



## Energy Talks

### Paving with way to net zero with Margaret Muller and Greg Ross

Darren Hill (00:05):

Welcome to Energy Talks, the podcast where we speak to the people powering the energy sector. Today I've been joined by Margaret Muller, Petrofac's, head of Environment and sustainability, and Greg Ross, our head of sustainability. We'll be talking about decarbonization sustainability and the path to net zero. Before we dive into the conversation, hit the subscribe button to make sure you don't miss another episode. Greg, Margaret, thank you so much for joining me on the podcast today.

Margaret Muller (00:28):

Thank you, Darren, for having us.

Greg Ross (00:30):

Yeah, nice to meet you Darren.

Darren Hill (00:31):

Brilliant. Thank you so much. Great to have you both on. So sustainability is at the heart of many organizations' plans, but looking beyond the plans, are we now starting to see real action?

Margaret Muller (00:41):

Absolutely. When you Google any company, and chances are they'll have a stated net zero goal. I mean, there's, I don't think there'd be any company out there. And we are talking a diverse sector, not just oil and gas. We're talking from IT to the food industry, to the clothing industry, to the Googles of the world. Everyone has a stated net-zero goal, and it's not just about having that goal, it's about having a plan to back that up. So what are you doing to reach your goal? And there's a lot of, I mean, the world is, is doing all sorts of wonderful things to, to really understand what their emissions are and how they can make a difference to bring those emissions down and really to have a, a carbon neutral future for all of us.

Darren Hill (01:25):

Greg, what's your take on that?

Greg Ross (01:26):

Well, <laugh>, I mean, if you're not progressing sustainability actions, you don't have a business for the future. I mean, sustainability is, you know, it's about having a business that's investible. You're delivering value to all your shareholders, all your stakeholders, the communities, your staff, those who invest, those who you work for, those who you work with. It's future proofed. So it has a strategy for growth and we need to have a social contract. We need to ensure that we're



leaving the world in a better place than we find it. So, I mean, I think if you don't have those three elements in your business development strategy then you're not gonna have a business in 10 years.

Darren Hill (02:11):

I know, Greg, you were quite key in developing decarbonization and NetZero strategy. So what was your thinking behind this? And we're talking action here. So how, how are we actually getting into that implementation stage?

Greg Ross (02:24):

I've been really proud to be part of that, and it's been very much a team effort, but we've developed our strategy around four key levers. So switching to renewable energy in our offices at our sites, looking at marrying up more traditional forms of diesel power gen with solar, how we driving energy efficiencies lights in offices like this retrofitting our AC's with more climate friendly refrigerants. how do we reduce our emissions? So gas management plans at some of our sites where we sleeve off some of the more gases parts of the reservoir, so we're flaring less. And then the final pieces around optimizing and electrifying our transport running more fuel efficient operations progressively phasing in EVs. And Margaret we've spoken about our Scope three emissions and why that's important. Yes. Why don't you talk a little bit about that.

Margaret Muller (03:29):

So absolutely. Thank you, Greg. So scope three is, the uncomfortable bit of emissions that people try to ignore, but you cannot it's essentially everything that's downstream and upstream. So in Petrofac's case, what does it mean for us? So our upstream scope three would essentially be all the products and the materials that we used to build the facilities for our clients. So we're talking about your steel, which has a very high carbon footprint, your cement, also very hard carbon intensity. So it's really looking at the products that have that low embedded carbon. So basically the premium products building those facilities. And then when you go all the way to downstream, it's essentially the facilities then that we hand over to our clients. And why is that important? Ultimately, the facilities that we build and will operate results in a 20, 30, even 40 year lifespan for our clients. So that becomes their scope one and scope two emissions. So ultimately we want to be the differentiator, be the service provider that can build the low carbon solutions for our clients. So it's very important that you don't just only look at your scope one and two. But also focus on scope three as well.

Darren Hill (04:47):

Yeah. And do you think that's been a problem so far with other companies or, the industry in general is focusing too greatly on scope one and scope two emissions?

Margaret Muller (04:55):

I think up until fairly recently, scope one and two has most certainly been the focus of most companies. But the trend now in the last couple of years, the industry, or when I say the industry



and not oil and gas, but other industries have certainly set Scope three targets. So the world is moving in that direction.

Greg Ross (05:16):

I would add to that. Is that to have any credibility in net zero, you have to get your own house in order first. So, sort out your scope one, scope two, I mean, it would be difficult for us to have conversations with our supply chain about reducing embodied carbon in steel and improving the recycled content in copper when our backyard is in disarray. So we have to sort out our own emissions and lead by example and then engage our supply chain on, you know, what are the low carbon solutions and strategies that you can deploy that, as Margaret says, that we can then take and offer to our clients as part of a more joined up low-carbon service offering where we can deliver low-carbon construction, but also importantly, a facility which has a lower energy footprint. So for the 20, 30 years it's operating, they are running a low carbon facility.

Darren Hill (06:19):

Yeah. And do you see that as being our role, Petrofac's role in being the champions? Because obviously supply chain is massive part of our business. Are we the champions of Net zero? Are we championing that to our clients and to supply chain helping them get there too.

Margaret Muller (06:33):

That's certainly the intention of our sustainability strategy is to move towards that direction. I mean, by no means are we blind to the fact that we've got a lot to do to, to get up to speed and we acknowledge the areas where we need to improve. And like Greg said, scope one and two is our focus area for now. But definitely scope three is the ambition.

Greg Ross (06:59):

Yeah, I mean, we're an energy services company. What we do, we do for others. So it's gotta be a core part of our focus for Net zero. And while we're very much focused on sorting out our scope one and two, our direct emissions that we control are scope one. The energy, the emissions associated with the energy we purchase, are scope two. We have to get after as Margaret says, the elephant in the room, the scope three, the many moving parts, many different companies. But we are engaging broadly focusing on where are the carbon intensive bits, how we can support them in their decarbonization journeys. Yeah.

Darren Hill (07:41):

And more recently we've seen a scaling back of green initiatives. is that going to continue in your opinion? Is it Right? What's your take on that?

Greg Ross (07:52):

We've got an energy crisis and and as a consequence, the climate response program and many companies has been two steps forward, one step back. We've had to provide affordable energy security and while also looking to transition. And that's almost the dual challenge that we face.



The world needs more energy, but we need to do it in cleaner better ways. We need a greater level of urgency about that.

Darren Hill (08:24):

Yeah. So what's, what's gonna give us that level of urgency? What do you think it's going to take?

Margaret Muller (08:29):

Look, I think a lot of it's sad to say is driven by legislation and the regulatory environment. So unless you're forced to do it by law, a lot of countries are sort of hesitant. So, but we are seeing a lot of changes happening. I mean, a lot of countries, especially in the European space, are now banning oil and gas exploration altogether. So things are changing and I think with COP being in the UAE this year. Which is of course the heart of the oil and gas capital of the world. I think there might be some interesting changes happening. But also the other shocking fighting from the IPCC report, the intergovernmental panel on climate change, results have shown that the last decade has been the hottest on record, ever.

(09:20):

So I think we're now at 1.1 degrees warming, and the Paris agreements says limited to 1.5 degrees, and we rapidly approaching that and that's 2050. So we are probably gonna reach it before then. So as a global community everyone has a part to play, not just the oil and gas sector, but yes, the oil and gas sector does contribute significantly. So I think collectively as a globe, you can no longer put your head in the sand and one hopes that the government will then support that in terms of the legislation.

Darren Hill (09:55):

Yeah. It almost levels the playing field between different organizations and energy sector. We've touched on it briefly about decarbonization of our existing activities. And is digital, is that the path one, of the many paths that we can take? Is that the easiest route at the moment for us to start decarbonizing today?

Margaret Muller (10:13):

Exactly. I mean, decarbonization is, like Greg said earlier, we have those four key levers that we are using to look at our own facilities. And we've done quite a bit in the last two to three years in terms of switching out the renewables electrifying where we can in terms of our transportations optimizing, but there's there's a limited amount that one can do. The real game changer would be when we we're designing those facilities upfront in your concept, pre-feed, feed, and then using those low carbon materials. So that's really where I think the big change would take place because to retrofit a facility, I mean, it costs an exorbitant amount of money, which a lot of clients don't have. And if they've only got, you know, 10 to 20 years left of the life of that facility, it doesn't make financial sense. Yes, you can do the small changes, which will have some impact, but essentially it's the new projects where we've really gotta push those low carbon solutions.



Greg Ross (11:19):

And I think those digital tools are real accelerators because whatever you do, whether you are an operational planner and you use a digital tool with a feedback loop that tells you what's the most efficient way to plan those operations, we save the number of flights we're sending off to people offshore. We're safe carbon. If you are, let's say an engineer you want to understand the energetics of the facility you are designing for a client, use a digital tool to get a sense of that footprint. If you are in our supply chain and you want to enable our clients to build a facility with a lower carbon footprint, green steel all the things we've mentioned, we can use a digital database to identify where are those low carbon sweet spots and how to access them. So we know digital is touching all our lives, and that is only going to accelerate with, you know, this massive growth in AI.

Darren Hill (12:24):

So on our traditional oil and gas projects, how are we supporting our clients to reduce their emissions?

Greg Ross (12:29):

Well look, decarbonization, whatever part of the business we're in is an inescapable reality. And so one of the examples quote is on a project where the back end of the project where we are commissioning the facilities and testing the equipment, what we normally do is, we bring in hydrocarbons, we clean up the wells and we need to safely dispose of those hydrocarbons. So we put them to flare. So that's a significant hydrocarbon loss. And we see a spike in emissions with a bit of innovation and collective will within the team, they developed a green completion where we've routed the test fluids back, kept in the process envelope so we didn't have to flare. Tested and commissioned the facilities and did that in a way which is lowering the carbon footprint of that whole operation. And was really well received by the client.

Darren Hill (13:38):

Petrofac has a producing asset. What are we doing to reduce the carbon footprint?

Margaret Muller (13:43):

So yes, this asset, which we have in Malaysia, it's definitely the lion share of our, of our footprint. And we've had to really look at the asset and what we can do to reduce those emissions. So we've implemented a gas shut of program to reduce the emissions because the reservoir itself it's quite gaseous. And Greg can maybe talk to some of the technicalities around this program, which has actually proven quite successful and it's resulted in a 21% reduction in our emissions. So Greg, if you would like to some detail around that.

Greg Ross (14:16):

Yeah, look, we've got fantastic team Malaysia OPS reservoir managers, who have pulled together a workover program, who worked over a producing well, which sleeving off the gaseous parts of the reservoir. So we're producing less gas with the oil. The position of the facilities too far for us to feasibly transport the gas to shore. So we've gotta safely flare it. And what they've



done is sleeved off that gas. So we produced the oil but we're flaring less. And it's been a step change in terms of the way we've deployed innovation to reduce the carbon footprint of that operation.

Darren Hill (15:00):

And for any operator listening to this as well. And is this something they can implement? Because this can't be a unique situation. There must be other parts of the world that has exactly the same situation, how can they implement something similar?

Greg Ross (15:13):

Yeah, I think we've got a fantastic OPS team that are really much focused around low carbon, whether it's using their reservoir management capabilities to shut off and reduce the amount of produced gas, whether it's another initiative they're doing is rather than burning diesel as a fuel gas, which can be quite efficient. They're using the excess produced gas and routing that through to our gas turbines to use that as energy. So again, saving on our emissions and reducing the carbon footprint of the facility. And they've taken it a step further, they're even looking, drilling down, to the logistics and looking at how we can use the vessels that support the field, in a more fuel efficient way. Optimizing those operations and again, reducing our transport emissions. So I think the whole OPS piece, you know, they're challenging themselves to see how we can drive this decarbonization in everything we do.

Darren Hill (16:18):

What role does a Petrofac employee have to play in the journey to NetZero

Margaret Muller (16:23):

Every employee first of all, everyone within this organization has a role to play. It doesn't matter whether you're part of the communications team, the marketing team, finance, BD, proposals, engineering, of course sustainability, where we, Greg and myself sit. Everyone has a crucial role to play because every part of our business ultimately comes down to serving our clients. So we have a group within Petrofac called the Environmental Sustainability Network Group, ESN and it's really a platform for employees to share their ideas in their personal lives as well as what they do at work. It's on our Yammer group and it's really, a good way to connect with like-minded people and to realize, oh, I didn't think that eating meat, for example, would have such a high carbon footprint, but, you know, simple things which you can change in your own lifestyle, but also from a work perspective in terms of what we do people in our procurement team might think, well, what has sustainability got to do with me?

(17:28):

But our procurement guides are absolutely crucial when it comes to sourcing our material and our suppliers, our supply chain, which we spoke about earlier, our scope three. So they have a really important role to play, of course our engineers are crucial in terms of those design elements and looking at all the different, you know, low carbon options that we can incorporate using the tools that Greg has mentioned to comms and marketing. I mean, we've got to get the



message out there and create the awareness. So absolutely. I mean, everyone in the company is a role. We are just the voices I guess in our department, sustainability, but it's everyone. It's a company as a whole.

Darren Hill (18:04):

What is it that drives you both anyway, because you're a small but mighty team, you're trying to enforce this great change. What is it that drives you, Margaret?

Margaret Muller (18:13):

So I've always worked in the sort of the natural resources sector. I've come from a mining and renewables background and now coming into the oil and gas sector. And I really feel that there's one thing being on the sidelines and advocating, you know, oh, we must be sustainable. We must do everything environmentally friendly, but you actually have to be at the heart of where it's happening to make the real difference from the inside out, really. So as an environmental scientist myself, you know, coming from South Africa, one of the most unique landscapes in the world, I mean, you grow up in these environments and you really want to conserve, but also you realize development has to happen. The world needs minerals, the world needs oil and gas and it's about how do we use those in a more sustainable way.

(19:01):

I mean, it's the whole concept of sustainable development. If we go back to the definition of it, it's that balance and being part of a company where we can make a true impact for the big giant oil and gas giants of the world to the new energy giant, all the renewable energy clients that we're getting more of. It's really inspirational that we can be part of that movement. And yes, I mean, we are under no illusion that we are seen as the baddies in some minds, you know, everyone thinks oil and gas, oh, you know, you're destroying the planet. But actually we're trying to come up with those sustainable solutions because there are facilities out there that are 40, 30 years old and I mean, it's, they're going to continue and you want to make sure that any changes we can make, we are doing it. Any future facilities, whether that be oil or gas or offshore wind, that it's all done in that sustainable mindset.

Darren Hill (19:59):

Yeah. Amazing. Greg?

Greg Ross (20:02):

I'm passionate about planetary health. I mean, always have been. And I love the challenge. I mean, it's the most exciting time to be in the energy sector. It's we need more energy to feed global growth. We have to produce it and use it in cleaner and more sustainable ways. I mean, it's a fantastic challenge and to be part of recognizing that the success factor is not gonna be one team or one individual, even one company. We all have to carry this over the line. And so being able to get the opportunity to collaborate, work with colleagues, on these fantastic challenges, keeps me focused each day.





Darren Hill (20:52):

Yeah.

Margaret Muller (20:53):

Keeps the job exciting.

Darren Hill (20:54):

Exactly.

Margaret Muller (20:55):

And it's not a job, it's a lifestyle. Coming to work, having these challenges and really just unpacking them and trying to make that small difference in the grander scheme of the world and climate change.

Darren Hill (21:06):

And I love that. I think that's a great point for those who are considering moving to energy sector. Either they're younger or they're transitioning from a different industry at such an exciting time, and they can be part of solving that as well.

Margaret Muller (21:19):

Absolutely. I mean, spot on. We talk to lots of young graduates and I mean, they are very switched on, very mindful about working for a company that will, not destroy the planet to say it simply. And when you're a young, bright engineer, environmental scientist, whoever you are, I mean, being in the energy space right now is so very exciting because, as you've said, it's that energy switch. So it's a transition period from, a traditional sector and we are moving towards, what we call the new energy. So we've got the offshore wind, which of course has been around for a long time. But all the other exciting stuff, the carbon capture and storage that Petrofac are involved in. And yes, it's in its infancy, but if you're part of that movement and imagine in 20, 30 years time, you can look back on your career and say, well, I was at the start of that. I was part of this movement where we transitioned over to cleaner energy.

Darren Hill (22:16):

Amazing. Thank you both so much for joining me today. It's been an absolute pleasure to talk to you both.

Margaret Muller (22:21):

Thank you so much.

Greg Ross (22:22):

Thank you





Darren Hill (22:23):

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