#SustyTalk: Ofwat's John Russell on green innovation for the water sector - Transcript

Key:

SG: Sarah George

JR: John Russell

SG: Yes, hello and good morning evening or afternoon, depending on when you are listening to this latest episode of edie's #Susty Talks are a series of short interviews with sustainability professionals across the world to help us all be a bit more informed and a bit better connected. And delighted today to be speaking to someone probably outside of our normal remit of the sustainability teams within companies. And that is John Russell, who is the Senior Director at Ofwat, who's on hand to talk about clean innovation in the water sector in the UK. So John, a pleasure to have you on the call today. How are you doing?

JR: I'm great. I'm great. Pleasure to be here.

SG: No, thank you for hopping, hopping on. We always start these talks really with an introduction to the speaker and their organization and and their role. So it'd be great to hear a little bit about your role, and specifically what you're up to at the moment regarding clean innovation.

JR: Yes, so my role so I've worked for Ofwat, which is the water regulator that we regulate the public water companies in England and Wales which is sometimes referred to as the economic regulator. But we do a lot more than that than that. And we set the sort of the revenue that companies can earn, through what we charge people in customer bills, or what they charge people in customer bills, and set the performance levels for those companies and challenge and drive the sector through through sort of various regulatory tools that we that we use. And my focus, I have a big focus in this in our work on innovation.

In the sector, there's a lot of challenges in the water sector. And actually, it's been it's been a very, you know, that there's, there's a there's a lot of focus on the performance of companies rightly so and about the availability, long term resilience of water sector, the water sector to drought, concerns about sewage pollution, from water networks, and a lot of the work, who a

huge focus of the organization is on driving improvement in there. But the innovation piece is an extremely important component of being able to really make sure the sector is fit for the future.

SG: Good. And when we've seen water in sort of the tabloids over the past few months, it has been about probably sewage with with sewagegate. But I've been given a briefing on Yeah, some of the other environmental considerations for the for the water sector. So energy efficiency, emissions from from wastewater, and as you mentioned, climate adaptation, as well as mitigation. So how do you plan a sector that's fit for the future? With all of all of that in mind? What what are the challenges and the opportunities there?

JR: Well, I mean, those challenges, the challenges that are faced the entire country and entire world, which is, particularly in the water sector, yes. It's how resilient is the sector to drought, if we have more extreme extreme weather events, you know, the summer last year we had in the UK was exceptional. And I did put a lot of pressure on oil company IT company networks, and also those extremes in temperature affect the physical networks, you know, pipes, and treatment works all are kind of affected by that weather. And that can affect things like leakage rates, leakage rates are too high in the water sector. In the UK, we're doing a lot of work to drive that, drive that down.

But I think that the key thing for me is that in the sector doing things the same way as they've always be done is not going to solve the problem, these these kinds of issues, these challenges, the resilience the sector, its ability to cope with that with climate change, adapt to climate change, and and play its part in reducing emissions is all going to work and require companies to do things quite differently. And that's why we've introduced our £200 million Innovation Fund, over this regulatory period, through to 2025. And we've just confirmed we're going to roll it forward for another five years after that and make it bigger. So it's going to be at least £300 million in the next five year period through to 2030.

That is our you know, to be honest, we've tried to sort of disrupt a bit and be a bit disruptive with and create an opportunity for, for companies and the sector and those outside the sector. And I'll come on I'll talk about this a bit more to bring innovation into the sector to coat you know, to deal with all these kinds of these issues.

SG: Got it and we're speaking shortly after the launch of a new tranche of funding. I've been told about the Water Discovery Challenge. So for those listening, what is the Challenge what sort of solutions and technologies are you guys looking for under under that Challenge?

JR: Yeah, so I mean, the big the big challenges facing the sector of the world I said are the ones that face, you know, a lot of utility sectors. And obviously, the whole whole of the country or the

world, which is, you know, got big population growth in the UK, could be at least 10 million more people needing water supply by 2030. climate changes, and extreme weather events are making, you know, do put pressure on networks and lots of different ways. So that capacity of networks to deal with demand, at the same time sector is a big emitter, you know, it's a big industrial emitter uses a lot of energy to treat water, pump water around us, a lot of chemicals, pause quite a bit of concrete as well. So there are a lot, there's a lot to do for the sector to drive down its emissions, and also be, you know, adapt to be able to cope with the risks, you know, the risks of, of climate change. So this, but we are really, we've run this innovate our innovation phase a Innovation Fund. So companies bid in and we assess these bids in a range of different on a range of different themes.

Climate change is one of them, environmental protections, we talked about sewage and rivers, it's a big theme is how to how to companies best protect the environment, have a big impact on it; operational resilience, so that just the resilience of networks, how could you drive down? How can you drive down leakage to zero from where it is at the moment, which is which is too high.

And also, we're really keen in this on new ways of working and delivering the core activities as well. So it's not just all about technology, but about the enablers of innovation. The water sector has got a lot of great men and women who work extremely hard, but it hasn't always been prepared to do things a little bit differently. And I think it's about the supporting architecture of innovation as well, that we're interested in and try to stimulate through through our Innovation Fund.

The new bit of the Fund, the Water Discovery Challenge that we've just opened is is different for us, because previous rounds have have been open to the regulated water companies to lead bids. And that's largely because its customers money that we're using. So let's make sure it sort of focused on that kind of thing. But we recognized from doing those early rounds, that we weren't always getting quite the spread of innovation that we think we might see. So you know, maybe some of the relationships in the bids that we saw coming through about perhaps a bit more traditional between water companies and academic institutions or supply chain partners. Now, great bids, lots of brilliant stuff being done. But we wanted to really see if we could test the boundaries of this and really see where innovation could come from outside of the sector.

So this, this Fund, this round of the Fund is open to anyone at all, any innovator inside the sector, outside the sector, internationally. And it's £4 million. And with funding, that's annual, an annual amount and bids of up to you get awarded up to half a million pounds in terms of what they've what they're proposing in linked to those themes that I talked about. But but really, yeah, we're really trying to test the boundaries here. And make sure that the sector benefits from from all the innovation and all the great ideas that are around that around our inside and outside the sector.

SG: Pretty cool. I've seen some of their previous winners and I'm pretty fuming. They're things that the water sector is not necessarily experts on so manmade carbon capture hydrogen, bio engineering, eco design, eco design biomimicry. So I'm presuming that part of that is to is to bring that expertise in?

JR: Yeah, absolutely. I mean, you know, all these things, like I said, have to be done different differently. I mean, we've got, we have some sort of strategic games of what we're doing with our Innovation Fund across all of it. And while it's like it's pretty principally to build the capacity and capability of the sector to do things differently, and look at these areas, and you know, these things, they sound, they sound, you know, they obviously sound sort of outside the traditional color comfort zone of companies. But they, you know, they are going to have to be mainstreamed. Because they're you know, they're going to be key things to making sure that you know, the sector is playing its part in mitigating climate change. But at the same time, you can continue to do the day job and continue to provide people with clean water and deal with sewage in a way that doesn't pollute the environment.

So, so we're really interested in building the capacity and capability in the sector, also building a spirit of collaboration. We've not always seen companies in the UK, the water companies are regional monopolies. So the network's don't really interact with each other and they're sort of quiet so they don't always interact with each other quite as much as we would like in dealing with common problems.

So one of the core themes of the fund has been a spirit of collaboration and building collaborations between the companies outside the sector, you know, really changing the game on on that, that side, that side of things, which is, you know, we are seeing, but bringing in, in this round is water discovery challenge bringing in new companies completely outside. And part of that Water Discovery Challenge. Actually, some of it some innovators who come in, particularly the small scale innovators, will get mentoring and support with their bids through the first round. So again, it's a way of building a spirit of collaboration inside and outside the sector.

SG: That's definitely important. And what you mentioned was innovation architecture as well, a lot of the times, for example, you see some funding being given to a trial. And then that's it. It's the child of this spirit of collaboration doesn't necessarily go on after that. But we know that the water sector has a joint net zero by 2030 commitment. So we're running out of time to sort of take things beyond individual trials, really.

JR: Yeah. And actually, one of the other themes of the of the Fund is how do you roll out there's innovation to be honest to be had and how you take things from pilot phase to, to deployability. And again, there have been issues about each company wanting to test the technology 17 different times across across different companies, and that frustrates sometimes the supply chain. So some of the things we've seen, and there's been some of the bids we've seen and we've funded have been for some of that kind of collaboration architecture to sort of, to test things in, you know, maybe once we got a great new centre for excellence in the sector called Spring that we we provided some early funding for through the Fund. And that's the first time the sector has had a really strong centre for excellence. And that would that's, that's really moving forward now. So all those things can help with that. deployability. So that we're not, we're not, there's a bit of a joke in the sector that have more pilots than Heathrow Airport. But, but but struggle to really sort of bring bring things out into the sort of the more mainstream.

And finally, given the ambitions on climate change, and also the government's set targets on things like leakage, to get to sort of, you know, 50%, cuts in leakage, that's, that's really, you know, you're not going to solve that kind of deep cutting leakage simply by just having more men or women on the ground, fixing leaks, you know, you'll get somewhere, but you're gonna have to do things really differently. And that's why with some of the bids, we've seen, we've seen some really groundbreaking way, you know, sharing data, doing analytics on data that could really be game changing and assessing where, you know, I know, stresses networks occur, and pooling information having an open data set. So that data is shared on things like that. So that, you know, we can really understand what what causes leak, where's it happened, where's the, you know, in using some of the kind of power of data tools and sharing that right across the sector, which is not something that's really been done before?

SG: So the definition of innovation does cover things for for the sector that already exist, and are improving software and things. I'm always fascinated about, how much can we do with the software and the technologies that we've already got and the processes that we've already got by just innovating how we roll them out? And to what extent we're relying on technologies that might not exist yet, at least at least at scale?

JR: Yeah, it's a bit, I think it's a bit of both really, I mean, you know, we're really interested, you know, it's great to see some, you know, there's, you know, huge leaps in AI and machine learning that are making, you know, making the sort of the analytics piece very different. But to be honest, even like basics of companies sharing data in a form that allows an open data approach. And one of the bids that we funded is for is for a project called Stream, which is led by Northumbrian Water, but it's working with the Open Data Institute, about having an open data standard for sharing information on things like leaks, you know, leak detection, and because because it's it's, it's less to do with brand new technology, and it's more to do with if everyone's recording their

information in a slightly different way in a slightly different format. You can't compare and contrast easily. So the more that you can, you can you can push on those things that that then, you know that that, again, I think that stuff, it can be really game changing. I think it's that, like I said as much it's that enabler of looking at things differently and doing things differently, which is which is where we're really really focused.

SG: Got it and John, we're nearly out of time for the call today. So would you mind reminding us when the Water Discovery Challenge fund is open for application until?

JR: Yeah, it's open till the fifth of April this year, so quite quite soon. So for your listeners, I really encourage you to look at it. And we've got a website dedicated to this, run by a company called Challenge Works, who are our partners in delivering this and they're very exposed living some of these sort of challenge competitions. So I would definitely encourage people to look on there, there's entry, you know, there's an entry for we try to make the entry process quite slick, you know, and we'll, you know be, really, really keen for a wide spread of of innovations here.

Also, importantly, we've taken some decisions around allowing some innovation to keep IP, which has been an issue that some bidders have raised in the past before. So we've adjusted our process to make it, you know, more attractive to a wider range of bidders. And I think that you know, that that really should be something that I think hopefully your your, your, your listeners would be really, really keen to look at. I think there's a lot of potential here. And we were already seeing, we ran a seven, you know, a webinar on it. I think we had like nearly 400 people on that webinar. So there's a lot of interest in this.

And I'd really encourage people from all over the world and all sectors because one of the things we're also interested in is how can the joint joint approaches across utilities, so it shouldn't just all be about water. There's a huge interplay, for instance, between in relation to climate change between water using energy use, obviously, a lot of energy is used in heating water in people's homes. So so, you know, bids from outside the sector are kind of really, really welcoming this.

SG: Got it! Well, John, I think we're out of time for our call. So thank you very much for helping me dig a little bit into innovation in the water sector. Thank you very much.

JR: That's great. Thanks for having me on.