

The Ten Point Plan: Does it go far enough?



How can we build back better to create a greener, cleaner post-COVID-19 economy?

We sat down with keynote speakers Colette Cohen (OGTC) and Mike Smith (NECCUS) to discuss the government's ten-point plan, the impact of COVID-19 on our drive to net zero, and why CCUS and hydrogen will be essential to the global energy transition.

It'd be great just to hear from you both first of all about why CCUS and hydrogen are so important for the energy transition to go smoothly?

Colette Cohen, OGTC: I think there's a number of things to think about when it comes to hydrogen. One, it's pretty clear in virtually every scenario, including the CCC report, that hydrogen is going to play a major role in the future of getting to a net-zero economy.

I realise that there are pros and cons in everything, but I think there are a couple of things to think about. We constantly want to find a single solution, maybe because we have had a single solution (fossil fuels) for many years. But actually the future is not a single solution. The future is what I would call an "and society."

We need oil and gas, we need hydrogen, we need wind, we need geo-thermal, we need tidal, we need wave. We need a lot of different solutions and they'll actually be quite bespoke to different countries' capabilities and natural resources, as well as to rural and urban environments, depending on what's appropriate.

Hydrogen is one of the key ones in my opinion because of its versatility, and that's one of the reasons that I think it will end up being applicable to many nations, not just us. It can be burned for heat and one of the reasons that's really important is that electricity, as it stands now, does not serve all needs. I know people like to think that it will, but it won't, and it won't serve some of the needs of heavy industry in particular, the high temperature industrial needs, and it won't really meet our heavy transportation needs that we have as well.

On top of that, on a more pragmatic approach, is that you've got 28 million homes connected to gas currently in the UK. 85% of them are connected to a gas system. Hydrogen is something that we can use to take the pressure off the gas demand or completely convert to a hydrogen solution. So there's a lot of versatility there. You might then turn around and say, "well, why wouldn't you move directly to green hydrogen?" which is the preferred for many. It's that we just don't have the capacity and capability to deliver it economically, currently. Blue hydrogen will create a great bridge to a green economy. It would also allow us to meet some of the requirements of the CCC report, which says we need to get our hydrogen economy going now, not in 2050.

That leads us very nicely onto CCUS, because that goes hand-in-hand. If we're to deliver blue hydrogen, if we can combine that with CCUS, where we have massive capability and capacity in the UK, then you have a hydrogen economy that will serve the needs of the UK, but also an export market and the European markets. Mike, maybe I'll let you talk more eloquently about CCUS than I would.

Mike Smith, NECCUS: As Colette has highlighted, hydrogen is going to be fundamental. There are significant parts of creating a reliable, secure hydrogen production base that relies on CCUS through the creation of blue hydrogen. But also, there are fundamental parts of our economy which will rely on the high heat industries where you can decarbonise the source of that heat as much as you like, but there is still significant carbon created in the industrial process.

A good example of that is a major cement plant, such as the cement plant that Tarmac has down in Dunbar in Scotland. You could decarbonise all of the heat sources in that plant and you're still looking at somewhere between 40 to 50% of the emissions coming from the process that creates cement. We need a net zero future, but that net zero future will rely heavily on these goods that we need today.

So, as Colette's already highlighted, we need all of these things to move forward. Renewables, re-greening of the environment and behavioural change are all going to be important to impact our greenhouse emissions. To have a net-zero future, with fundamental things such as new homes and hospitals, medicines, effective transportation of goods and services, fertilisers for agriculture... it will ultimately rely on CCUS to fully abate their emissions.

What do you think of the UK government's policies and initiatives, particularly its 10 Point Plan for a green Industrial Revolution? Does it go far enough? What else will the government need to do to really make hydrogen and CCUS a really important part of the energy transition?



Mike Smith, NECCUS: Sure, I'll maybe lead with that. The NECCUS membership is working quite closely with government around developing the policy and regulation that's going to be needed here.

First and foremost, **something as fundamental as transitioning the UK to a net-zero future, it needs a high level strategy that allows them the detailed frameworks to develop within it.** I think the 10 point plan delivers on that high level strategy. It's already starting to give industry investors and the public confidence that this is going to be a national imperative, and without that national imperative we simply won't deliver on it.

In terms of what still needs to be done, particularly from the perspective of the NECCUS members, there is still work to be done. We require a business model framework that allows the investments and the projects to be funded. As well as the commercial arrangements that you'd need between the users of some of these projects and the providers of the projects. I think that's first and foremost.

There's a lot of work being done as we speak. **I think 2020 delivered a lot of progress, but those frameworks aren't fully formed today. Without them it's very difficult, even with a growing appetite in industry to address these changes, for these changes to be addressed.** We will ultimately be creating national infrastructure, so we also need government to work with industry to make it clear how that will become investable, and from that, the degree of public and private collaboration for that.

I think the recent energy white paper that came out before Christmas has given us some really good signposts as to where this is likely to go. It's also laid out some really important and ambitious targets for where we need to be by the end of the decade. Those targets, I think, allow multiple regions in the UK to move towards a net zero future.

Colette Cohen, OGTC: So I'm maybe not as quite as optimistic, or as happy, with where it is at the moment. I'm a Just Transition Commissioner for Scotland, and I think the work that's ongoing there in trying to put together a plan that is meaningful for Just Transition is something that should be emulated by more areas.

I think the 10-point plan that's been put out is a great thing. I completely agree with Michael, it's great to have it, it's good that we've got the energy white paper. However, if you actually look at the information that's in it, it's like we all agree we know where the destination is: 2050, 2045, we want to be net zero. But I don't think we've been very good at laying out a roadmap, which makes it very hard for industry to invest against it, for the supply chain to diversify and for us to really stand by this concept that we can transition jobs from oil and gas into renewable opportunities. **The growth plan is not clearly there, and we're not doing it at pace in the way we need to.**

We haven't got floating wind conquered and yet that's the one thing we really desperately need if we're going to get the scale-up of wind that we require. If we want to get to a green hydrogen economy we've got to be at like 150 gigawatts of offshore wind power. **I feel there needs to be a greater drive for pace, a greater drive for delivery.**

I think currently 5 gigawatts of low-carbon hydrogen is what's in the 10-point plan by 2030. We need to get to 270 terawatt hours by 2050 - that's just light-years apart in delivery. **So for me it's pace and the need to innovate to make this affordable. We're not talking enough about making this transition to a net-zero future affordable, revenue-generative in some cases.** It's an opportunity for industry and for the UK to become a global expert in net-zero technology and services, but also to be able to turn that into a viable economic powerhouse for us.

So I think there's some really good seeds being put out there for where we want to go. However, when you think about the fact that we need to see change by 2030, we need to feel change by 2035, I feel that we still lack pace. If either the Scottish or UK Government had come out and said they wanted, let's say, 50 terawatt hours of hydrogen by 2030, a lot of companies would be thinking about hydrogen in a different way already. So, **we need to be more aspirational.**

So you say it needs to be more fast paced, but is it just that the government needs to be pushing this along faster with higher targets, or is there something else that should be done to encourage the whole sector to move forward more quickly?

Colette Cohen, OGTC: It's interesting because I think the sector has moved. Certainly the oil and gas sector, I think the commitment to net-zero is all there. We have to be cognisant of the fact that this is a global market, so we can't try and force things onto our industry that would make them uncompetitive compared with other regions.

However, having said that, when you see the changes in attitude and company policy and infrastructure driven by the policies that have been created around electric vehicles, you understand the power of policy. I feel that at this moment in time, we're maybe not taking the same approach to enforcing some of those expectations, by creating policy around whether it's a hydrogen economy, or whatever.

We have made statements around new houses, for example, on geo-thermal pumps. Well, that's fine but what about retrofitting? There's actually a massive opportunity for reskilling and jobs within the UK, changing homes and that. But we need to work out how we do it and what we're changing too, because then infrastructure companies will diversify and we'll start driving a different economy.

So there is a need for change in policy to be able to drive this. I think we need to look at where we want to go and then really ask ourselves, if I want 270 terawatt hours of hydrogen, just as an example, can I really deliver that if I'm only delivering five gigawatts in 2030?

There's a lot of backloading going on to the delivery of our net-zero future, and I think we need to start frontloading ourselves a little bit more; start using this green recovery as that opportunity to invest in innovation. **Fail fast, set up some greenhouse opportunities to really trial some of this and make it a national aspiration that everybody gets behind.**

Mike Smith, NECCUS: I definitely agree with Colette's fundamental point about the importance of ambition and the importance of sort of enshrining that ambition in national targets, and indeed in things like national level procurement. The nation buys a huge amount of goods and services; we can harness that buying power to change industries' approaches and attitudes and to change consumer's approaches and attitudes.

But the other point I hear regularly is that industry needs clarity and certainty. The ambitious targets partly do that, but it is going to fundamentally come down to primary and secondary legislation that needs to be changed.

I think the last point here is, unfortunately, **the UK is near the top of a global list of countries that has offshored its CO2 emissions. We have been fantastically effective at offshoring our emissions as a nation, and so we need to do something to address that.** We need to do something to onshore those emissions by bringing more industry back to the nation, and that industry ultimately being put in a net-zero framework.

An important part of that is we need to look at CO2 border adjustment. So what is the price to be paid of someone creating a product in another country that is highly pollutive to the environment that we all share? And why should we allow those goods and services to be imported into this country without recognising the environmental cost of that? I think that's another really important facet of this that I think all nations need to address to make sure there's global change.

Colette Cohen, OGTC: Society wants to drive this concept of net zero fossil fuels. But actually our own understanding of carbon footprint, of everything we use, is so essential going forward because it's not a simple answer.

So, carbon labelling, which is slightly talked about by the CCC, but not yet championed, that's something I'd love to see COP26 really talk about. That then allows what Mike's talking about to really start happening.

But I think the other part is the procurement capacity of the UK. Right now we offshore a pile of stuff. We buy, we buy, we buy, we buy. I think the pandemic has shown the lack of manufacturing capability and capacity we have and how damaging that is to a nation. We need to ensure that the UK manufactures, controls and designs. It's the greatest opportunity for making the most revenue for the UK, for creating jobs, for building a nation. We can't sit back wait for other people to find the solutions and then go back to doing exactly what we've done before - which is to buy everything in.



Are either of you concerned about whether the continued uncertainty around COVID-19 will deter the UK Government, and indeed other governments around the world, from really focusing on this properly?

Mike Smith, NECCUS: So no, I mean obviously COVID-19 needs to remain the government's principle short-term focus, I don't think anybody would disagree with that. And I still don't think we've seen the full economic impacts of COVID-19. I think both government and industry needs to see how rapidly the economy will recover in order to then start up the path as to how to build back better.

For me, that's the fundamental part of this. Not just in the UK, but pretty much every evolved economy is making part of its post COVID-19 strategy this idea of building back better, greener and more sustainably. So I think that will stay a priority.

Where I do think there is going to be concern is industry will inevitably be investing in this alongside governments. The industry doesn't have, as I've already talked about, the clarity and the certainty so that they can invest in these things. We're building value chains. We need collective certainty, because there will be different players in different parts of this value chain.

Colette Cohen, OGTC: I would love to see the government coming out of this with a plan, related to their build back better, that actually drives some delivery around this new green economy. Whether it's fuel cell development, whether it's installation of the infrastructure you need for EV's or the conversion of homes for insulation. **Could we have massive training programmes for this new generation of people, who were doing something else pre-pandemic, and convert this amazing workforce into something else that drives a green economy?**

I hope we don't drop the ball in that space, wondering, waiting for it. That's what I mean by pace. If the government steps into that and drives that, then there's actually an opportunity as we come out. Instead of us ending up paying a huge amount on welfare, we could pay a huge amount on retraining and get this great next generation of employees out there. So I think there are some opportunities there, and I think they are thinking about it.

They're certainly messaging that they want to build back better and the green economy. Prior to the pandemic our government would have been wary of the kind of government intervention that we may require in mass retraining programmes, or even sponsored factories to create this next generation of what we need. But, having been quite interventionist recently because of the pandemic, I kind of hope that they might phase themselves through this as we move to that next generation of a kind of new industrial revolution. I think there's an opportunity, but we're not seeing enough of those signposts yet.