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Demystifying the Carbon Markets | Episode 10

Susannah Pierce, President & Country Chair, Shell Canada

How do carbon markets work for end users? How can carbon credits work in tandem with emissions reduction and carbon removal technologies to achieve net zero? David Greely sits down with the Country Chair and GM of Renewables and Energy of Shell Canada, Susannah Pierce, to explore how corporate net zero pledges are turned into corporate climate action.

Susannah Pierce (00s):

Given the fact that so many customers today, big customers have made net zero commitments themselves. It does create this relationship with them where we work together to help them achieve their goals while we achieve our own and ultimately the goals of the planet.

Announcer (14s):

Welcome to Smarter Markets, a free weekly podcast, featuring stories from the entrepreneurs and icons of commodities, capital markets, and technology ranting on the inadequacies of our systems and riffing on ideas for how to solve them. Together, we explore the questions is capitalism in crisis and will building smarter markets be the antidote?

David Greely (43s):

Welcome back to demystifying the carbon markets on Smarter Markets. I'm Dave Greely, Chief Economist at Abaxx Technologies. Our guest today is Susannah Pierce Country Chair, Canada and General Manager for Renewables and Energy Solutions at Shell. Hello, Susannah. Welcome to Smarter Markets. Thank you for joining us today. Many corporations have made net zero commitments during the past few years, and many are now working on translating those commitments into credible plans for achieving net zero. Shell's commitment to be net zero by 2050 covers all the energy that you sell scopes one, two, and three and that's a big deal because Shell's scope three emissions. The emissions from people like me using the energy you sell is over 90% of your emissions. So I wanted to start off today asking why did Shell choose that level of ambition?

Susannah Pierce (01m 34s):

Thank you, David and thanks for the opportunity to be on the show today. It's an important question, because for us, indeed, it's a significant level of ambition. When companies talk about net zero, very often, they're talking about the emissions that they create when they consume energy for example, that will be scope one. When they buy power or the emissions they create in the production of whatever it is that they're making, but for us, we're actually saying, as you said, we we're actually trying to tackle our customers' emissions and that's, that's difficult because it's not really in our control a hundred percent, but we recognized the significance of Shell in the energy system and when we think about all of the energy that Shell sells to customers, it's about 5% of world consumption of energy and so for us we have a significant opportunity, I think, to have a role in significant carbon emissions reductions by working with customers. We also recognize that our future business depends on working with customers as they decarbonize, so driving lower carbon solutions for us is the market opportunity as well. So in short, our survival depends on giving our customers the type of energy that they need and given the fact that so many customers today, big customers have made net zero commitments themselves. It does create this relationship with them where we work together to help them achieve their goals while we achieve our own and ultimately the goals of the planet.

David Greely (02m 58s):

And of course, many other corporations are now also working through how to turn their own climate commitments into strategies, plans, milestones, can you walk us through how you've done this at Shell and what were some of the bigger challenges in that process?

Susannah Pierce (03m 14s):

Shell thought about how we are going to continue to have a sustainable business in light of the Paris Agreement. We had to take a look at what is our existing business today and how does it need to change. We also had to consider the needs of society more broadly and what I mean by that is as we look to transition the energy system, we need to also pay attention to how that transition impacts people who are in the least, or have the least capacity to pay for challenges that might come as a result of that. So we need to consider

affordability today in light of what we see happening in the world and war Ukraine. We also have to consider energy security, but for us at the time, it was really driven by an idea or an understanding that the world is changing in terms of the energy that it needs, needs to be lower carbon and the world is growing.

Susannah Pierce (04m 03s):

And so we need to find a way of pivoting our business to that. So we developed a strategy we call powering progress. We released it in 2021 and it's built on four key goals. The first of which for a company like ours is to continue to generate shareholder value. So we need to continue to have an investment case to have investors give us money that then we can give them a return on. We want to again, consider how we can make sure that the energy that we provide is affordable and reliable for people. We want to make sure though, as we do provide that energy, that we can achieve our net zero commitments and then finally, we also recognize the role of nature and the environment in terms of producing sustainable energy. So there's a relationship also with how we can reduce other types of environmental impacts, including clean water use, including the impact on biodiversity, the circular economy.

Susannah Pierce (04m 48s):

So we stood back and we said, we have four key goals, generate shareholder value, focus on powering lives, achieve net zero and respect the environment. With these four goals, which really is a combination of business strategy and social responsibility we then said, now let's look at our business. So we have three real key pillars of our business. We have our upstream business, a traditional business. That's your oil and gas. We have our transition business, which is integrated gas as well as chemicals and then our growth business, which is really looking at renewables, carbon capture sequestration, hydrogen, and lower carbon fuels and nature based systems and we recognized that the ability of us to continue to supply energy today and to generate revenues from that will help us then fund the transition business and the growth business. So we need to have a very careful calibration between each of those three pillars to make sure we're working with society to achieve those four goals of our great strategy. So really it's taking a step back looking at where society is going, where the climate needs us to go looking at existing business and finding the right calibration between the three pillars so that we can provide energy today, but then continue to transition and meet our goals of powering progress

David Greely (05m 57s):

And your transition pillar. It includes the use of natural gas and I'd love you to talk a little bit about why you believe shifting to natural gas should be a part of achieving net zero?

Susannah Pierce (06m 09s):

Yes, the shift in natural gas is really recognition that when we think about lower carbon energy today, we are pivoting from an oil and gas company to more of a gas company because we see gas as a better alternative for some sectors that are hard to electrify and hard to decarbonize. But then also as an important fuel for power plants for electricity, when you still have intermittency with renewable power, what we see happening actually in the world today, and you see it in Germany and you see it in China is that there continues to be a fallback on coal-fired power. So the better alternative of course is natural gas. We see that today and we see that into the future until we get to a point of, of greater amount of storage. So for us, the shift in natural gas is a shift away from oil. It's a shift of gas that can provide backup power to intermittent renewables. And it's a shift of using natural gas for harder duty carbonized sectors, where it could be used as LNG for fuels or LNG for shipping, LNG for bunkering and things like that. So it is a pivot to natural gas and it's one that I think is necessary over the course of the next couple of decades.

David Greely (07m 13s):

And while natural gas emits less than half the carbon that coal emits in power generation. So that that switch is much cleaner. Its green credentials have been called into question recently because of the issue of methane or natural gas being released during production and transport. Do you believe the industry can handle the issue of methane release and how's the best way for them to do that?

Susannah Pierce (07m 37s):

Well, first off the industry must there's no question that we have to, the oil and gas sector and then, and then all who contribute to methane emissions must because of the potency of methane. I would say that for Canada the country in which I come from, you know, there is significant leadership in this area and, and frankly there was a COP 26 where there was the global methane pledge, which was to reduce global emissions by 30% by a number of countries and in Canada, I'll give you the example. We have a commitment to reduce methane emissions, 75% by 2030, but we're already advanced in that regard. And we're advanced because we have technology which we can employ. We're also benefiting, I think to a large extent in Canada from hydro based electricity systems. So we have the ability to go from pneumatic drives and bisector to electric valves. So we have the ability to actually decarbonize and to reduce our methane

emissions right now with existing technology. It's a function of rolling it out and accelerating it, but it's a must do and I think we're on the pathway to do that and do it for our sector, but then also look at what we could do for other sectors as well.

David Greely (08m 45s):

And that brings up the point that, you know, not only do net zero plans have to be effective, they also have to be seen to be credible by stakeholders and I'd love to know how you're approaching that credibility challenge at Shell. I've noticed that earlier in your career, you worked with diverse groups of stakeholders and community groups, you know, on Canadian LNG projects and I was curious if that experience offers lessons in, you know, creating consensus among stakeholders that you might find useful. Now

Susannah Pierce (09m 18s):

It's a great question in part, because one of the things I think our industry has suffered from is a lack of trust and frankly, any big industry to an extent suffers from trust issues and with respect to my experience at LNG Canada, I lived by the principle that transparency is the currency of trust. I wasn't the one who coined the expression, but I lived by it and therefore you need to make sure that the communities where you operate in this case, many indigenous communities, where we were looking to partner and build our facility, we wanted to make sure they understood what we were trying to do and we worked together to do it and then in particular, where we were trying to do difficult things that again, we were very open with what was happening in the case for our company and on GHGs and any company, frankly, as it relates to environmental issues, we need to be upfront about it.

Susannah Pierce (10m 07s):

And we need to make sure that there is a clear understanding and a credible understanding of what the real impacts are and so in the case of greenhouse gases for Shell, our company we've developed, or we use the net carbon footprint metric and methodology to assess our carbon intensity of our fuels and that's the emissions that we produce and we sell to our customers and that starts, you know, at least with an agreement, okay, this is how you're measuring it and then it's a function of, well now let's make sure that you're reporting against it. Let's understand where you start and then let's get into a regular drum beat of when you're reporting in a way that is credible, can be assured by third parties and that you build confidence that there's nothing that that's really being missed. So with respect to what Shell has done, also as part of its strategy, we were the first to come forward to our shareholders and provide to them our energy transition strategy and put it to a vote, say, this is what we're planning to do.

Susannah Pierce (11m 02s):

So we also have the ability for our shareholders know quite clearly what we're doing and put it to a vote. Then we will report against our success. So as we've set these target scores, net zero, we will come back every year and show how we're doing. We'll also come back every three years and update our strategy. We've also tied our executive compensation for thousands of folks in our organization to what we're doing to actually reduce emissions. So they are also compelled to act. So coming back to the first part of our question for me, it is about the relationship with stakeholders it's founded on trust and an understanding that we will be right up front with how we're doing to maintain that relationship over time.

David Greely (11m 41s):

So transparency is the currency of trust I like that line. I'm gonna have to steal that as well. I wanted to return for a moment to the, the meeting, the scope three emissions targets. This requires Shell not only to supply lower carbon energy sources, but also consumers having made investments in the new plant, the new equipment, the new vehicles that can use these lower carbon energy sources how big of a hurdle is that and how is Shell working with its customers to overcome that hurdle?

Susannah Pierce (12m 12s):

Well, I think the hurdle is less high today than it was maybe even two years ago and part of the reason for that is we're beginning to see, as I mentioned earlier, that customers have their own net zero commitments. They've made very public commitments to reduce their emissions. Whereas in the past we could produce all the clean energy in the world. We know how to do it, but if nobody's buying that clean energy, then we're not creating an economic value to our shareholders. So for us, the important thing we see now is that customers and Shell can work together to design solutions for them to decarbonize. It requires an affordable alternative than what they're using. It requires an investment in technology in many circumstances, but because we've started with some shared goals, we now have the ability to work back and decide, well, what are the constraints, what are the enablers, how can we find a way of, if in the case of hydrogen creating hydrogen, that is at least price equivalent to the alternative that you might buy such as diesel.

Susannah Pierce (13m 10s):

And so we have now started with a customer back and then we can look across the entire ecosystem, particularly within different types of sectors. So whether that's heavy duty transport, marine or aviation and say, okay, how do we work back from new customer and then find the pathways for you to carbonize. Importantly, the role of government is critical because the government has the ability to establish regulations as well as to drive fiscal incentives. So a little bit of the stick in the carrot, which can help enable the transition more effectively and helps us as producers find ways of saying, okay, it's more economic for us to produce a lower carbon fuel because we would either pay a carbon tax or we'll be able to generate a credit.

Susannah Pierce (13m 53s):

And for customers, it enables them to see, okay, we can actually buy this fuel because the producer's creating and it gives them more certainty. So it creates a new type of relationship. That again is great because it's a much better starting point than where we've ever been. The role of government is absolutely crucial because in a world where we need to accelerate the transition really think about between now and 2030, we cannot do it on our own, but we're starting in a better place today than we were two years ago, but again, there's no doubt there's a real sense of urgency and a demand that we work even closer together than we ever have.

David Greely (14m 26s):

And how does that translate down to the retail level, thinking like, you know, a person like myself of driving a car or using electricity or all the other sources of energy, I imagine there'll be, you know, increased use of biofuels as part of the plan increased use of electrification, but of course, will I have the car that can do that. So I was just curious how you're thinking about the retail level as well.

Susannah Pierce (14m 52s):

Well, we think about that quite a lot because when you think about Shell, you think about Shell Gas Stations, many of us, you drive up and you see the pumps, but we also see the role of government mandates for zero emissions vehicles again, which are mandating the manufacturers create zero emissions vehicles. So for you and me in time, probably by mid 2030s, we will be driving a zero emissions vehicles in part because the manufacturers have had to create it to sell these vehicles. So you and I will have that choice. So we need to keep pace with that and make sure that as we're looking at what type of energy these vehicles consume that we're putting those pumps at our station. So I'll give you an example, which is interesting because you know, this is an example of where we as Shell, maybe got a little bit ahead of our, our retail customers.

Susannah Pierce (15m 37s):

I live in Vancouver BC, and we've had a number of hydrogen pumps at our retail stations here. The challenge we've had in BC is that nobody's really driving hydrogen cars. There's a few, but not enough. So when we think about putting hydrogen pumps in those retail stations, we're basically taking away those pumps from serving customers, what they're typically buy gasoline or diesel, and we're putting hydrogen pumps there. Well, if nobody's driving hydrogen cars, then that's not a great investment at this point in time. However, that will change with zero emissions vehicles because we'll see more hydrogen cars, we'll see more electric vehicles and so that will mean at the retail stations will need to keep pace with that and that's what we're doing. We're rolling out thousands of EV chargers at our stations and if you're in California, you'll see hydrogen as well and we're looking to do the same for hydrogen where I am right now in Vancouver too.

David Greely (16m 24s):

It sounds like it's really gonna be that concerted effort between companies like Shell, the typical person on the street, like myself and government policy makers and manufacturers of vehicles, all kind of trying to get to the, the common goal. I wanted to ask you, in addition to avoiding and reducing emissions Shell's plan also calls for mitigating the emissions that do occur by capturing and offsetting them. How are you approaching obtaining high quality offsets from carbon reduction projects?

Susannah Pierce (16m 55s):

Thank you. The question is really important because I think that there can be quite a misunderstanding around the role of offsets, first, what do we do to avoid emissions, what can we do with the existing production that we have today to reduce emissions, but in the absence of that, we do need to look to the role of carbon credits or carbon offsets, which enable us to invest in projects that can actually offset the emissions that we weren't able to eliminate, so essentially the residual emissions. Now, for some of the challenge around carbon offsets today, it's been a question about whether or not these carbon emission removals are real. Can they be measured, are they permanent, like for example, in trees, if you capture carbon, is it permanent, if the trees burn down, are they additional meaning like, would this emissions reduction have happened otherwise?

Susannah Pierce (17m 42s):

And can they be verified and unique. I think that's very important. Those key criteria are crucial to it and those are the types of offsets and credits that we would invest in because we do need them to be critical, but it's critical to understand that as we're looking to really make such a significant transition in a short period of time and an energy system, that's been around for a 100 years, we will not be able to do it without looking to the role of offsets when you're not able to avoid or reduce your emissions. So these are things, again, that meet those criteria that enable in the case of, let's say forestry for certain jurisdictions of the world, a new revenue stream for trees that could be forested and therefore not foresting gives that particular community, a revenue stream that they would not otherwise see, but that also benefits the climate if they don't take down the trees.

Susannah Pierce (18m 30s):

So it's a really important lever. It's not one that you should go to first, but it is absolutely critical, I think for us to be successful in meeting our goals under the Paris agreement and so, yeah, Shell looks to it as an important part of our strategy. Last year I think we invested about a 100 million in looking at nature based offset, and we're continuing to look at additional offset that we can provide in particular for scope three, for our customers and looking to about 120 million tons by about 2030 to help reduce scope three emissions.

David Greely (19m 00s):

And you know, much of the investment that's occurring globally in the carbon reduction projects is still very, you know, bespoke, bilateral agreements between project developers and companies and, and relatively long term, you know, you mentioned some of what you look for in a carbon reduction projects. It sounds like more of the nature based projects, but, you know, if there's anything you could go into more there, you know, I'd be really curious.

Susannah Pierce (19m 26s):

Sure. Well, as it relates to let me just speak about a project that we've had here in British Columbia, and it speaks maybe directly to the earlier question about retail, but we partnered with a nature conservancy and we developed a forest offset project called Dark Woods and so when you pull up to a pump, a Shell and you fill up your car, you're able to actually offset your emission. So our scope three, your scope, one, you're able to offset your emissions by purchasing carbon offsets, actually on your phone and your app, your app and so that's an example of something that is working for you on a voluntary basis, that you can voluntarily decide to reduce your emissions based on a commitment that we have made and so these sorts of opportunities are beginning to grow. Again, they have to come from real projects, as I mentioned, that are verifiable, measurable, et cetera, but we're beginning to see more and more because I think there's an understanding about the urgency and the need for carbon offsets.

Susannah Pierce (20m 21s):

But I also think we're beginning to actually get better at building out the protocols and, and making sure that we really understand what we're buying and what we're offsetting and I'm sure many people have seen the work of Mark Carney who used to be Governor of Bank of Canada here, but the task force and scaling voluntary carbon markets talked a lot about what the opportunity was and I think they suggest that the market could be more than 50 billion by 2030. So you see the growth there again, needs to be underpinned by real projects and so that's quite exciting and I would also say this, and this maybe comes back to the strategy piece. I mentioned earlier called powering progress. I'm pretty proud and excited by the opportunity that we would have and looking at in this case, forest carbon offsets for particular communities that can drive these income streams by not taking down their trees. Now foresting their trees community that we work with here is the Chill Coleton First nation. We're planting approximately 800,000 trees and at some point in time, those trees will now enable them to capture carbon, but then also hopefully monetize that, and that creates that new income stream. So again, lots of development underway. I think the function of the carbon markets for offsets is going to continue to grow and it needs to be underpinned again by real projects that are investible, but I'm quite foolish about it,

David Greely (21m 43s):

Right and you said, you know, Mark Carney's task force and others point to carbon markets becoming very large markets in the future and of course they're small today, small and growing very rapidly and I think a lot of their success will be underpinned by commercial users like yourselves, finding them useful and finding them a good part of meeting your goals and so I wanted to know what are some of the things that you think would make carbon markets more useful for companies like Shell looking to make their net zero goals and maybe how would you like to see these markets develop so that they would be more useful to your commercial needs?

Susannah Pierce (22m 21s):

Well, indeed, I mean, I think there is a process of developing the carbon markets and as I mentioned earlier, the important thing is that these are real incredible offsets opportunities and so as part of the carbon markets, you need to see that there are third parties that are verifying these projects that we would be investing in. So there's third parties out there that we look to such as Vera, the American Carbon Registry, Gold Standard, Climate Action Reserve that provide a level of assurance on the standards that we use for these projects. So that's really absolutely crucial. There is an important role, I believe of individual project developers and nations and maybe I'll shift a bit to things like Article 6, where Article 6 enables trade between nations so that you're transferring in this case nationally determined contributions. So if I invest in a carbon offset project in one nation, it reduces the emissions there.

Susannah Pierce (23m 12s):

We could begin to trade that emissions credit back. That's an interesting element as well, that I think is important. As I look at individual projects, a Shell might have a one country that can't reduce much further than, than a particular level. How can we work with our governments to begin to trade under Article 6. I think that's another element I'd very much look forward to, you know, and I think there's other types of projects that I'm quite interested in, I think is evolving as well and it's the role of soil carbon sequestration, but I'm quite interested and excited to see that develop because it's very much connected to regenerative farming and this is a piece where farming practices have a significant role either to play in providing a sink for carbon or not and so the farming practices that we could look to also, and then potentially beginning to measure the carbon and soil creates a new type of potential offset opportunity.

Susannah Pierce (24m 10s):

Driving regenerative farming practices increases for forest product farming productivity, but then also enables a new type of potential carbon offset, which has that virtuous circle of better farming, better productivity, more carbon capture. So that's another element that I'm really looking forward to see evolve. A lot of this has to do with the technology. A lot of this has to do with the practice. A lot of this has to do with the ability to establish the protocols and then you can begin to get into a place of trading and making these types of investments. So I think we're just at the beginning of a very exciting time of looking at what we can do to leverage things like nature, to help us meet our climate commitments. Again, it's something corporately we look at in terms of assets as a third part, but it's a necessary part and when you add on these additional benefits, more productive farming revenue streams to communities that wouldn't otherwise get, it is a necessary part of a climate strategy.

David Greely (25m 06s):

Thanks again to Susannah Pierce Country Chair Canada, and General Manager, Renewables and Energy Solutions at Shell. We hope you enjoyed the episode. Please join us next week with our guest Corrine Boone, a true climate market pioneer and current Group Head Americas at Air Carbon.

Announcer (25m 24s):

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