

A New Angle

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Justin Angle: This is A New Angle, a show about cool people doing awesome things in and around Montana. I'm your host, Justin Angle. This show is supported by First Security Bank, Blackfoot Communications and the University of Montana College of Business.

Justin Angle: Hey, folks, welcome back and thanks for tuning in. Today's guest is Shannon Hughes, strategic communications manager at RMI, an international organization working to transform global energy production with market-based solutions.

Shannon Hughes: We are the data nerds. We are really focused on making sure that the data that informs climate solutions is objective, verifiable and accurate.

Justin Angle: Shannon's purview is supply chain, a significant source of carbon emissions. As a communications expert, she is focused on making this complicated topic more digestible to a broader audience. Given the pandemic induced salience of

supply chain in all of our lives, Shannon and her RMI colleagues have a great opportunity to raise awareness of the climate implications of how we move stuff around the globe.

Justin Angle: Shannon, thanks for coming on the show today.

Shannon Hughes: Yeah, my pleasure. Thank you very much for having me.

Justin Angle: Of course. So, tell us, where did you grow up and what did your parents do?

Shannon Hughes: I grew up about 15, 20 minutes north of Boston. I was born in a little seaside town called Marblehead and then mostly grew up in Lynnfield, Massachusetts. Not a camping, hiking, fishing on the weekends person, very much taking walks in the city, going to art museums. My father was a dentist, and my mother was a dental hygienist, so...

Justin Angle: That's a good match.

Shannon Hughes: Yeah, a lot of focus on clean, pearly whites, but I fell in love with skiing when I was really young. On family vacations, it was, you know, we would go a handful of times a year, but I just fell in love, not with just the skiing, but being in the mountains and the quiet you can find there. So, I went to college at the University of Vermont, where I studied English literature, and I met a boy who was going to be a rafting guide outside of Glacier National Park the summer after we graduated. And so, I came out in the summer of 2002 thinking I would stay for a summer and work on Purple Frog Gardens, which is a small organic farm up in Whitefish. And here I am.

Justin Angle: Here we are.

Shannon Hughes: Sitting in your studio.

Justin Angle: Yeah. Years later. You put that English Lit degree to work in branding and other communications and creative work. Talk about kind of how you've approached making decisions in your career to where you are now.

Shannon Hughes: I mean, really the biggest takeaway is from the English Lit degree was just the deep analysis of information and being able to draw a deeper meaning, being able to tell an effective story. And I think that that's frequently overlooked. No

matter what the work you're doing, you're going to have to be able to communicate the value of that work to other people in a way that moves them. So, I came out here intending to be a farmer. That is incredibly hard work as I found out through my few summers of doing that while also working on Brian Schweitzer's campaign for governor. So, I had the good fortune of working on that campaign that was run out of Whitefish and worked on a lot of the campaign messaging, then had the great opportunity in my early to mid-twenties to actually go to work in the governor's office in Helena. Ended up doing some really interesting work marketing in the Office of Economic Development, kind of cut my teeth on marketing and also understanding the world of energy development a little bit better in that role.

Justin Angle: Sure. And you must have honed some of that skill, too, on the campaign trail with Governor Schweitzer just learning how to connect with people, position him as a candidate, all those things.

Shannon Hughes: I learned a countless amount. Brian was a natural communicator. He was a natural connector. He was incredibly good at relating to people and talking to people. We didn't have to do a lot of heavy lifting as his communications team. We just didn't he was naturally good at understanding what was going on for people and talking to them in very real terms. The policy, of what he wanted to do for the people

of Montana, he really always focused on how it would impact them at their kitchen tables.

Justin Angle: Yeah, I often feel like sort of the policy debates often are similar to climate debates in a way. They're like an information model of exchange and information is not going to change hearts and minds, whereas that connection and story and what does this do for me? How does it improve my life or the lives of those I care about? It's much more salient to folks.

Shannon Hughes: Absolutely. We all have ourselves or our families to feed. We have to keep shelter over our heads. You know, we have Maslow's hierarchy of needs, right? That's a very real thing.

Justin Angle: Yeah.

Shannon Hughes: I think where we have not had a lot of traction in the climate argument is when we try to hit people over the head with the data and the science, which is, you know, that's absolutely the world I work in. [00:05:17] Right, is the deep analytical data around emissions and where they're coming from and supply chains and what we can do about them in the supply chains with better purchasing decisions.

But yet the average person doesn't care about that, right? They care about what's actually happening outside their window, what's happening with their crops, what's happening with their water supply. [24.3s] And so you have to break everything down to that relatable level. And a lot of the work that we do in climate intelligence is, you know, there are policies, rules and regulations that are driving a massive shift in industry towards decarbonization and towards a safer climate future. But what are the people who need to make the big decisions, what do they need to know to make their jobs easier, to make their lives easier, to give them the right information, to make accurate decisions and know that they're adding value to their company, to their teams. What helps them sleep better at night?

Justin Angle: Yeah, so we'll get into all of that. Tell us before we do give us a little bit more about RMI. Yeah, but what is Rocky Mountain Institute and give us the little brief history.

Shannon Hughes: Sure. Rocky Mountain Institute just turned 40 this April. It's a nonprofit organization. It was founded by Amory Lovins 40 years ago in Colorado. And it was largely focused on energy efficiency and the energy transition. And we are now 12 distinct programs dealing with very distinct solutions areas we operate around the world. We have teams in China and India, islands in the Caribbean. We have offices in

Basalt, Boulder, Oakland, DC and New York. So, we rebranded a couple of years ago simply as RMI, when we've formally been known as Rocky Mountain Institute, because in some ways we kind of outgrown that Rocky Mountain.

Justin Angle: The globe is a lot bigger.

Shannon Hughes: Yeah.

Justin Angle: And so, and you join the team nine, ten months ago, something like that?

Shannon Hughes: Six or seven months ago, September 27.

Justin Angle: Yeah, what prompted that move? Like, why was this the right place for your next phase?

Shannon Hughes: I have felt a personal level of climate grief and climate anxiety most of my life. To be honest, it was something I learned about when I was ten or 11 years old. It was astounding to me that this, what we were calling global warming at that time was something that could happen and the adults in charge weren't necessarily

going to do anything about. And, you know, at that time, for me, it just meant less winter, less snow.

Justin Angle: Sure. And your love for skiing and that. Yeah. It must have felt like a real threat at that age.

Shannon Hughes: Yeah. Just the peace and quiet that comes with snow. You know, as a little kid, I really craved peace and quiet. I liked to read. I liked to walk in the woods and really enjoy that silence. And I've always felt sort of a, you know, a connection to the natural world in that way. And but I think I just sort of shoved that feeling down as I got older, and I didn't really want to have to face it head on.]And then eight years ago, to have an eight year old daughter came into the world, and my personal sense of responsibility, combined with my sense of responsibility as a mother, kind of just came to the forefront in making career decisions. And I opted to transition out of a marketing and agency studio I had owned called Spur Studio into more purpose driven work. And I saw this opportunity with RMI. RMI began growing exponentially. The role for climate intelligence, when I read that job listing, it felt like it had been written for me. It just seemed like too great of an opportunity to not go for. And I went for it as hard as I possibly could, and I ended up landing the job.

Justin Angle: Yeah, and here we are. So, let's talk about supply chain. So, you work a lot in supply chain, it seems like outside of COVID and inflation, supply chain is just in the news all the time, but it's mostly around like why we can't get the stuff we want. You think about it at a very different level, not necessarily a very different level, but like the climate implications of supply chain are enormous and they're not really well quantified. Is that correct?

Shannon Hughes: It's very much correct. And first of all, I don't think any one of us could have ever foreseen supply chain becoming sexy. To be honest, I was largely unaware of that term as of a few years ago. And now we just see it everywhere all the time because it's having very real disruptions on our lives. I think that awareness due to the disruptions has a real upside in that in order to really make net zero targets, we have to deal with the emissions that happen all the way throughout our industrial supply chains. So, what that is dealing with is what's called Scope 3 Emissions.

Justin Angle: Scope 3. Okay, we're gonna have to define that.

Shannon Hughes: Right now, the ability for a company to come up with their carbon footprint, right, we hear that term a lot. That's kind of a recognizable term is largely

based on what's called Scope 1 and 2, which is the emissions from their power and heat that are produced either onsite or purchased from the grid.

Justin Angle: I see.

Shannon Hughes: What that doesn't account for. Scope 3 Emissions is sort of all the other stuff. Right. So, a company has people traveling, business travel. Right. They have shipping for their packages. They have all of these other emissions related to the products and services that they sell to consumers that are not accurately accounted for right now. The work we're doing at Climate Intelligence is really working to standardize the data behind those emissions calculations by making emissions more visible in real time with remote sensing technologies and satellites and then being able to actually pinpoint emissions throughout an industrial supply chain from raw materials extraction all the way to a product level, so that a large corporation, you know, like an Amazon or a Walmart, can make purchasing decisions that actually allow align with their announced climate goals.

Justin Angle: I see. It sounds like you're trying to create some sort of a prescriptive tool, in a way? So if Amazon was trying to make a decision on where to source a particular product, like a set of steak knives, there's a world in which they could make

decisions not just based solely on price and speed of delivery, but also the emissions ramifications of that purchase from where they bought it and who that person or who that entity had made it from, like all of those pieces can be quantified?

Shannon Hughes: Correct. Right. A system that allows that, as well as allows the steak knife manufacturer to actually source the raw steel with the lowest emissions intensity.

Justin Angle: Mm hmm.

Shannon Hughes: So that everyone's kind of looking at standardized data, the same data. That we're all working from the same playbook, I think, is the simplest way to say it.

Justin Angle: Yeah. And then I would suppose like a buyer with the power of an Amazon, or a Wal-Mart could then push that expectation upon the manufacturer. Hey, if you're going to work with us, you got to, you know, source it from ethical sources or have minimal emissions in your downstream supply chain or upstream, I should say.

Shannon Hughes: Yeah. I mean, I think we would like to believe that some of the world's largest corporations have a strong demand signal that they can put out into the world and ask for products and materials that better align with their announced climate goals.

Justin Angle: We'll be back to my conversation with Shannon Hughes after this short break.

Justin Angle: Welcome back to A New Angle. I'm speaking with Shannon Hughes about supply chains and climate change.

Justin Angle: And so, what does this look like? As far as, you know, I know RMI is dedicated to market-based solutions. If you all are kind of working on how to compile this data, how does that go from development and research within a nonprofit to adoption by corporations or maybe policymakers? How does it kind of get operationalized eventually?

Shannon Hughes: So, what we really focus on is making the emissions data more visible. And then standardizing that data to remove the guessing and subjectivity. We

largely are sort of like the data providers and how we would aspire for a corporation to use it would be to make purchasing decisions that better align with climate goals.

Justin Angle: Okay.

Shannon Hughes: How we would aspire for policymakers is to use that standardized, clear data to drive rules and regulations around what we call climate differentiated markets. Right. So, I think one of the best examples we can use is how we're creating climate differentiated markets for oil and gas. Which is one, making the emissions related to oil and gas operations and production much more visible with satellites and remote sensing technologies, but then dispelling the notion that oil and gas is one standard commodity. Right. There's huge variability in oil and gas depending on where it comes from and how it's refined, produced and delivered to consumers. So, the first thing that we are really looking at is, is modeling these various oil and gas sources to understand the emissions intensity so that as we make the transition to renewables and cleaner energy, we have options now to use the least climate intensive oil and gas.

Justin Angle: Sure. Okay. So, you're focused on the data and making these data transparent. Who are who are the consumers of your data?

Shannon Hughes: It's, you know, those industry stakeholders in the oil and gas world and in the corporate world, sort of like the sustainability leads who are working, you know, see C-suite executives to drive purchasing decisions and operations decisions that will have an impact on climate. It is the policymakers who are really needing more pinpoint specific data to regulate and create legislation for specific industries. And it is investors and finance entities. So, the S.E.C. recently announced that climate risk is now going to be considered in investments. So, they will be looking at it to ensure that investment portfolios actually align with climate action and to really assess that climate risk of various projects in their portfolio. And then ultimately, what we hope is to be able to come up with sort of this, you know, carbon tag of sorts for individual products so that, you and I...

Justin Angle: That's like the holy grail of all this, right? Like a nutritional information tag for climate.

Shannon Hughes: Yep. So that you, you know, so we put power in the hands of the individual consumer who can kind of make these decisions about purchasing goods, consumer goods that best align with their values.

Justin Angle: So just back for a moment to Scope 1, Scope 2 and Scope 3. And I'm sure it varies across industries and even within industries. But do we have a sense for like how big a problem Scope 3 is relative to Scopes 1 and 2 in general? Because I think this is maybe a problem, as you say, it's not accounted for in any of the current reporting and certainly probably not accounted for in many customers' minds. How big a problem is it?

Shannon Hughes: The calculation we use is that s, Scope 3 emissions are approximately 11 times higher than Scope 1 and 2.

Justin Angle: Wow. One and 2 combined.

Shannon Hughes: Yeah. Because it's all the things that are really not being factored in. I mean, the emissions, the oil and gas industry emissions that come from like combustion at a power plant are actually fairly small compared to all of the upstream emissions from the supply chain.

Justin Angle: The extraction, transportation and all of that.

Shannon Hughes: Right. And that's sort of across the board for all industries. Right.

There's just so much we're not looking at because it's been really challenging to look at it. It's been really challenging to identify exactly where those emissions are coming from and how do you attribute those emissions along the supply chain. So those are the issues that we're looking at solving at Climate Intelligence.

Justin Angle: So, the supply chain disruption has spawned a lot of discussion about relocation of manufacturing. So, Ford, for example, it couldn't get microchips. So, they got a bunch of F-150s sitting on a lot, right, for a year. So, they're going to make a microchip factory, you know, in the United States. So, some manufacturing becoming, you know, more domestic to the customer base. That would seem to reduce at least some transportation costs that could go into emissions. Maybe it has other negative externalities that I'm not thinking of, but it seems like relocation in some ways could provide some ancillary benefits to climate.

Shannon Hughes: Sure. I mean, the less you have to move stuff around, the fewer transportation emissions you have associated. And that's you know, that actually goes back to some of Amory Lovins original thinking behind RMI about, you know, systems thinking and systems design. Right. How do you create integrated systems, whether

that's for your energy production or manufacturing, really carefully thinking through all the steps required?

Justin Angle: Yeah. And I would suppose the transparency about it, like some firms are probably making decisions without really the awareness of how much product or ingredients bounces around before it gets to their distribution center or their store.

Shannon Hughes: Oh, yeah, absolutely. I mean, the work that we're doing on climate intelligence really is groundbreaking in a lot of ways in that there hasn't been this level of transparency and emissions visibility before. And so, a lot of decisions have been made without factoring in some of this climate impact and emissions data. But, you know, we're hoping to change that rapidly.

Justin Angle: Do we have any kind of success stories of firms that have been making those decisions differently based on new data that have become available either from you or from other shops?

Shannon Hughes: I would say the best example we have are oil and gas producers like Exxon, BP and Shell, who are using the MIQ Natural Gas Certification Standard. It's an independent, nonprofit entity founded by RMI with Systemic. And what it does is it

allows for a grading of natural gas fields, essentially. So, we're looking at real methane emissions reductions in those gas operations. And it has been able to show where Exxon, for example, is making real world on the ground changes to reduce their methane emissions. And, you know, use that as the standard for the rest of the industry to kind of strive towards.

Justin Angle: So, let's talk about blockchain a little bit. You and your colleagues are out with a relatively recent publication on how blockchain can really make advances in how these emissions are quantified within a supply chain. Make that case. Like how is blockchain a tool for better transparency, discovery and documentation?

Shannon Hughes: Without going too far down a rabbit hole, Blockchain is distributed ledger technology, where independent operators have the ability to verify transactions and verify the accuracy of the information in the blockchain. So, we are looking at using blockchain to pair emissions attributes with actual steps in a physical supply chain so that as a product advances through the supply chain, the emissions attribute would travel with it and the distributed ledger.

Justin Angle: So almost like an individual carbon footprint for every little step in the supply chain that gets documented with it as it happens.

Shannon Hughes: Right. And it could be, you know, it's open source. So, it can be actually independently audited and verified. So, it's not just one person or entity kind of holding the keys to that information and allows for verification on how emissions have been calculated and attributed that hasn't been possible previous.

Justin Angle: Sure. And then there's the rub of like, well, blockchain technology itself is hugely energy intensive. Is there new thinking around that?

Shannon Hughes: Yeah. First of all, I want to clarify that blockchain technology is not cryptocurrency, right?

Justin Angle: Nobody's mining blockchain in general.

Shannon Hughes: Right. So, two different worlds, but obviously using the same sort of base technology. There is blockchain technology that is far less energy intensive and far less emissions intensive as a result. So, I think what might be more helpful is for me to speak about the work Climate Intelligence is doing to decarbonize the cryptocurrency world, which is the Crypto Climate Accord, which was released last year, has over 250 miners signed up with the goal of switching cryptocurrency to

100% renewables. Given that crypto largely functions on the existing grid, right, there's not a deep manufacturing process that needs to be decarbonized. There's actually a lot of opportunity to sort of decarbonize the industry as a whole by focusing on renewables development and procurement within that industry.

Justin Angle: Okay.

Shannon Hughes: So that was kind of a rabbit hole answer.

Justin Angle: I don't know, you dug your way out of the rabbit hole.

Shannon Hughes: Yeah. Blockchain technology in of itself is not incredibly energy and emissions intensive.

Justin Angle: And, you know, there is some argument that as the world, and it was blockchain and bitcoin and Ethereum and all these crypto adjacent or immersed technologies sort of gained steam, that it will drive investment in renewable energy sources because of that energy intensity. We'll see if that plays out those ways. But that would be one possible market-based solution to renewables.

Shannon Hughes: Yeah, again, great opportunity to create a demand signal for more clean energy development and the grid infrastructure to get it to consumers.

Justin Angle: Yeah.

Shannon Hughes: You know, that seems like that's largely how our global economy functions is we create clear demand and then we get the supply to meet that demand.

Justin Angle: So, let's talk more broadly in a remaining minutes. Just, you know, tell us more about Climate Intelligence and what else, what other things are in the scope of your subgroup within RMI?

Shannon Hughes: We are the data nerds. We are really focused on making sure that the data that informs climate solutions is objective, verifiable and accurate. So that will continue to be our focus in the oil and gas initiative, working with, you know, industry stakeholders. And in that world, it will be continue to be the focus in the Supply Chains Initiative, which is working with, you know, largely with the blockchain technology. And then we also have a carbon markets initiative that will be launching to improve the transparency, quality and liquidity of carbon markets.

Justin Angle: And that means like offsets and things like that.

Shannon Hughes: Just making sure that...

Justin Angle: So, you actually know what you're buying when you offset or flight or whatever.

Shannon Hughes: Yeah, ensuring that an offset actually results in carbon emissions avoided or removed in the atmosphere instead of allowing it to be sort of a, you know, a marketing ploy.

Justin Angle: Sure. So, like we said, you've been with RMI a short time. It seems like it's going to stick and in a short tenure. Tell us your biggest takeaways. What were the biggest lessons that you've learned in this new role?

Shannon Hughes: The biggest takeaways for me are, one, there's a lot of personal fulfillment in doing this type of work. It is hard, it is complex. Even, you know, as you've seen on this podcast, I still am wrapping my head around a lot of the very complex solutions that we're working on. But the biggest takeaway is you have to make it relatable. You know, that piece we talked about in the beginning is what are the real

problem solution sets that we're delivering on? And the other big takeaway is this is a marathon of a fight, right? It's not something you just work on for a while, put into the market and then focus on something else. It takes perseverance and it takes endurance. And there's a significant need for RMI as a whole, for the people to take care of themselves and really make sure that we're ready for a marathon and not a sprint. And I think that RMI as an organization does an amazing job of taking really good care of its people.

Justin Angle: Yeah.

Shannon Hughes: For that, for that reason. And there's a lot of focus on making sure that we all still feel connected, even though there's a lot of remote work and hybrid work. And so, you know, when you talk about making things relatable and bringing it down to that individual level, I think that that's not just about how marketing and communications works, but it's about how a company culture works and how effective we are as an organization by celebrating each other's successes.

Justin Angle: Sure.

Shannon Hughes: And acknowledging the challenge of this work. And acknowledging the emotional weight of some of this work and having our eyes on the on the climate dashboard at all times.

Justin Angle: That makes good sense. And we're grateful for folks like you doing this work. So, Shannon, thanks for spending some time with us today and good luck as this job unfolds for you. And we'd like to hear more from you in the future.

Shannon Hughes: Yeah, thank you very much, Justin. It's been a pleasure.

Justin Angle: Thanks for listening to A New Angle. We really appreciate it. And we're coming to you from Studio 49, a generous gift from UM Alums, Michele and Loren Hansen.

Justin Angle: A New Angle is presented by First Security Bank, Blackfoot Communications and the University of Montana College of Business, with additional support from Consolidated Electrical Distributors, Drum Coffee and Montana Public Radio. Keely Larson is our producer. VTO, Jeff Ament and John Wicks made our music. Editing by Nick Mott, social media by Aj Williams, and Jeff Meese is our master of all things sound. Thanks a lot, and see you next time.