

IETF Podcast – Seb & Rachel

**Narration:** Connecting for positive change.

**Jenni McDonnell:** So, hello and welcome to the first in a short series of podcasts that we are doing, focusing on industrial decarbonisation and, in particular, the industrial energy transformation fund, which is provided by the Department for Business, Energy and Industrial strategy. My name is Jenni McDonnell, and this podcast series is being brought to you by Innovate UK's KTN.

**Jenni McDonnell:** The purpose of this podcast series is to encourage the deployment of industrial energy efficiency and decarbonisation technology on industrial sites with support from the industrial energy transformation fund. The fund is providing capital investment to industrial sites to help them to reduce their energy demand and carbon emissions associated with their industrial process, which can be very energy intensive. A link to the competition guidance for this fund can be found in the description below.

**Jenni McDonnell:** And, I'd also recommend signing up to KTN's newsletters and updates. To get updates about the IETF funding, the summer competitions are open right now and they close on the 9th of September. But there will be a further round of funding in the Autumn too. So, by staying in touch with KTN, you'll be able to find out when that opens.

**Jenni McDonnell:** So, following on from this first podcast today on policy and standards, we're gonna continue with podcasts from, industrial site owners who've already benefited from the IETF support. They'll be talking about what they're doing with the money and as well, speaking to some of the delivery partners who have experience to share on how to implement industrial decarbonisation in the UK.

**Jenni McDonnell:** So, joining me today on our first podcast, I'm very pleased to say we have Sebastiaan Van Dort from BSI group and also Rachel Arber from BEIS's IETF policy team. So, hello to you both.

**Jenni McDonnell:** Would you like to introduce yourselves, tell us a little bit about your role and your involvement in supporting industrial decarbonisation? So, Rachel, would you like to go first.

**Rachel Arber:** Hiya. Yes. I'm Rachel Arber. So, I'm in the policy team for the Industrial Energy Transformation Fund. I've been the team for about two years now and was relatively involved in the, the development of the fund from, from 2020 onwards. And I'm greatly enjoying the job.

**Jenni McDonnell:** Excellent. Thank you. and Seb, would you like to introduce yourself?

**Sebastiaan Van Dort:** Hi I'm Seb Van Dort I'm the Associate director for energy and sustainability at BSI we are the national standards body. And so, we support the UK with its national standards needs and, and we represent the UK voice into international standards, making with organizations like Cen-Cenelec and ISO.

**Sebastiaan Van Dort:** My core focus is to ensure that we work with government and industry and position standards so that they help deliver policy outcomes and accelerate deep transition to net zero.

**Jenni McDonnell:** That's great. Well, thanks to you both for making time to talk to us today. We really appreciate it. So, let's start by setting the scene for our listeners.

**Jenni McDonnell:** Rachel, could you explain the importance of industrial decarbonisation? Why is the government supporting the industrial sectors to reduce their energy demand and carbon emissions?

**Rachel Aber:** Yeah, sure. So, I think the answer's actually quite simple. So, industry contributes to about 16% of total UK emissions, which means that if we want to meet net zero by 2050 industry needs to decarbonise.

**Rachel Aber:** Now, HMT, appre- HMG, sorry. Really does appreciate the measures that reduce energy consumption and emissions are costly, and it's not necessarily something that industry can do completely on their own at the moment. Industry's needs are so nuanced and these technologies take a lot of time to research and implement.

**Rachel Aber:** And that's really why the government's committing so much support via the IETF and other funds as well, like the, "Net Zero Hydrogen" and, and "Carbon Capture Infrastructure" funds, to name a few.

**Jenni McDonnell:** Okay, thank you very much. And Seb I, I think we could both agree with Rachel that industrial decarbonisation is a worthwhile thing to do. I was wondering if you could highlight some of the work that BSI have been involved in to develop new standards, to, to drive a change and move industrial sectors, such as manufacturing, towards net zero carbon.

**Sebastiaan Van Dort:** Yeah. So firstly, I agree with Rachel, industrial decarbonisation is key for us to meet net zero, by 2050. And, as I mentioned for us, it's cool to, to ensure that we position standards, where it helps deliver on policy outcomes and accelerate that transition to net zero. and so we've been very active in this space. and when we look at the industrial decarbonisation strategy, I've been very pleased that it highlights the importance of standards.

**Sebastiaan Van Dort:** I think it mentions it 41 times. And, and so, it sort of highlights all the areas where it should sort of where, where standards are absolutely essential. And so, we know that, as the UK national standards body, our work is, is essential to supporting strategy. So, some of the work that we've been doing, in a variety of areas- and the more and more I joined BSI sort of three years ago- and, and the more I joined it, it seemed like the matrix of standards are required everywhere. Particularly, in this sort of transition that that we're sort of facing. And so, the work that we're doing, there's some new work we're kicking off. We OPSS that unit in BEIS where we're looking at net zero standards for products.

**Sebastiaan Van Dort:** And, and we're looking to create an overarching standard from net zero products in relation to the four R's, "Reduce, Re-use, Recycle, and Renew". We also do a lot of work in, in hydrogen. So, we sit on a lot of the influencing and, you know, influencing and direction, setting groups and task forces, including the hydrogen regulators forum - gas go green.

**Sebastiaan Van Dort:** And so, we do a lot of work in, in, in this space and we have a lot of bespoke standards work. We obviously have our committees that, that look at hydrogen in different sectors, but in particular, we are currently doing a program with BEIS, or sponsored by BEIS, called "Hydrogen for Heat", where we're looking at hydrogen for heating as a decarbonisation pathway for domestic heat and light commercial premises.

**Sebastiaan Van Dort:** We also produce some roadmaps for hydrogen use in heavy goods vehicles and, and also in aviation. Another thing where we work closely with BEIS is ISO 50,005. The industrial decarbonisation strategy specifically mentions energy management systems and, and ISO 50,001, but also highlighted that for SMEs ISO 50,005 might be the first step to get to grips with energy management.

**Sebastiaan Van Dort:** It provides a much easier and insight approach. So, we've been working closely with BEIS and "Erase to Zero", campaign to supply a hundred thousand free copies. That is free because BEIS sponsored it and, and SMEs can download this standard for free if they go to the SME climate hub and then start their energy management journey. There are many more sort of examples, but I think for the nature of this podcast that probably provides a good overview of some of the work that we're doing to support the industrial decarbonisation.

**Jenni McDonnell:** That's great. Thank you, Seb. And, and if it's okay with you, we'll pop a link to that SME climate hub on the, the bottom of the description for the podcast.

**Sebastiaan Van Dort:** Absolutely. Yeah.

**Jenni McDonnell:** ...Help people find that, that's great. So, a question for both of you now, and, and I appreciate that this is subject to external factors, so it's not something that you can give a definite answer on but... What level of carbon emission reduction do you think is achievable by 2050? Are you optimistic that we will meet our carbon targets? And if so, can you give some examples of why you think we're on the right track? So, Rachel, would you like to go first on that one?

**Rachel Aber:** Yeah, I'll go first. I think we'd love to be able to say with, with certainty, but as you say there is a lot of external factors that come into play here.

**Rachel Aber:** I think reaching net zero is am- by 2050, is ambitious, but it's definitely something that we think is achievable. There are a lot of examples that prove that we're on the right track and, you know, as we've sort of gone through, there is a lot of support that's currently up and running that will also show a lot of improvement as, as the years go on and we're able to see the benefits of, of all of those various funds and schemes.

**Rachel Aber:** I think, highlights for me, obviously, is to, to name drop the IETF. The IETF is future-proofing industry, by helping first movers reduce their energy consumption and emissions, which sort of allows people to, to, to get a little bit of a head start on, on these kind of technologies. If they're, if they're able to.

**Rachel Aber:** Other examples include, phase one of the cluster sequencing process. So this, this, this scheme has created two, two clusters, the Hynet and the East coast cluster, which are gonna act as economic hubs for green jobs in line with the ambitions capture, about 20 to 30 metric tons of CO2 by 2030, which is a huge ambition. And, you know, internally across government, we're also looking to develop various resource and energy efficiency measures with an ambition of achieving... I think it's around 11 metric tons of, of carbon emission savings by 2035. And, there are many, many other things that are going on as well, but I think we're moving in the right direction for, for sure.

**Jenni McDonnell:** That's great. And, and the other, you mentioned the two industrial clusters that are part of that sequencing project, but the other industrial clusters as well, I know are working on their, their roadmap for industrial decarbonisation too, with support from the government. So, that's really good to hear and the nice thing about the IETF as well is, that it's not just supporting the clusters, but it's also supporting individual, industrial sites around England, Wales and Northern Ireland. So, Seb, would you like to answer that question as well?

**Sebastian Van Dort:** Yes. Yeah. So, it, it's an interesting one. So as, as the national standards body, we sort of use net zero as a sort of north star, but recognize there's, sort of, many twists and turns. As you know, we, we, we sort of start to embark on that transition and I think recent geopolitical events have, have shown that, that, you know, you need to be sort of adaptable, but, but very much having net zero in, in our sights. Interestingly, the Committee for climate change has recently produced its annual progress report. This report assesses the strength and credibility of the government ambition and policy areas across the economy, the Committee on climate change highlighted that, you know, the UK government has a, you know, a solid net zero strategy in place. But, it also highlighted that important policy gaps remain.

**Sebastian Van Dort:** It mentioned some bright spots like, offshore winds, renewable energy generation and electric vehicle take-up. But also highlighted some shortcomings, most notably, farming and farmland use. So, the view of the committee is that the policy framework is not yet fully in place to drive the large program of delivery required to, to, you know, meet the, the target set. And, and so from this, we, we can establish that the CCC thinks that we are currently not on track. Now I know that government will reply to the CCCs report, from that, I think it's interesting, because I think we have to recognize that net zero is, is sort of highly ambitious and, and, and a long-term journey and goal.

**Sebastian Van Dort:** And, with that in mind, I'm going to be optimistic and, and say that we are going to, to reach it because optimism is much nicer, but also I think, there is a bit of a groundswell and I think last year COP 26 sort of showed the, the commitment. And, and I think in particularly recently, Mark Carney talked at the World economic forum mentioned

that 40% of global private financial assets, or £130trillion is now being committed to manage assets to support the transition to net zero. And so, when I look at this, I, I think it might be a bit like a snowball. If we look, let's say the, the policy drivers of 2030, when we're banning combustion engines, it means that we won't sell any conventional cars and we're only gonna sell electric vehicles in the domestic sense at the moment.

**Sebastiaan Van Dort:** You know, we, we're a quarter into this sort of decade. It is still going slowly, but as we start to get to 2030, it becomes this sort of classic hockey stick. And then most of us will be driving electric vehicles. And I think, my feeling is that this is what the wider net zero transition will look like, slow at first and then faster, and then unbelievably fast. And before we know it, we're in a sort of very different, different world. So, I'm going to be optimistic and I'm gonna say, we're gonna reach net zero by 2050.

**Jenni McDonnell:** That's excellent. I'm, I'm pleased that you are optimistic. I do think as well, the, from a, the industrial decarbonisation side of things the CCC were, were quite complimentary. I think my personal experience talking to different manufacturers and industrial sites is that- over, particularly over the last two or three years, is something that is part of their, their own personal strategies now, whereas it wasn't before. So, I agree with you, I think that snowball is building, we will see some, a positive change.

**Jenni McDonnell:** So Seb, a lot of work's already been done to support industrial decarbonisation, as you've mentioned. In your mind, are there any other areas that still need to be addressed in terms of standards to ensure the benefits of net zero carbon solutions can accurately be reported. So, making sure that we are comparing apples with apples when we are, we're looking at net zero.

**Sebastiaan Van Dort:** Yeah. I sort of have a slightly broader answer to that, but yeah. I mean, firstly, a great deal of standards already exist. But as I mentioned before, when I joined BSI about three years ago it, it did become sort of like a matrix and I saw the need for standards everywhere and I think it is because we're very much in that transition. And so, I think, you know, that there's the obvious one, sort of life cycle assessment in product labeling where we believe standards are needed. There's an interesting area of carbon intensity slash carbon quantification.

**Sebastiaan Van Dort:** We at BSI have a net zero strategic advisory group and, and we have, it's chaired by, by Laura Sandys. It's got a lot of members on there, including the Committee for climate change. And one of the things that, that Laura specifically talks about, and she's very right here is, she calls it carbon flows. But, ensuring that carbon is consistently, transparently, incredibly, quantified of key points in, in different sectors.

**Sebastiaan Van Dort:** And, and, and I think that is sort of key. We discussed this actually in, in, with government as well. And, and government said that they want something like that as well, or that there is a need for that because government, you know, is, is making decisions to reach net zero, but they need to have certainty that the decisions have the intended impact of lowering CO2 emissions. So, you need to have a sort of credible area there. Then, when I look at, sort of, wider industrial decarbonisation, there are just so many

areas that, that, that I think, you know, standards really support and, and, and hopefully accelerate that, that transition.

**Sebastiaan Van Dort:** You know, when we look at some of the things that we mentioned earlier, when we look at big industrial processes like carbon capture and storage, you can think of anything from measurements, you know, how do we measure captured carbon? How do we know that, that, you know, carbon has been safely, stored? How do we know that, that carbon stays under the ground and, and, and what is the sort of consensus driven standard we all agree on that, that that's correct? Now, hydrogen, we mentioned that already, green hydrogen standards and the various production pathways, safety standards there. The other area that I think is going to be sort, quite important is, if we're talking about net zero and, and, we're talking a lot about negative emissions or, or, or, you know, carbon removals again, we need, we need to have the credibility there and, and standards there to make sure that we can rely on, on those claims that that are being made.

**Sebastiaan Van Dort:** So, those are just some areas that I think standards are needed, but, but there's probably quite a few more and I can go on for, for quite a long time on the need for standards in different areas.

**Jenni McDonnell:** No, that's great. Thank you so much for that. Just to give us a, a flavour of what, where we still need to, to work on, on standards.

**Jenni McDonnell:** And, and finally, a question that I know our listeners will want me to ask you, Rachel, is about future support from government. So, what can we expect to see in terms of future, maybe capital investment, or tax incentives, etc. To keep up the momentum that the IETF has started. A lot of quick wins have been achieved with support from the IETF, but we're getting to the complicated stuff now, the, the kind of harder to decarbonise stuff. So how is the government gonna support the industrial processes that are harder to decarbonise in the future?

**Rachel Arber:** Yeah, I think I, I, I think you're right, you know, some of the easy wins will be, will be sort of facilitated through the IETF and some of the, the harder wins as well. You know, the IETF does deploy deep decarbonisation technologies, just as it deploys energy efficiency technologies and support studies as well. So, the IETF has really been paving the way I think it's fair to say, for industrial decarbonisation. Specifically in those sort of deployment areas, there are a lot of options out there.

**Rachel Arber:** I am sympathetic to industry cause I think sometimes, it can be a bit overwhelming when you, when you can see all of these various funds that have very specific criteria for applications. And, I think those that are interested can also go and have a look, go and have a look online, and there are documents, like the "Net Zero Strategy" and the, "Industrial Decarbonisation Strategy" that also do give quite comprehensive overviews of, you know, what we're doing at the moment and what we hope to do in the future. But, I think the, the headliners for me for, for, for industry to keep an eye out for is HMT super deduction scheme. So, that has been around for a while, but I think it is, it is quite an important area of support that, that the government is providing at the moment.

**Rachel Arber:** So, the super deduction scheme allows businesses to cut their tax bill by up to 25p for every pound that they invest. So, in terms of tax incentives, that's the one that I would, I would highlight there. And, I think in particular, those interested in CCUS should keep an eye out for track two of the cluster sequencing scheme.

**Rachel Arber:** There are of obviously other funds that are in the works as well. Also, funds that are continuing, continuing works such as the "Net Zero Hydrogen" funds and the "Industrial Hydrogen Accelerator". Information on those can be found online. And for those who are sort of still looking in a bit more of an innovation space, because obviously we have to, have to appreciate that there are many companies that are still sort of developing their options at the moment. There are funds such as the "Industrial Energy Efficiency Accelerator", so the fourth phase of that is currently open and that's gonna be running applications through to September of this year. And then you've also got in, in the future, you've got phase two of the "Industrial Fuel Switching" competition, which is gonna be opening later this year.

**Jenni McDonnell:** That's great. And I believe there's an event as well for the "Industrial Fuel Switching" taking place on the 12th of July. So, I'll pop, we'll pop a link in the description if you listeners, if you would like to attend that. A big thumbs up for the super deduction tax incentive as well. I think that's a great scheme and it is also, you can use it with the IETF funding to, as a, for the assets that you are buying and deploying on your site, you can then claim the super deduction tax. So, that's a great one. We'll also pop links to that in the description for you as well.

**Jenni McDonnell:** So, unfortunately time's got the better of us and I think we need to draw things to a close now, but thank you so much to Rachel and Seb for, we are privileged to have you with us today and to learn about policies and standards driving that change in industrial decarbonisation in the UK.

**Jenni McDonnell:** Thank you everyone for listening to our podcast. As I said, there'll be more podcasts coming up in this short series. Any links mentioned today and a direct link to innovate UK KTN's website you will find in the description below the podcast. So, don't forget to sign up, to receive our newsletters so that you don't miss any of the funding that Rachel mentioned.

**Jenni McDonnell:** In the next episode, we'll be hearing from some of the industrial site owners who have received support from the IETF. So, until then, thanks again for listening and goodbye.