

More Life, Smarter Use: Lessons from Hitachi Energy

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Barbara Mendes George: You are listening to C Suite Perspectives, a podcast by the Conference Board.

Barbara Mendes George: Hi, welcome to C Suite Perspectives, a signature series by the Conference Board. My name is Barbara Mendes George. I'm a sustainability communications expert based in Brussels, Belgium and the guest host of today's episode. In this episode, we're returning once again to the topic of circular economy. But this time we're talking about how a company in the energy sector is managing to accelerate its circular economy progress and what lessons other businesses in other sectors can learn from it. Joining me to discuss this is Edwin Ligrin, global circular economy lead at Hitachi Energy, a tech company headquartered in Zurich, Switzerland. Hitachi Energy's products include high voltage equipment, transformers and services for renewable energy. In their latest sustainability report, Hitachi Energy says, we prioritize long term, um, use of our products and future proof our business with resource efficiency as a key operational driver. Edwin is based in Stockholm, Sweden and has worked at Hitachi Energy since 2021. He was previously a circular economy specialist at technology company ABB where he also held roles in supply chain management. Edwin has an MSc in engineering and Industrial Management from the Lulea University of Technology. And as well as Sweden, he studied and worked in Cambodia, South Korea, China and France. His interests lie at the intersection of doing good and sustainable business. Welcome Edwin. I'm looking forward to discussing how circular economy topics are embedded in your company's strategy, how systems transformation essential to progress, and hear any advice you have to share for businesses at the beginning of the circular economy journey.

Edvin Lindgren: Thank you very much Barbara. I'm um, happy to be here and also thanks for having me.

Barbara Mendes George: Thanks for being here Edwin. I would love to start this interview by hearing a bit more about how you started working on circular economy topics. Did you already study these at university or is this something you became more interested in when you started your professional career?

Edvin Lindgren: Well, uh, it started back in university, uh, where I was at the time studying industrial management. But I did add some courses into environmental engineering. And I remember specifically one course where I did a project where companies were essentially doing waste exports and that was a viable business model both for the sender and the receiver. So I was kind of intrigued by how such a quote unquote bad practice actually made it as a viable business model. Um, I did my master's degree project in France later on circular economy, uh, credit to France for, for pioneering the um, uh, this field. And uh, yeah, then I started after working in supply chain management, I kind of expanded the view to the value chain and then I took on a role, um, working on circular economy.

Barbara Mendes George: So I mentioned in the introduction that Hitachi Energy is increasingly focused on the circular economy and while of course like with any company, there's progress to be made. In your words before the recording, you said that Hitachi Energy is not a company starting from scratch on this issue. And according to your latest sustainability report, you're actually envisioning a value cycle instead of a value chain to better incorporate the circular economy in your business model. Could you explain to our listeners why Hitachi Energy is envisioning this and how it impacts your processes?

Edvin Lindgren: So talking about the value cycle instead of a value chain is really about the time horizon. Right? So we recognize what's happening upstream and downstream with customers and suppliers. Um, and uh, yeah, we're not just interested in the transactional piece, but we want to also make sure we optimize, um, for a longer time horizon.

Barbara Mendes George: It seems like a very engineering perspective as well that you're looking for efficiency app to optimize. Uh, it just makes business sense for a company like yours in that case.

Edvin Lindgren: Yeah, it goes back to what I mentioned before, uh, that typically you can find theoretical benefits in moving towards a more circular model, but then there are barriers to that. You have to kind of then explore how do we break down those barriers and actually enable that theoretical value. And uh, yeah, make it real interesting,

Barbara Mendes George: um, because, yeah, I think one of the barriers can be sometimes customers. Right? Because I, um, would really like to ask how we interact with customers on the circular economy because many of our listeners are very likely to be working for companies who like to be more sustainable, like to accelerate their circular economy progress, but be worried that certain customers are not there yet. So how do you make the case for your customers on circular solutions?

Edvin Lindgren: It's a hugely important part of uh, what I mentioned with realizing that value, um, because that's really where we start kind um, of anchoring our business obviously is the customers and what they want, what they want to see. Uh, so going out and explaining the values. Right, is super important. And that's what we're doing now to kind of, uh, put that into perspective. Um, how does this solution then deliver value to the customers? We talk about value propositions and I'd like to give you an example of that because, um, it's not

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Edvin Lindgren: just about circular as a sole metric. You have to look at all the other things that are benefiting from it and those can be already existing drivers that customers are willing to pay for as of today. So we had an early engagement with a project where the customer already wanted input on their base design, and that was based on six transformers and then all the equipment around that. So what we did is that we tweaked that, changed the design and actually went with an optimized design of only two transformers. Higher capacity, of course, but, uh, that resulted in a smaller footprint. It resulted in potential cost reduction, lead time reduction on having just those two, um, pieces, uh, of equipment instead of the original six. And that was of course triggered by the fact that they wanted to make sure that their solution was as lean as possible and as smart as possible. But then you have all these other benefits and obviously the circular benefits of reducing uh, the footprint and the amount of materials needed.

Barbara Mendes George: That's interesting because do you normally engage with customers, uh, or projects that early on in the, in the process? Because I guess that's quite key to making sure that you can input on, you know, making it efficient, lean, circular, as you say.

Edvin Lindgren: Exactly. I mean, we want to be there, uh, early on. The, um, thing is that we have a lot of expertise in house, um, but at the same time we have to make sure that we're acting independently. For example, uh, in this case, this was working purely for the best of the customer. So sometimes you may think that isn't it better selling six transformers than two? That wasn't our incentive. Right. Um, and we can enable such smart solutions if we can engage early with customers, which we are aiming at doing.

Barbara Mendes George: And I don't know if it was your first time engaging with that potential customer, but I imagine that the customer appreciates that you're not trying to upsell, you know, you're not trying to upsell, you're trying to come up really with what is best for them. And likely that builds trust as well. Well, that if they come to you with other projects in future. Yeah. You will be as open and honest.

Edvin Lindgren: Yeah, look, in our industry right now we see that, uh, demand is still outpacing supply. So yeah, we don't want to tell them that. Okay, we can design it this way, but you're going to get this solution working in 2035. So yeah, we'd rather then make sure that, uh, they get the best possible solution. And then in this case as well, that can

mean that they get their solution, uh, online earlier than originally planned potentially.

Barbara Mendes George: So have you had situations where conversations with customers have been a bit more tricky, where it's been a bit more difficult to talk about circular solutions, Evan?

Edvin Lindgren: Yeah, absolutely. Um, because when we're dealing with public procurement, uh, there's also Certain guidelines and making sure there is fair competition in such tenders. So in those cases they are already, let's say procuring from m, the perspective of a transactional procurement model. So there maybe if we start offering additional services and something that we would see as more circular, that really isn't interesting. So yeah, we want to co create sometimes with customers. And yeah, uh, there are limitations to being able to do that in certain cases.

Barbara Mendes George: And that's why sustainable procurement is such an important topic. But uh, not the one we're discussing today. No next episode. Not in this episode. You have to stay tuned for another one. Um, to wrap up the first part of this interview, I'd like to ask you about something we discussed before this recording. You mentioned that when it comes to circular economy, you feel that the only innovation we need is in the way we operate. Could you expand on this quote? Because I'd definitely be interested in hearing your views on how much circular economy progress depends on systems transformation rather than technological innovation.

Edvin Lindgren: Yeah, uh, so I realize that some of my colleagues would probably disagree with that quote and that's fair because in some cases we do need to look at replacing specific materials, redesign products to enable circular performance. But what I was trying to say is that we need to start in the right place so our solutions are optimized for the current operating model. And it's only if that changes that the priorities change as well. And that's when we are then creating, developing other types of solutions and that's when we can drive systemic change. So to take another example, we see an emergence of data centers requiring huge amounts of energy and they need grid connections, they need power which we can deliver. And they, so we have, you know, century of, of experience in the field. They, they don't have that same experience specifically on the grid connection. So they are turning to us and asking

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Edvin Lindgren: that, well, can't you take more responsibility here? We're just interested in the outcome. So then that drives a change in how we operate. Right. That is also innovation. And um, then that also brings other potential benefits. Let's say if we take more control of that equipment, we can also enable more sort of, ah, precise monitoring, more efficient maintenance, uh, and a higher level of flexibility. Because as well we see uh, that in this particular sector that um, the lifespan of a data center might be slightly lower or even a lot lower than the grid connections that um, we install. So we need to enable a certain level of flexibility. So that kind of sparks the innovation into other directions. Right. How do we then reuse Redeploy, um, these solutions that we have, uh,

commissioned.

Barbara Mendes George: Yeah, that's really interesting because it's changing your um, in a way, I guess kind of your offering your business model as well, not just, uh. Yeah, not just what you produce. Well, thank you, uh, Edwin. We're going to take a short break and be right back with more insights from Edwin Ligman.

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Barbara Mendes George: welcome back to CC Perspectives. I'm your host, Barbara Mendes George, a sustainability communications expert based in Brussels, Belgium. I'm joined today by Edwin Lindgren, global circular economy lead at Hitachi Energy. Now that we've discussed moving from a value chain to a value cycle, I'd like to discuss circular economy progress in the energy sector. More specifically, a little bit more on barriers and how listeners from all sectors could benefit from moving beyond a linear model. So Edwin, at Hitachi Energy, you mentioned that you follow the 5R's approach, rethink, reduce, reuse, repair, recycle. And in your latest sustainability report you talk about that fact that you're working on a circular economy policy which will further guide the company strategy. How much can you say about it at this stage and how will it impact the way you operate?

Edvin Lindgren: So I can talk about it extensively because we did publish it quite shortly after the publishing of the sustainability report. So thanks for raising that. It's almost a year old now and it really encapsulates our three principles and how we are focusing on circular economy. It's echo design, it's resource efficiency and it's the lifecycle perspective. So it includes the 5R levers that you mentioned. And uh, it sets our priorities across the value chain and value cycle, uh, both starting with the upstream sourcing, the right materials, um, and then in our operations focusing on operational resource efficiency. Obviously you hear the synergy with, with our, our quality program when it comes to resource efficiency and uh, the echo design in R and D and product development. And then downstream towards our customers, how we are bringing in circular elements in our offerings. And even as we talked about before, the circular business models, we are also saying that of course to enable this we have to look at integration up and down and that's usually then enabled by. We can take some more responsibility as part of our service commitment, uh, but also collaboration and partnerships to enable that value cycle. And um, that's also connecting to data. Data is a key enabler, um, because that helps us understand then, you know, what's the journey of this material, this product, what's the

impact and how do we then see that our actions will actually have this impact further down the road or actually upstream so that we can uh, optimize and avoid sub optimization across, uh, the value cycle.

Barbara Mendes George: I think it's interesting that you mentioned the collaboration because in part one you also said, you know, to enable circular economy progress, it can't be in a silo. Right? Like you need to collaborate with lots of different elements, lots of different people to be able to enable that progress. Right?

Edvin Lindgren: M. Yeah, absolutely.

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Edvin Lindgren: Um, we can't do it all ourselves. I mean, that's just the nature of us focusing on our core business. But that can grow to some extent. And then we want to work with partners that are very good at doing, um, things that we can't at the moment. And they are necessary to make sure that we have circular performance across that, um, value cycle. I will mention though, on the policy as well. I mean, uh, it's a first version that we've had now. It's very helpful and useful in setting kind of the foundation, but connecting to regulation. We've got our ongoing work with CSRD and we're going to be in scope soon enough. And uh, that means that we have done our double materiality assessment where we have found additional IROs that we are now looking at making sure that we're recovering in the policy. It covers a lot. But then there are some, some, yeah, let's just some fine tuning and some improvements that we can do. Uh, and then that trickles down into targets, actions, etc.

Barbara Mendes George: Yeah, often on this podcast we talk about, uh, EU legislation like the CSRD, of course, and that's such an important part of keeping track. And there's so many, so many things that you have to keep track of. And I guess, I mean, I like, I always like to get into the nitty gritty of when you're developing a policy like that. How, how much did you enjoy, how much do you involve employees of different sectors to create that. And how are you uh, making it available so people see it? Uh, because obviously for something to really become enacted, employees need to see and see what has changed and see how to communicate that, right?

Edvin Lindgren: Yeah, absolutely. Um, I can't really speak for the entire governance of how we do CSRD, but I can talk about it as a representative of the company and then being part of communication flow. So uh, right now we are uh, in a place where we're looking at it from a corporate perspective. So these are the impact risks and opportunities. The arrows I mentioned that we have identified, they categorize into these different fields and we have seen now, okay, so which are the most material topics for us? And then circular economy is a highly material topic for us. I mentioned, you know, the dependency on materials and the opportunity as well when it comes to the circularity of our products. So now it's, let's say up to us more so in the corporate team to make sure that this is reflected in our processes. So that's kind of how it trickles down. And I mentioned the targets as well to really make sure that we're measuring where it matters.

Barbara Mendes George: Absolutely. So we haven't talked yet too widely about the sector that you operate in, the energy sector and the benefits of prioritizing the cyclo economy is quite well documented. But of course there are also challenges which you briefly mentioned in part one. So what has Hitachi Energy identified as the main barriers to circular economy adoption and how is it planning to tackle them?

Edvin Lindgren: So uh, the first thing that pops into my mind is the data again that I mentioned before, uh, to actually access that data and have good quality data. So that goes both internally for us, but also with the ones we are collaborating, working with across the uh, the value chain of a value cycle. Um, so that's one part and there we're essentially just making sure that we have processes that uh, are geared towards getting the right data, uh, from the right stakeholders and that we're also integrating that into our systems so that we have essentially a data pool where we can pull the necessary data, uh, for disclosures, for tender requirements and other needs. Uh, so data, the first one, uh, customer perception, I would also like to mention that has changed somewhat. I mentioned that, yeah, demand is still outpacing supply to some extent. So that means that uh, we saw before that it was very focused on. Right, this is critical infrastructure. Sowe're looking at of course brand new equipment to fulfill these needs and the, let's say the quality perception of anything pre owned was somewhat Negative. And we see now that that's changing because of necessity. And then we are making sure that we can give the necessary, um, call it guarantees or quality assurance so that uh, customers can see that we have an opportunity to save a lot of lead time here. And at the same time we can rest comfortably assured that uh, this solution, this equipment is going to perform. Uh, if I would mention one more, uh, there's been this. Regulationsdrivinggood progress. We mentioned csrd, there's

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Edvin Lindgren: many, many others in other regions as well. Uh, but we've also seen some existing regulations that can be actually working against the interests of increasing circularity. So having that said, the customer perception aspect and yeah, it's critical infrastructure, it should be new, it should be replaced. That has been reflected as well in some of the regulations that we have on the market that um, the ones operating the grid, they have to essentially replace assets at a certain point in time, even if the asset is still performing. But then it's ruling out any type of upgrade or lifetime extension of that equipment.

Barbara Mendes George: Yeah, that'svery interesting. I've worked with manufacturing companies before and the other manufacturing and refurbishment is, it is a tricky one. Right. As you say, like you, you have to become an expert in remanufacturing and you have to provide that quality seal to show that you know this, this will still work and it can save you money as well if it's uh, remanufactured. But it still has to be top quality.I'm guessing that's uh, something that uh, Hitachi Energy is very focused on.

Edvin Lindgren: Absolutely. M. Yeah. Yes, it'sgood business. Uh, and uh, yeah, we want

to, we want to be able to serve the markets more. So when it comes to that and have a bigger coverage, um, we're actually increasing our service presence quite a bit to um, be able to serve more customers and more solutions like this. Because actually one thing that we should mention as well is that there was a lot of assets, particularly uh, in developed countries that were installed, let's say in the 50s to the 70s. Um, so we have in some regions quite an aged asset fleet. So then we come to a point where we see that there's a lot of equipment potentially reaching its end of life. How do we manage that to actually continue delivering on the grid expansion and the investments being made, uh, without actually having to take capacity out of use.

Barbara Mendes George: That's interesting. So it's kind of solving two problems in one. Hopefully if you can repurpose, uh, it as well.

Edvin Lindgren: Absolutely.

Barbara Mendes George: Great. Um, so before the recording, you mentioned that the materials you work with are quite circular but quite carbon intensive. For example, you mentioned metals. I'm sure this is the case for many of our listeners. So I'd love to hear more about how you deal with this challenge specifically.

Edvin Lindgren: So uh, our, most of our products, lion's share of our products is made of primarily metal as you, as you're referring to and that's what we were talking about. Um, metals are infinite, definitely recyclable. Uh, you know, as opposed to for example cellulose or some polymers, there's molecular uh, degradation. We don't see that for metals. So they are inherently, you know, they have a high circular potential. Um, but at the same time as mentioned when producing you've got all the, the um, the steps going from mining to refining to processing to then another processing step potentially before our factories. So it does become quite carbon uh intense especially in the kind of smelting, refining stage. So if we can then instead of taking ore to, to create those raw materials, if we can use more scrap obviously that's going to be huge savings. I mean aluminium is up to 95% for, for steel I believe it's around. Yeah, it's significant saving. I don't have the number in my head but uh, we do see significant carbon savings by being able to not only recycle of course what we talked about before when it comes to refurbish and reuse uh, products and components. But if we focus on the recycling aspect there of those materials we see that increasing scrap is very good for the carbon footprint. But sometimes we also see that there's a risk in the quality of the material coming out. And again that's not because of the degradation of the material. It's more so about the contamination of uh, certain trace elements that end up uh, uh, in the waste uh collection scheme. So we have to be very mindful and really find the sweet spot there. Okay, so what should our technical requirements be? Okay, we keep it at this level. Good uh smelter, if you can then keep this grade with as high level scrap as possible, we're very happy. Um, but we should also do our part. Uh I mentioned that you know we want to enable the value cycle. So then how do we actually make sure that these smelters get good quality scrap into their,

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Edvin Lindgren: their smelters so that we can then benefit from higher recycled content in high grade metals?

Barbara Mendes George: I'm guessing. Yeah, that's where it's key to perhaps work with other partners or maybe I don't know if this is a plan. It was like investing in a recycling plant yourself or something like that, you know. Are these the kind of ideas you have in mind for improving the, the amount of scrap and the quality of scrap metal that you can use?

Edvin Lindgren: I think we should have separate conversation. Investing a smelter, Barbara. It could be a business opportunity.

Barbara Mendes George: That's part three on cyclo economy. Okay, great. Well, Edwin, to finish up our conversation, I'd like to ask you what is the one piece of advice you would give to any listeners seeking to accelerate their secular economy journey, Whether these listeners are in the energy sector or another.

Edvin Lindgren: So I would say don't do it alone. We spoke about external collaboration, but also focus on what you can do internally depending on the size of your organization. This is such a cross functional endeavor. So make sure that you network with the right people across functions, you present the topic, you explore the opportunities and you aim at following a credible path towards increasing circular economy. Focus on where you see the most potential. After gathering all this, uh, information, either you yourself would act as a project manager or someone else would make sure that they take sort of the reins of this, this journey. And um, yeah, tack on what you're already doing so that you can show that yeah, we're not starting from scratch. This is not something entirely new. Uh, but do focus on what we can do additionally to form uh, some level of business case to yeah, convince your peers in the C level or to, to convince uh, your, your managers in the C level, uh, so that you can actually then, yeah, define the journey and then start progressing that journey. So uh, I'd just like to say good luck on this and uh, yeah, happy to connect, uh, in any way possible. Find me on LinkedIn or uh, or otherwise.

Barbara Mendes George: Fantastic, thank you, Edwin. I think what I will take from that answer as well is you're probably not starting from scratch. I think this is very important for people to hear that you, you may have the capacity already inside, you might have um, allies who can help you with this. So if you start there, it probably uh, is a good place to start. So Edwin, thank you very much for joining me today and thanks to all of you for listening to C Suite Perspectives. I'm Barbara Mendez George and this series has been brought to you by the Conference board.

Barbara Mendes George: Um, you have been listening to C Suite Perspectives, a podcast by the Conference board.

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AUTHORS



Bárbara Mendes-Jorge
**Sustainability
Communications Expert**



Edvin Lindgren
**Global Circular Economy
Lead**
Hitachi Energy

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