

The Big REthink: Understanding ESG's Impact on Business

Brian Rowley: It's time to rethink everything. To redo the rulebook. To explore smarter ways to work and rediscover what's possible. It's time for a fresh take on how technology and creativity are changing the way work gets done. I'm Brian Rowley, and this is The Big REthink. So today, climate concerns continue to rise and consumers are demanding organizations improve their sustainability efforts and footprint. And on this episode of The Big REthink, Lee Taylor, co-founder and CEO of REsurety, Inc, is going to talk to us about the current state of clean energy initiatives, the work his company does in the space, and the future of clean energy, and what this means for business. Lee, welcome to the show, I'm excited to have you.

Lee Taylor: Thanks so much for having me here, excited to be here.

Brian: So Lee, let's start on a broader topic. I want to get into what REsurety is all about and the organization and all of that, but let's start with sort of a very high level. So I think as we look at it, consumers today are looking for a lot more transparency from companies when it comes to the topic of sustainability. And so I know one of the questions that I have is how has ESG and corporate social sustainability sort of evolved in the recent years to get to this point where every business now has this responsibility to drive sustainability efforts forward? And maybe for those of you that are listening to this and aren't completely familiar with the topic, maybe we start with, why don't you explain what ESG is, and then sort of follow on with the question in regards to responsibility.

Lee: Sure, happy to. And so, big picture, ESG stands for environmental, social, and governance. And essentially it is good things in the world - better management of governments and companies, improved access to education, social equality, environmental protection. I think in our industry and renewable energy, we almost exclusively focus on the E part of ESG, from the environmental impact. And I think that you've broadly seen this dramatic increase in demand from various stakeholders of businesses - customers, employees, and investors alike - to believe that they're voting with their time and their dollars, either as consumers or investors, in something that they are proud of standing behind. And so that shift towards ESG has been building and reached a pinnacle recently. But as you point out, there's also been a shift of that increased call for transparency and scrutiny around it. And we live in the weeds of a specific element of ESG, as it relates to renewable energy and how folks procure that, and we can get into that in detail, but I think bigger picture, ESG has been the cover of The Economist recently, I think the title was ESG: Three little words that won't save the planet. It's been the focus of a recent Elon Musk tweet, where he called ESG the devil. I think those are all in the last few months. And so there's this huge claim or a huge clamoring for improvement in ESG around that transparency, and I think that that's a key overarching theme, whether you're in renewable energy or totally unrelated from it.

Brian: Yeah. And I think you touched on transparency, and the recent increase in this, but actually one of my questions is "why?" Why are we seeing so much news and conversation specifically about the transparency and accuracy in sustainability reporting?

Lee: So I think it's generally been building over time, but recently reached a peak of this demand, not for just "tell me that you're doing good things as a business", but prove it. And I think some of that scrutiny is healthy. I mean, there's been a lot of articles recently, for example, that the concept, like the phrasing, of carbon footprint was actually invented by an oil company, BP, in the early 2000s, as part of a marketing campaign. And so this view that differentiating between real, sincere, and impactful activities versus a marketing campaign that suggests you're doing that whether or not you actually are, separating between those two such that again, employees, customers and investors are driving their time and dollars towards those real sincere high impact and away from what often gets the term 'greenwashing' at least in our industry greenwashing, where its sort of ESG in name only. And I think that's where a lot of the scrutiny has come from, and certainly where I think a lot of the blowback on ESG, which we as a company, and I as an individual, think is an incredibly important evolution of where corporate activities are going. But I think it's healthy to say, "well, how much of this is spin versus real impact." And it's that that's driving that interest overall. And I can get into the specifics of the renewable realm if that's of interest, but I think outside of renewable energy, I think that's what we're seeing and why it's the focus of Elon Musk's tweets and cover stories of The Economist.

Brian: Yeah, I think that's a really good point, because it is definitely a marketing term, and there's a lot of folks that are utilizing it. And I think it's also - we live in a time where, if we're going to make a claim, there's someone that will call you out on it. And I don't know that that's a bad thing, per se, but I definitely think that it's something that people need to be aware of when they're talking about them being a sustainable organization, or some of the things that they're doing around sustainability, being able to back that up, because someone will call them out on it. But in that context, how is consumer demand changing how companies operate in terms of ESG? And what do you see those impacts being on B2B companies?

Lee: So from a consumer perspective you see it in almost any packaging, grocery store, or toy store or otherwise made with renewable energy, made with clean energy. And that is something that is demanding at worst sort of a tiebreaker, when consumers are making decisions; at best really defending a premium for those products. And so you see consumers asking for that, and that flows through the value chain. And so when you see retailers, whether it's Walmart, Amazon, or otherwise, they're pressuring their suppliers to drive towards levels of sustainability, that they can then pass that through and demonstrate that not only are we greening our own practices, for example, but we are amplifying our impact by going upstream in the supply chain it gets to be more B2B. So I think from the consumer side, and I think we can't - if we think about it, employees of companies, as well as effectively consumers choosing where to spend their time versus dollars, you see that preference for sustainability driven companies, and particularly if that's highly defensible, and sort of reducing the risk that there's a real or perceived impact of greenwashing relative to the legitimate impact, that drives demand. And that is something that corporations are therefore going after, both altruistic and self interest. That's what their stakeholders want.

Brian: I think we've seen an evolution over time, where from the consumer side if someone brought out a green initiative, the reaction from a consumer would be, "Oh, that's nice", "It's nice

that they're doing that". But I think we've progressed to the point where now it's a "No, I'm specifically looking for those companies that are sustainable, who do have the appropriate green initiatives in place. And that's who I want to do business with." So it's not just the "Oh, that's nice", it's now people in what I've seen and what I've been reading, are really searching for that. And I will give you an example. I was just watching a review the other night on an electric bike manufacturer, and they even talked about how they're packaging for shipping, rather than using zip ties, they're actually using these ties that are paper related. So they're using all these different things to be able to eliminate some of the more challenging materials for our environment to be able to manage, which I thought was really kind of interesting. And I will tell you, it did pique my interests to a point to say, "Okay, that's a company that I would look to moving forward", just because they're taking those level and steps in place to sort of do what's right for what we think needs to happen to protect this planet that we're all living in. I guess one of the other questions that I have is what have we learned from the recent evolution of ESG? What's working, what's not, when it comes to how businesses are putting sustainability issue initiatives in place and sort of measuring that impact? What are we seeing? What's working, what's not?

Lee: What's working from our perspective, and a lot of the way ESG demand by companies' stakeholders manifests itself in our world, is through renewable energy procurement. So this is corporations that are signing contracts directly with a wind project or a solar project or increasingly, more recently, storage projects, towards the ability to say we are, rather than just buying power from the grid and assuming that utilities and regulators will eventually drive down the role of thermal in that grid, I'm going to directly procure in order to try to create demand for a project that gets it built that otherwise wouldn't have. And so what's been working is, high level, the scale of that appetite. So 10 years ago there had been very little direct procurement of energy by corporations. You had a retailer, a utility, and you purchase power from them. So sort of circumventing that direct relationship, in order to buy directly from a renewable energy project was effectively brand new a decade ago, and was driven by a change in carbon accounting methodologies that rewarded you for direct procurement of wind and solar. And that has been an enormously successful activity. So I think today, there's been something like 111 gigawatts of renewable energy that has been directly purchased by sustainability buyers. These are non-energy firms who are sourcing energy directly such that it is sustainable. And to put that in context, roughly 90 gigawatts is the entire U.S. nuclear fleet. And so you have direct procurement of more energy than the entire U.S. nuclear fleet, by corporations of renewables. That's globally, not U.S., but it's had an enormous impact. And it's been a, from my perspective, surprisingly resilient source of demand for clean energy. I think there were views, including mine, that that was potentially fragile based off of an economic downturn, or whatever the case may be, that that was sort of a luxury good, effectively, for corporations to be participating in. And with some volatility around commodity markets and other activities, it's pretty much been on a one way trip up where that demand has been growing. So I would say that's something that has been working quite well and looks to continue, on a scale perspective. I think what isn't working as well about that is the industry is somewhat a victim of its own success. When you think about the way procurement is done of renewable energy, historically, it's binary. If you buy wind or solar, it's good. If you don't, it's bad. In reality, there's a huge spectrum of the carbon

impact of your activities. For example, groups like Facebook, who are participating in procurement of energy from energy storage projects, in order to incentivize them to charge when renewable energy would otherwise be curtailed. So there are certain windy hours in certain places, there's basically wind farms that are having to shut down because you don't have enough demand to consume it. So that it is carbon free electricity that is just being shut out of the system. Energy storage can be incentivized to buy that power and turn around and sell it when coal is ramping back up. And that is a demonstrably carbon reducing process, that traditional carbon metrics, accounting and otherwise, give you little to no credit for. In fact, it's not even possible to measure that impact historically. Similarly, the Panhandle of Oklahoma is an area that has had huge success in its growth of renewable energy. To the extent that in a really windy hour, adding another wind farm in the Panhandle of Oklahoma has almost no impact from a carbon perspective, because you're just adding more wind when wind is already being curtailed. So in the absence of storage or transmission, enabling you to build and get that power out of there, your impact is positive but limited from a carbon perspective. Whereas building a wind farm in West Virginia has 300-400% higher impact from a carbon perspective. Historically, that nuance was entirely lost in all success based metrics for carbon reduction. And we see a significant shift towards trying to change that. World Resource Institute, which is the NGO that drives carbon accounting rules, is opening them back up to try to figure out if there are ways to solve that issue. You've got consortiums, like the one announced a few months ago by 10 corporate buyers and investors leading it. But at the front of the pack was Amazon and Walmart and Salesforce and Hannon Armstrong. And they are publicly traded companies who all have significant ESG activities and goals, and they're trying to drive this shift towards more nuanced measurement of success. All of that is a function of trying to drive dollars - investment, purchasing, otherwise - towards the highest impact projects. So I think that's an area that I think we've sort of outgrown some of the more basic metrics that that were the underpinnings of success of this industry, but that we need the next phase for the future.

Brian: Yeah, I think that it's a very complex topic and obviously one that for a lot of individuals scratch the surface, right. But there's so many complexities of it. It's one capturing, it's another storing. I mean, when you look at just as an individual consumer, you had the opportunity at one point to put solar panels on the roof of your house and generate a certain amount of electricity for your home, and now there's storage walls that you can install, right, to capture the excess that you have, and cover the peak times and the load times. I think it's such an evolving piece of who we will be. And we'll get to this, but I'm really curious to know some of your thoughts in regards to what does it look like down the road, but I'll come back to that because I do want to talk about REsurety for a little bit. You co-founded REsurety in 2012, and I'm just curious - what led you to be interested in this space, and actually even just create the company in general? As I mentioned, it's a complex space and there's a lot that's going on in there. What was the driver for you?

Lee: The interest in environmental linked businesses started basically with my parents. My father was an environmental reporter. My mother was a wildlife documentary film producer. I grew up in Seattle, and so in the 80s and 90s, right, the plight of the spotted owl and the king salmon was sort of standard dining room fare. And so the interest in having an environmental

impact in my careers I would say started there. In terms of starting a company, that wasn't part of the plan. I started REsurety out of business school. But if you read my business school essays, I said my definition of success was getting a job in the renewables groups at GE or PG&E. So enormous companies that are sort of the opposite of starting a company. But it was an independent study in grad school that I had done that basically focused on this concept that has underpinned a lot of what REsurety has done to date, which is "How do you accurately predict and manage the value and risk, respectively, of intermittent generation?" So wind and solar have this huge economic advantage, put aside the environmental benefits, of the fact that the fuel is free. It's hard to charge for the wind or the sunshine, and so this risk that traditional energy - natural gas, coal, etc - has to manage, which is that there's a highly volatile cost of your fuel. Renewables don't have that. So you have this significant advantage from a financial predictability perspective. But unlike natural gas and coal, where you can turn the switch on and consume more and burn more and produce more, with wind and solar you can't. And so by hour, month, and year, the variability of your output is changing and absent, an enormous growth in storage is largely uncontrollable, unsolvable. And that has grid, physical grid impacts around making sure that there's enough energy at all times. But it also has very significant financial impacts. So as an example, put yourself in the shoes of a datacenter operator, and you consume 50 megawatts every single hour. And so you buy power from a wind farm in order to serve that load. You get a heat wave where prices go through the roof and wind speeds die. This happens with most heat waves, 2019 being the most recent in Texas, and so you're out in the market buying incredibly expensive \$9,000 power - power in Texas is typically more like \$20 or \$30 - in order to keep your data center running, and you're getting 0 megawatt hours out of the wind farm that you use to protect that. The grid served the power needs during that period physically, but financially, there's a significant risk of that intermittency. And that is one example but it flows throughout the ecosystem, that the wind blowing and the sun shining and obviously the sun comes up and goes down at the same time pretty predictably, but cloud cover is not predictable and has fairly dramatic impacts on aggregate power output from solar depending on where you are in the world or in the country. And so that financial risk was something I found intellectually interesting and something that I felt like I had an opportunity to do something about. I wasn't an engineer, I wasn't going to invent the next solar panel. But this was an area where solving that problem for renewables felt like a necessary step towards the maturity and the growth of clean energy as a whole. And so dove in and rest is sort of history.

Brian: So tell us a bit about REsurety. How do you guys help inform or guide companies that are building clean energy infrastructure? What is your role? Talk to us a little bit about that.

Lee: So when we think of ourselves, we aspire to be the analytics engine of the clean energy economy. And by that, I mean we want to provide the data, the software tools, and the related services that enable the buyers and sellers of clean energy and the ecosystem around them to have simply put best in class information and the tools to act on it. And so that, as an example from a data services perspective, we create and publish location specific, hour specific carbon intensities. So there are hundreds of different sub markets, for example, specifically, in any given grid, where demand and supply is clearing. And depending on if you're a consumer or a generator power in that location, your behavior at that location can have wildly different impacts

versus the same consumption or generation in a different time and place. And so if you put yourself in the shoes of an energy storage operator, you need a lot of data about by location, by hour, how carbon intensive is the grid, such that you can choose to dispatch and schedule when you're going to charge your storage asset, and when you're going to discharge your storage asset, such that you can optimize for and demonstrate your carbon impact. And so as an example, we have APIs where storage developers will access every electrical location in an entire ISO to try to figure out where they should be developing energy storage projects towards the goal of maximum carbon impact opportunity. From a software tools perspective, we have SaaS-based platforms for tracking PPA portfolios, for evaluating an M&A opportunity for a new build project. And those are used by investors, investment banks, etc, towards largely long-term financial decision making. And then we have related services. A lot of times when someone says, "Okay, now I understand my expected value and my risk, but I have more risk in this contract than I want, and so I'd like to find somebody who will hedge that for me. They'll put in a floor, or that'll take the risk entirely off my hands in the form of a financial swap." And so we provide hedging, origination and settlement services towards acting upon that risk exposure that the information side of our business demonstrates. And so I think that's sort of the suite of tools and services that we use to support those buyers and sellers and investors in clean energy today.

Brian: So what do you see the future of clean energy looking like?

Lee: Complicated.

Brian: It's complicated already.

Lee: Yeah, it's already complicated! So I think there's been a view of "what is the answer for clean energy?" Is it that we just need more transmission, or if storage got cheap enough, that would solve the problem. Or if we build enough wind and solar, that'll solve the problem, or if we just start building more nuclear facilities, that'll solve the problem. I think the reality is it is very much an all-of-the-above strategy, and that requires a lot of embrace of that complexity. And I think we talk a lot about this when we think about carbon policy. The goal is we want to make sure the perfect isn't the enemy of the good, as we think about what the future can be and how to build towards that. So how do you strike that balance of pursuing that good and trying to avoid good at the expense of the perfect or, excuse me, vice versa? But also what are the ways that we can drive decision making, whether that's policymakers or commercial buyers who are buying power towards the highest impact that they can have. You should be able to think about, as a corporate buyer, should I be investing in a solar project? Should I be advocating for a transmission line that crosses a place that I have political influence? Should I be advocating for storage to be located at locations I already have wind or solar projects? Each one of those has very different impacts. And I think we have to increasingly think about the world in that highest efficiency towards the end goal - decarbonization - because I think there's very clear agreement amongst the ESG leaders in the renewable space, that we need to get to a point where the grid as a whole is carbon free. That every hour you are consuming carbon free electricity. At the same time, the path to that, there are very different efficiencies of the path to get there. And by

efficiencies I mean how long it's going to take us. Are we prioritizing the highest impact opportunities first? And that comes down to a combination of the tools that we and others are aspiring to build and have already built, as well as from policymakers setting up, quote, unquote, "sticks and carrots" to reward the highest impact behavior.

Brian: 2012 RESurety started, so it's been 11 years now since you started that company. How would you rate the advancements in this space in those past 11 years and where do you see the next 10? Will we notice significance in the way in which people approach this topic about the impacts of sustainability and carbon neutral and all of those conversations? Do you see it growing it at a similar pace or do you see it being accelerated based on some of the changes that we're seeing through whether it be politics or is the focus that we're seeing from individual companies and businesses?

Lee: On the one hand it's been amazingly fast, right, in that when you think about how much renewable energy existed a decade ago, and who was buying it. The idea that these corporate buyers were leading - of those 110 gigawatts that corporate leaders have purchased today, I don't know what the answer was in 2010, but I suspect it was single digits. So there's been an enormous change over that period. But I think from where we are on a progress towards a viable level of global warming, it's also not happening fast enough. So I both anticipate and think it's a requirement that it accelerates going forward. And there are good reasons, I think, to believe that it can and should. One of them is technological. Over the last 10 years, wind and solar has become incredibly cost effective, compared with thermal power, especially true today when you have elevated prices of fuels like natural gas. But we've seen, more recently, and we are much further earlier in that cost curve, cost of energy storage coming down simultaneously. And so 10 years ago, you almost had to guarantee that you were paying a significant premium towards your next best alternative. Whereas today, in many cases it's an economically irrational decision to build a coal or gas plant instead of a wind or solar project. And that means that rather than the market being driven purely by the subset of folks who are willing to pay that premium where it was required by state mandate, it's now pure economics driving that, and that's a dramatic accelerant. I also think we didn't get a whole lot of policy support out of the Trump administration, to put it mildly, but we've already seen fairly significant shifts in that with the Inflation Reduction Act, as well as the infrastructure bill. There is now a significant amount of tailwind behind the clean energy industry that will drive that acceleration. And I think also just lastly, the participation, as you mentioned, by consumers, and that rolling up into the ambitions of corporations. When we think about the announcement I mentioned in the Emissions First Partnership from December, where it was 10 groups that came out and announced that we have to change the way we do carbon accounting in order to incentivize highest impacts. I think it's really notable that those are 10 private companies, those are not NGOs, focused on this area. And so you see the level of advocacy and engagement, thought leadership, and aggressive activity by corporate actors. Tying out to the comment I made about an economic tailwind as opposed to purely policy or goodwill, I think those all combined for tailwinds that give me a lot of optimism. But we have a lot of work to do because we do have to accelerate and we are running out of time to do so.

Brian: Yeah, I think it's a really interesting topic, and we could go on for a long period of time because there's a lot of opinion on both sides of the conversation. But I think at the end of the day, we all have this responsibility to leave the planet better than the way in which it was delivered to us. And I think there's no doubt that we can't argue that there are significant changes that are happening as a result of global warming. And much of this, the answer to that is renewable energy. And I applaud the work that you're doing. I appreciate this conversation. No doubt, it's a complicated conversation. But I thank you very much for being here and appreciate our time. And we will have you back to talk through some of the advances that we're seeing and some of the changes that we're seeing, but thank you very much. Really appreciate the conversation.

Lee: Appreciate it, look forward to round 2. Maybe 10 years from now we'll do the lookback.