

Carbonomics: The Green Engine of Economic Recovery

Liz: Hi, Michele.

Michele Della Vigna: Hi, Liz.

Liz: You just hosted the firm's largest-ever virtual conference called "Carbonomics: The Green Engine of Economic Recovery." Let's start with the term "carbonomics" and how it relates to the business case for sustainable investing.

Michele Della Vigna: Absolutely. I believe decarbonization and climate change are going to be two of the defining themes in the global economic development of the coming years. But often these topics can have quite ideological points of view. And what we've tried to do is take it away from that and actually go back to the economic roots of the problem. How do we achieve net zero carbon in the most economic and efficient way? And that's why we built a cost curve of decarbonization through a hundred different technologies.

And we've also examined the investments needed, what that would mean for jobs, and how those can be financed. And overall, we get to a picture where actually the path to decarbonization can be accretive to economic growth. We believe it can mobilize \$16 trillion just in energy infrastructure investments over the next 10 years, creating 20 million net in new jobs on a global basis.

Liz: So tell us about the conference and some of the key themes that emerged.

Michele Della Vigna: So we had 30 CEOs and a lot of different exciting themes across the sessions. Actually, the conference was opened by Marcani [sp?], who really laid out the themes for the day in terms of the importance of private capital to get us to an efficient net zero solution. But I would say across the space energy was in heavy focus with renewables, with hydrogen, with carbon capture, but also there was a huge presence from consumer companies mainly thinking about sustainability and circular economy. There we had some of the largest investors in the world also laying out the case that sustainable investing is not just good for the world, it's good for business.

And our own sustain analysis would suggest that top companies from an ESG perspective tend to out perform over time. To be more specific, by 320 basis points per annum over the last 10

years compared to fifth-wing [UNINTEL] companies.

Liz: So in digging a little deeper into the clean energy theme, we hear a lot about wind and solar. But what are some of the new technologies that are emerging to combat climate change?

Michele Della Vigna: I think we're at a very exciting point. The technologies of solar and wind have been proven and have proved that in large scale costs can come down 70% and that technologies can become affordable. And now it's the time to move to the next stage where we don't just try to decarbonize power generation, but we try to decarbonize the broader energy industry. And that needs an ecosystem.

What do I mean with that? I mean that not only solar and wind will be needed, but they will need to come together with clean hydrogen and with carbon capture. And really these three technologies that feed on each other because you can generate clean hydrogen by using carbon capture on gas or you can use electrolysis from water using renewable power. And these three technologies together can really decarbonize the entirety of the energy industry. And that really will be the key challenge for the coming years, to get this ecosystem to work and propel us to net zero carbon.

Liz: So looking at the energy industry overall, where does this leave the big oil companies?

Michele Della Vigna: Absolutely. It's so important that companies which today make their cash flow and earnings from producing hydrocarbons have the business model to transition towards what we would call a lower carbon broader energy company. And by reutilizing the cash flow from traditional hydrocarbons to these new businesses, they can create that U for the shareholders and they can help society transition. And in specific, we believe that big oil has three characteristics that make them valuable in the energy transition. They have an integrated business model including trading and customer-facing businesses. And so they can help shift some of the consumer behavior towards lower carbon sources.

Two, they have an ability to risk manage across the system that will allow them to take risks in new technologies such as carbon capture and clean hydrogen and develop them for the future.

And thirdly, they have ability to manage large, complex

projects, which also will be important especially as we start to build in large scale projects like Loop and the green hydrogen. And so with these three capabilities and a strong cash flow and balance sheet, we believe they can be a key part of the energy transition, as some of the CEOs like to tell, like BP, like E&I, clearly laid out at the conference.

Liz: So looking at carbonomics from a global perspective, how does the progress that you're seeing in Europe compare to what's happening in the rest of the world?

Michele Della Vigna: I think Europe is laying out the framework with the Green Deal. It was the first major economic area to commit to law the fact that they will reach net zero carbon by 2050. Now, other countries, other regions are following through. But Europe was the first one to properly think through it with a policy on decarbonization, on renewables, on hydrogen and carbon capture.

And I think what Europe is trying to achieve today, other regions will follow up with. We believe China is very focused on decarbonization. The US will be very focused on decarbonization. Japan and South Korea are committing to net zero carbon as well by 2050. We think what started very much as a European theme will soon become one of the defining global themes for the economy, for investment, and for corporate strategy.

Liz: Thanks, Michele.

Michele Della Vigna: Thank you very much, Liz.

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