean energy companies. Someday as we get bigger, quite possible.

Greg Dalton: Lori Duvall and Christina Page, something your companies would think about using cash or is it more sort of operations? Is that something that only ultra-rich companies like Google can do? Christina Page.

Christina Page: Well this -- this wind project is a 15-year contract. And so we think of that as being an investment. It's investment in, it's basically, you know, financial investment in protecting against future energy prices. So that kind of investment in terms of R&D investments --

Greg Dalton: It's not what you do; Google is pretty unique in that regard.

Christina Page: Yup.

Greg Dalton: Okay. Bill Weihl.

Bill Weihl: I do think that --

Greg Dalton: Bill Weihl.

Bill Weihl: -- each of us, each company is different. I think we each need to and we do spend a lot of time thinking about where are the places where we can have the most impact with our money, with our people, with our brand. One of the things that we've been doing collaboratively is working and, you know, as I made the point that it's not just about our footprint and the energy that we use. In the end we have to decarbonize the grid if we're going to deal with climate change.

And that means we need utilities and other companies that use energy to change what they are doing. And so we've been working collaboratively with now, I don't know it must be well over 30 companies and half a dozen NGOs to identify policies that would make it easier for us as big corporate consumers to buy renewable energy in a really meaningful way with real additionality and in a cost effective way. And then to work with utilities and regulators to change those policies. And

that's a place where we have real power in the marketplace. It's not just about us investing our cash or changing our procurement. It's about bringing it to change the whole market.

Greg Dalton: Right. And utilities are pretty resistant to change. They like the status quo very well, thank you very much. Just leave us alone. But how is that going with utilities to get them to dance differently?

Bill Weihl: You know, the utility industry historically, especially compared to Silicon Valley, is conservative and slow moving. And honestly I think some of that is appropriate, you know, the lights are on here and that's a good thing. And they're on partly because utilities don't change everything, you know, every five minutes the way Silicon Valley companies sometimes do.

Greg Dalton: We don't want you running the grid, yeah.

Bill Weihl: So but, you know, some of them are more progressive and move faster than others. I think that the interesting thing in the last couple of years as we have banded together as companies and approached utilities as a group. They have responded and regulators have responded very differently than they did four, five years ago when, you know, when I was at Google or, you know, early days when I was at Facebook. We'd approach them as one company and they, you know, they listen, and then they'd have lots of reasons, "Well, you know, we can't really do that right now" or "We can't do what you'd like. But how about this other thing" that didn't really work for us. Now, with several dozen companies approaching them, they are listening in a very different way and the conversation I think is beginning to move.

Greg Dalton: Lori Duvall, you actually -- eBay had a law changed in Utah. I want to talk about that and also get to, it's interesting that a lot of this green energy is happening in red states. Is that a coincidence or is that something that's by design? Because Facebook went into Iowa, eBay went into Utah, North Carolina, Apple is there -- so but first quickly Utah, what did you get done there?

Lori Duvall: Well and I think what's becoming kind of clear in this conversation is, there's a lot of tools in the tool box. And in that case, that was an opportunity. First a recognition when we went into Utah we thought well of course we want to try to have cleaner energy for the data center, but realized that it actually was against the law to contract with a third party in Utah to buy clean energy. And it was an old law, I think really intended to -- and going back to when the grid was being created. There was a good argument for restricting who was going to build the grid and how it was going to be regulated.

But, and in this case, we actually were partnered with utilities, with the Republican State Senator, with some other local businesses to actually make the case and get in front of the legislature and show them that it actually -- not from a "gonna help the climate" perspective, but from a true jobs attracting new companies, having a healthier business environment in Utah. We were able to get the law changed and now you can buy clean power, not just us but anybody in Utah, including residents and including our employees who are now able to put rooftop solar on their houses if they want to with a third party company.

And so, you know, it really shows you have to stay flexible in these conversations no matter what your personal motivation is, you have to understand who you're talking to and be able to make the case, whether it's taking the business case to the CFO or taking the kind of broader societal business impact story to a red state legislator. There are a lot of good reasons to make these changes. It's not just because it's the right thing to do for the climate. That's a great reason, but it's not always the reason that motivates everybody.

Greg Dalton: Lori Duvall is global director of Green at eBay. Our other guests today at Climate One are Gary Cook, with Greenpeace International, Christina Page with Yahoo and Bill Weihl with Facebook. I'm Greg Dalton with Climate One. You can join the conversation on Twitter using our handle @climateone.

Gary Cook, your thoughts on green energy in red states. Is that just a coincidence, cause that's where the extraction or the wind is, or is there something interesting happening there with red states starting to realize these are good jobs?

Gary Cook: Well, I think you've seen, you know, from the stories you've heard so far where, you know, companies who are motivated, have commitments to renewable energy, this become a part of the conversation when they're going to a new location. And for any of the brands here or many of the brands elsewhere in the IT sector, especially from the governor's office on down, everyone wants to be the one that, you know, gets Facebook or Microsoft or whoever to come to their state. That's a big win for them politically, it creates jobs, adds to the tax base. So it's real opportunity, those companies are saying, well renewable energy is really important to me. You can actually get, you know, politicians and, you know, Lori talked about the success in Utah to become advocates for changing the rules in a way that allows the companies who are motivated to have better options.

So I give credit to Facebook when they, they built a third data center in the US, fourth overall. And when they went to Iowa, they had made a commitment to renewable energy, had it part of their -- baked into their siting policy. And this sort of, you're able to use that in part of the conversation with, you know, going to Iowa. And by comparison, Nebraska, nearby state, you know, weren't able to offer as much and you had, you know, the Republican legislators afterwards saying "Hey, we just lost Facebook to a neighboring state. We need to actually change our losses because we're losing business here, we're not as competitive."

And so I don't know how much red state versus blue state, but everyone wants more jobs in their state. And if they're having a big part, the growing part of the economy is and more companies saying we really want renewables, that's going to have a big impact. Because it's not all up to the companies to solve these themselves with their own procurement, we need to change the rules. So renewables can really take over the grid and we get rid of the fossil fuel generation that is currently causing climate change.

Greg Dalton: But still, in some places climate is a controversial topic. It's a political topic and we are going to play a clip of someone who was here recently talking about this then we'll get your response about some of the policy and political implications. This is the former chairman and CEO of General Motors, Dan Akerson talking about when he first got to the company and made a comment on climate.

Dan Akerson: The first time I was interviewed by the press, I was stunned with the following reaction. Some guy says, "Do you believe in global warming?" and I said, "well yeah, I do." Several GM executives said, "You don't say that in public!" Well -- [laughter]

Greg Dalton: So that's the former chairman of General Motors saying that people inside the corporations said "don't talk about climate in public," right? Bill Weihl, does that happen in Silicon Valley, is it okay to talk about climate, or is it sort of --

Bill Weihl: I've been talking about in Silicon Valley for the last ten years now.

Greg Dalton: Anyone ever tell you to shut up?

Bill Weihl: Not in --

Greg Dalton: Not on climate, yeah.

Bill Weihl: Yeah, I do get told to shut up occasionally.

[Laughter]

You know, you describe Gary as a pest and I think some of my colleagues probably would describe me as a pest occasionally but --

Greg Dalton: It's part of your job.

Bill Weihl: It's part of my job. You know, I think climate is not a political issue I think. We're, you know, a technology and science based company, and the science is clear. So the issue is what are the solutions? And I can understand with, you know, the politics in a company like GM where their business has for now, I don't know 100 years relied on building machines that use fossil fuels. If the solutions to climate change meaning we have to get off fossil fuels that threatens their business, or it means they have to change it. And so I can understand resistance. We use energy but, you know, it doesn't have to be from fossil fuels, it can be from wind, it can be from solar, it can be from geothermal. And we're focused on finding solutions that allow us to run our business and also help the rest of the grid run in a much cleaner way.

Greg Dalton: Lori Duvall, eBay was one of the companies that pulled out of ALEC the American Legislative Exchange Council organization, that was actually trying to push back the renewable energy standards that you talked about. Why did eBay leave ALEC?

Lori Duvall: Well, really, you know, there are -- these sort of organizations, these legislative incubators as it were, they tend to have a lot of different things they're trying to do. And eBay's original reason for working with ALEC was really the work that we do around small business. And we understood that and it had been a relationship that had been going on for a long time. But it became very clear, and certainly as ALEC became more vocal and it became more obvious that they were pushing back on things that really matter to us, like renewable portfolio standards, like development of clean energy. That really became an argument we can make inside the company and say, you know, we understand that there may have been historical benefit to this organization. But now we see them in actually direct conflict with some of the bigger issues we're trying to tackle from a green perspective.

And so, you know, it was a robust conversation we had about that relationship. But ultimately, it was made both from a yes, we don't want to be seen as contradicting ourselves but not just internally for our own, you know, with making us feel bad. But really, more importantly showing that we actually are committed to the things we're committed to, where we actually do believe that climate change is a huge challenge and danger to our own business, to our buyers and sellers. And so we were able to decide we needed to sever that relationship and find other ways to champion small businesses which we will continue to do. And that is the job of our government team.

Greg Dalton: Let's talk about leading customers. Christina Page, there's one area where an intern or someone hacked up something on Yahoo Finance to show that people looking at investments could also look at the sustainability of the stocks they're going to buy, and then we're going to ask Facebook also. But what are you doing to lead customers to be more green in addition to you as a corporation?

Christina Page: Yeah, I mean part of what we do -- we get a billion visitors each month on average.

And part of what we try to do is provide them what they need. Provide them things that serve their daily habits. So the prototype, the Yahoo Finance green prototype it actually came out of a hack day. Every quarter employees have an opportunity to spend 24 hours working on something that they're passionate about. And so there's again a prototype of a green score card that you can see right up there with the stock price and the price earnings ratio.

I think in general it's a power to let people assemble around issues that they're passionate about. We got something called Freecycle actually started on Yahoo Groups. And it's this movement all over the country and in other countries as well whereby if you have something that you no longer want, instead of sending it to a landfill, you can exchange it with other people, which is something the internet is very, very good at. And they have these free meet ups. We actually do "Free is Good" fair on campus every year in honor of that. But I think one of the things that we do really well is provide people with the information that they need to power themselves including on green issues.

Greg Dalton: Gary Cook, you've been an advocate of something in a browser where say someone goes to a website, there'll be some kind of little, I don't know, clumps of coal or not, depending on how clean or dirty that site was. Is it possible that people when they go to website they'll be able to have that kind of transparency, they say, ah this is clean site or no, this is a dirty one, or is it too complicated to get that simple user interface?

Gary Cook: It's actually something we're working on right now. We're updating our Clicking Clean report that will come out in April and just after that release a plug-in that people can download and, you know, when they're on the internet be able to see, you know, whatever site they're on, if they're green or not. So that's, you know, it is complicated but it's something we've been working on well over a year and we'll be releasing it in mid-April, mid to late April.

Greg Dalton: We're going to go to our lightning round. I'm going to ask here people a yes or no question.

So for Lori Duvall, Facebook's clean energy pledge is a good way to burnish its image, this is yes or no? Facebook's clean energy pledge is a good way to burnish its image for people who think its privacy policies are creepy.

[Laughter]

Bill Weihl: I'm glad you're asking her not me.

[Laughter]

Lori Duvall: Yes.

Greg Dalton: I didn't say, you might be next but.

[Laughter]

Lori Duvall: Yes.

Greg Dalton: Yes.

Lori Duvall: Yes. It doesn't make it bad.

Greg Dalton: Bill Weihl, Apple CEO Tim Cook is the leading CEO in Silicon Valley today on clean energy.

Bill Weihl: It has to be yes or no?

Greg Dalton: Yes or no.

[Laughter]

Bill Weihl: Yes.

Greg Dalton: Christina Page, Google is greener than Yahoo. Yes or no?

[Laughter]

Christina Page: Yes.

Greg Dalton: Gary Cook, Amazon CEO Jeff Bezos cares more about low cost than clean energy.

Gary Cook: Yes.

Greg Dalton: Thanks. You all passed our lighting round.

[Laughter]

I give you all As --

Bill Weihl: As I tell my friends sometimes, you know, nuance does not win the messaging wars. So there was no nuance on those answers just to be clear.

[Laughter]

Greg Dalton: By design, yes. By design. So let's talk about the vulnerability of Silicon Valley. A lot of your corporate campuses are in areas where you may need to kayak to them in --

[Laughter]

-- the future. Bill Weihl, Facebook is building a gorgeous new campus. Frank Gehry is spending a fortune on it. Have you thought about the sea level coming into that beautiful new Frank Gehry campus building?

Bill Weihl: We worry about sea level rise. It's not just the problem for Silicon Valley. I live here in San Francisco; we're in San Francisco now. There have been problems at high tide events where water is coming up in the Embarcadero you know, along the bay and going into the first floor of buildings. So we're already suffering problems around here. Long term in Silicon Valley down on the peninsula it could be a problem. And there are definitely people, I'm not involved in the details of this, but there are lots of people in the communities, in the cities as well as all the major companies that are based on their worrying about this. One of the ways to deal with it is to really address global warming. And to reduce emissions and reduce CO2 which will slow and eventually help us stop sea level rise. And then at some point, we're going to have to protect ourselves more against it.

Greg Dalton: Lori Duvall, some people think that the tech firms are so rich that they'll just pack up and move up the hill. Is it that simple, that Oracle could just kind of, you know, build up on the hills and sort of abandon at some point when the water starts to come?

Lori Duvall: Well, certainly, you know, we -- yes they could. But like us, I mean a lot of us we have

millions of customers and a lot of them live in vulnerable coastal zones not only in North America, but all over the world. Our IT supply chain relies on areas that have been heavily impacted already by large weather events like the floods in Thailand a few years ago. So, you know, yes of course we worry about our own company and our safety and well-being of our employees but, you know, with some of these events happening it's going to have a terrible financial impact on some of our businesses potentially. So some of us who write, you know, every year we write a response to what's called the carbon disclosure project and if you look in the risks and opportunity section of that we do address that. We do talk about our facilities and our supply chain's vulnerability and our customers. You know, we rely heavily on logistics networks to make eBay and online commerce happen. And those could be heavily disrupted. So, you know, we do recognize it. So that's one of the reasons we're committed to try and to work on this issue. Not just in our own silo as our own company but collectively to see what we can do about it.

Bill Weihl: And the potential impact of sea level rise on us and even on our supply chain is probably much less than it is on many very poor populations living in close proximity to the sea and various places around the world. So we might have some impact at some point and that's certainly something as a business that we have to plan for all the potential adverse events. But the people who are going to be most effective soonest are the ones who can least afford to do it.

Lori Duvall: We're already seeing that impact, yeah.

Greg Dalton: It's here, it's now. I want to ask you briefly about water. California is in a big drought, we've been talking a lot about energy. Does drought matter to a tech company, Lori Duvall?

Lori Duvall: Absolutely.

Greg Dalton: How so?

Lori Duvall: I mean, you know, we certainly think about water availability when we do our data center siting and our facility siting. Because data centers that use cooling equipment use water. Not only, you know, to, you know, to cool the equipment but just for the sake of again thinking about where our employees live and what would be the impacts of the locations of our facilities. So it's absolutely material.

Greg Dalton: Gary Cook, some data centers can be powered by fuel cells. Some fuel cells are powered by natural gas which gets into the F word, fracking. So have you thought about sort of fracking and connecting with powering data centers?

Gary Cook: Certainly a lot of data centers are being powered by natural gas. And some are using fuel cells, you know, to power them. You know, Lori, what eBay did in Utah was a good step, first step because, you know, you're dealing with a state that's mostly coal. And they were able to use fuel cells and reduce their current footprint. But we need renewable solutions. And we can't transition to natural gas because that's - we certainly see the impacts of fracking. And from a climate perspective, simply transitioning to natural gas is not going to save the climate. So it needs to be, we move off as fast as possible.

Greg Dalton: So you don't buy the natural gas as a bridge fuel argument, Gary Cook?

Gary Cook: No.

[Laughter]

Greg Dalton: Lori Duvall, no?

Lori Duvall: Well, as Gary said it's an incremental step. It isn't a final solution and certainly no back to drought. I mean we all know that, you know, they do call it hydrological fracking for a reason. It uses an enormous amount of water. And so I think that is a long term concern for all the communities that are doing a lot of energy development around that technology.

Greg Dalton: We're talking about climate change in Silicon Valley at Climate One. I'm Greg Dalton. And our guests today are Gary Cook, from Greenpeace, Lori Duvall, from eBay, Christina Page from Yahoo and Bill Weihl from Facebook. We'll be right back after this break.

[Applause]

Announcer: And now, here's a Climate One Minute.

For some corporations, a commitment to sustainability means more than just recycling copier paper or giving out employee carpool vouchers. When Microsoft's sustainability director TJ DiCaprio was our guest in 2013, she talked about the motivations behind the company's self-imposed internal carbon tax:

TJ DiCaprio: ...and then two, for energy that we can't offset, is to purchase carbon credits and carbon offsets. And that's where really we started to take a look at forests and how we could preserve forests because it's such a way to approach carbon reduction at scale.

And so to help with that, we put a price on carbon and we charge for accountability purposes the different business groups through our organization. Then we collect the funds, and we use those funds to support the efficiency and the greening and the carbon offset project such as preserving forests.

The organization got behind it very quickly. We understand that internalizing this external cost of reducing pollution, carbon pollution and how we needed to take that into consideration for our own operations and the amount of good that it does, not only does it make business sense because it drives efficiency when you've got a price signal that's associated with your operations and consumption of energy and business travel, but also we're able to then use those funds and have such an incredible impact in different parts of the world and help developing nations accelerate in a low carbon economy. And that was really a big position for us from a citizenship perspective is, how can we have that impact on a global basis?

Announcer: That was TJ DiCaprio of Microsoft, speaking with Climate One in 2013. This has been a Climate One Minute – now back to Greg Dalton and our live audience at The Commonwealth Club.

Greg Dalton: We're back at Climate One. I'm Greg Dalton. We're talking about greening Silicon Valley. Let's have our audience question. Welcome to Climate One.

Tom Foremski: Tom Foremski, Silicon Valley Watcher. I was wondering if, how do you take into account political moves, say by the Saudi Arabian dropping oil prices? And is that saving us from -- is that making say fracking and shale oil uneconomical and saving us from some very dirty energy? And do you take into account the subsidies and political margins in the price of energy when you do your long term calculations?

Greg Dalton: Dirty energy is cheap now, how does that change your job? Who'd like to tackle that? Lori Duvall.

Lori Duvall: I mean we certainly -- I mean I guess what I can say because I'm certainly not an expert in global energy subsidies. But we certainly do take into account the information that comes out of organizations like the energy information administration to look at as we're predicting what's going to happen to fuel prices and to consequently energy prices as we forecast forward. Because when you're building a data center, you're not looking at the next three years, you're looking far into the future. And so, you know, we do try to account for that using generally the same government sources that other people used to do those models.

Greg Dalton: Christina Page.

Christina Page: Yeah, that's to say that, you know, what we're starting to see is I think energy prices getting more global, you know. It's typically been quite local, coal tends to be local. And so one of the things we're definitely looking at is what's -- not just increasing price but volatility of price. CFOs never like to see volatility. So one of the things that I think is a really strong argument, again whether you're a really strong on sustainability branded company or not is how you protect against future cost of energy, if you're an energy intensive company. And in that case, clean energy sources like wind and solar should be a really good play. Not just for future price increases but for that up and down roller coaster that nobody wants to be on.

Greg Dalton: Next question. Welcome.

Female Participant: Hi, Gary Cook mentioned that Amazon web services are one of the worst for the green web. Are some of the alternatives such as Linode better? Is like, if I want to have a web platform and I'm not a giant company who can have my own data center, what are my choices and what's the greenest choice?

Greg Dalton: Gary Cook.

Gary Cook: So I think, you know, Amazon is providing, they're a cloud company. You look at the other providers out there, you know, their main competitors in terms pf cloud services are like Google and Microsoft. Google is certainly way ahead of either one of those in terms of being a green platform, because they are both buying clean energy, they are advocating for clean energy policies, and they're actually even using some of their investment, we talked about earlier to help support the deployment. So I would look at them if you're looking for a place to migrate. But if you look at, if you go to greenpeace.org/clickingclean you can see our scorecard and happy to talk further.

Greg Dalton: Climate One moved its website recently from Amazon to Rackspace which is -- gets good scores from Greenpeace, 100% renewable. Let's go to our next question.

Male Participant: Hi, I heard about Tom Slater talk about two weeks ago. And he said that there is a billion dollars -- I believe he's referring to the Koch brothers -- a standing fund to support candidates who will not do anything about carbon pollution. And so I'm wondering if any of your companies aside from just having a good green record on your own, do you want to get into that fray of putting money to support candidates who are green?

[Crosstalk]

Greg Dalton: Lori Duvall.

Lori Duvall: Yeah. And there are ways that companies do unite around both supporting legislators who are trying to move rational policy and policies in general. We're a member of something called BICEP which stands for Businesses for Innovative Climate and Energy Policy. And that is a way for us to collectively work together, particularly at the federal level but increasingly at the state level.

To give support to those legislators and those policies that we think are in line with some of our own objectives. You know, that's a big, it's a big competitor to those points of view but again, I think there's a good argument and we've seen some good movement by taking this sort of collective approach. And showing that it's not just one wacky Silicon Valley company that thinks this is a good idea. It actually is the voice of some of the biggest companies in the world.

Greg Dalton: When I interviewed Texas Governor Rick Perry, I asked him about climate science which is easy to dismiss. And I mentioned that climate declaration that lots of large companies have signed and it's a lot harder for someone like Rick Perry to dismiss General Motors than it is to dismiss some scientist. Let's go to our next question. Welcome.

Male Participant: I wanted to know if Greenpeace is involved in the strange, strange red state coalition in Georgia and Florida in which tea party folks are joining with environmentalists in the area to advocate for rooftop solar being able to feedback into the grid. Are you guys involved in that?

Greg Dalton: Green tea, a very interesting political phenomenon.

[Laughter]

A green tea party. So a woman from -- there's a leader from Georgia I'd love to get here at Climate One. Gary Cook.

Gary Cook: Yeah, we've certainly been watching that with great interest. You see in the south -- you may not tell from my accent, I'm originally from Birmingham. But there's a lot of, you know, merging of interest on people who want to have more access. They're really tired of the utility bills going up and up and they want clean energy. And so there you've seen a marriage, you know, begin to form where they're actually pushing, you know, from the right and from the left for the same thing which is great.

And we're starting to see some of that in North Carolina as well, you have the same sort of setup. Lot of places in the south you have monopoly of utilities, no choice, very poor access to renewables and the utility wants to keep it that way and you're -- the people are tired of that and they want to have better options they want to have renewable energy. And Georgia is a great example. We're hoping that will spread, we're starting to see that a bit in other parts of the country as well.

Greg Dalton: Thank you for the question. Next question, welcome.

Male Participant: Hi, this question is for Bill. For a growing technology company that cares considerably about sustainability, what do you think an appropriate size is for them to reach before they hire somebody who's full-time dedicated to evangelizing sustainability within the company and outside?

Bill Weihl: I don't know if I can point to a single, you know, I mean Facebook when I joined was 3,000-ish people. When I joined Google they were at six or seven. I think that if it's something you care about, you can start working on it and thinking about it part-time. I think in the end what you want is not in fact a sustainability team, one or several people off in a corner or in a closet somewhere, you know, being a pest. But you really want to embed it in the DNA, in the operations of the company. So that it's something that is just part of what you do every day and what every team does.

Greg Dalton: Lori Duvall, but a lot of startup companies are worried about growing fast, making their numbers, keeping their VCs happy. And there's a premise of we can grow now, clean up later,

true?

Lori Duvall: Well, you can do that but having mostly worked within established companies and trying to corner often the aircraft carrier size operation, I think that that's very short-sighted honestly. I think that especially even in these small companies, like the last question. If they're not managing their own facilities, they're probably hiring a company that does. And there are plenty of very large facility management companies that already speak the language of sustainability and sustainable operations that they can jumpstart that conversation.

Because particularly when you're in a business where not only do you have environmental risk but you have other source of social risks around just to your business model. You're incredibly short-sighted to not think about upfront in how you just build and also attract your talent. A lot of people really care about the core values of the company they go to work for, even in a startup culture. And so that's very important and often that's why they initially getting interested in it is because the people who want to come work there are asking them those questions.

Gary Cook: Really important point because I think --

Greg Dalton: Gary Cook.

Gary Cook: -- you know, we can't go down a path where you don't start to look at sustainability issues until you've gotten, you caught the bus so to speak. You become -- you had your IPO and then you could deal with these things. Because right now, in this town and many parts at the valley, you know, the startups that are getting - they don't have a capital budget, so they go get, they buy service from Amazon or they could buy somewhere else. I think right now their offices are different than you have over at Facebook where you're building your own data centers, or Yahoo.

But you do have a choice in the marketplace so it's really important to be prioritizing that early because once you get into you're actually -- you're successful.

And you grow to be a big company then you -- we as a society can't afford that pathway to then sort of then retrofit. We need to be heading down that path from the beginning.

Bill Weihl: And five years ago there weren't good options. So, if you didn't have a full-time person it was going to be very hard to do much. Today, you don't need a full-time person when you're small; you just need to pay attention to the issue when you make decisions. Like, should we host with Amazon or Google or Microsoft or Rackspace, Greg as you guys just moved to Rackspace. You can make those choices partly based on which one will be more sustainable, which one will be financially better and so on.

Greg Dalton: Gary Cook, you're playing so nicely with the corporations. I'm wondering if some of the Greenpeace supporters think you've gotten a little squishy on corporate America and that you should be landing on the roofs and doing the old school tactics that Greenpeace was known for.

Gary Cook: We still do that. We've done that with some of the companies on the stage here.

[Laughter]

And certainly with companies in the valley as well, so we are a catalyst. We are trying to, you know, be a catalyst to get these companies to embrace the challenge of being sustainable. And we have done that for data centers, we've done also in the valley with companies, the electronic manufacturers. And we play both sides. We, you know, in 2009 we had a -- we had seen HP roll back on some of their commitments to phase out chemicals from their products. And so went on the

building, we pasted "hazardous products" on top of their headquarters. They didn't like that but, you know, later that week we are back in there talking to them again figuring out how do we get them on a pathway where they are honoring their commitments. And, you know, six months later we are honoring them in a way because we saw big progress. So we have no permanent friends, no permanent enemies, it's really about what is the company doing.

We don't -- we're a fully independent organization. We don't take money from corporations; we don't take money from government. We look at their actions and act accordingly.

Greg Dalton: And you've graded these companies and some people graded Greenpeace recently for an action that happened down in Peru during the conference, you know, the UN climate summit. Where Greenpeace did some things, some people might give an F.

Gary Cook: Yeah, we definitely get an F for that for sure. That was an action that really should not have happened, it was against Greenpeace policy. And something we've unfortunately, you know --

Greg Dalton: Say briefly what it was.

Gary Cook: Sorry, the action that was in Peru, with the conference of the parties, was there's an ancient indigenous ruin, or basically if you look it from the air, it was the hummingbird. And we did an action where we're really trying to highlight, you know, the need for action at the climate negotiations. But it was really against our policy and it shouldn't have happened. And there's been concern that as a result of us putting a banner that it damaged the ruin. So that was something that to be honest with you, we're really quite ashamed of and really trying to address to make sure it doesn't happen again.

Greg Dalton: Gary Cook is a policy analyst with Greenpeace. Let's have our next question.

Male Participant: So a lot of you have focused on interventions or motivation for change coming from sort of a branding and marketing perspective. But I'm curious what you think the appropriate roles are for governments and regulators?

Greg Dalton: Who will admit they like government here? Christina Page.

Christina Page: Yeah, I mean the nice thing about regulation is you're creating basically some predictability in that case. When you have regulations that tell you things -- the direction things are going to move in then that's helpful to companies because you're not operating in uncertainty.

And we like those regulations to be as consistent as possible so we can build strategy accordingly. I think government regulations are extremely helpful for sustainability and environmental protection; it's hard to avoid that. The best ones are sort of collaboration and partnerships where, you know, Lori, you guys are doing great work on that in Utah, where you get to work together and come up with some really thoughtful legislation.

Greg Dalton: Corporations want to go at incremental change that's comfortable. Some people, scientists, would certainly say change needs to happen faster. Can that happen without dramatic government action? Because if it goes - if change only happens at the comfortable corporate pace it may not be fast enough. Christina Page.

Christina Page: Comfortable corporate pace is not how I would describe Silicon Valley.

[Laughter]

Bill Weihl: I'm with her.

Christina Page: Yeah.

Greg Dalton: Okay. So you think you're going as fast as you can, the government can't make you go faster.

Christina Page: I think innovation, you see a lot of innovation here in Silicon Valley. Again, getting back to things like financial innovation around renewable energy, you've got four different ways that you could invest today in a wind farm, in Texas for example, which was not true five years ago, six years ago. That's not because of regulation, that's because of -- somebody saying, hey how can we make money or protect investment or grow green power because we really believe in it and coming with a solution. That's not something that is mandated by a bill, that's somebody getting really creative and acting ahead of legislation.

Greg Dalton: Fair enough. Silicon Valley maybe going fast, other parts of the economy might need a little kick in the rear from government. Gary Cook, and then we'll --

Gary Cook: Yeah, and we absolutely have to have change of policy. And we really need to have stronger leadership from companies who believe in climate change, who believe in the need for more renewable energy. I mean, taken in a different context, you saw this past week where you had grassroots activists and the IT sector really push a big win in DC which is, you know, kind of rare these days on net neutrality.

And that's still, story was still being told there. But we actually had, you know, big companies and a lot of grassroots activists saying "we want a free internet." And we need to see in the same way, the companies really weighing in where "we want clean energy." Because we have to change the rules, the status quo rules are really geared towards the utilities and the status quo. And so we need to unlock renewable energy in places where it's not unlocked. And we need to have companies, you know, follow through on their commitments. So we don't expect companies to solve this on their own, we need to have change in policy. So that's a big part of how we evaluate whether a company is green or not: are they actually using their influence to change the policy.

Greg Dalton: I'd like to thank everyone who joined us here today. Gary Cook is a senior policy analyst with Greenpeace International. Lori Duvall is the global director of Green at eBay, Christina Page is the global director of energy, sustainability and strategy at Yahoo and Bill Weihl is sustainability guru at Facebook. I'm Greg Dalton. I'd like to thank our audience here in the room of the Commonwealth Club online and on air. You can join the conversation on Twitter using our handle @climateone. Thank you all for joining us today.

[Applause]

[END]