

National Carbon Manager at Skanska

Mark Chen | Transcript

Charlie: Welcome to Green Building Matters, the original and most popular podcast focused on the green building movement. I'm Charlie Cicchetti, one of the most credentialed experts in the green building industry and a LEED fellow. Each week, I welcome a green building professional from around the globe to share their war stories, career advice, and unique insight into how sustainability is shaping the built environment.

Today we have Mark Chen, the national carbon manager at Skanska in the Seattle area. Mark, welcome to the podcast.

Mark: Thank you for having me, Charlie.

Charlie: We've got some mutual friends in the industry, including Jimmy at Skanska. I'm excited to hear about your team's latest work. Let's start with your origin story - where did you grow up and go to school?

Mark: I grew up in Southern California in the Pasadena area, which is currently experiencing wildfires. I'm now based in Seattle where I've lived for over a decade. I came here for school at the University of Washington, got my degree in civil engineering, and entered the construction industry.

Charlie: Thank you for sharing that and our thoughts are with everyone affected down there. Let's talk about when you first became sustainability-minded.

Mark: My interest in sustainability stemmed from my childhood in Southern California. Air quality has long been an issue in the greater Los Angeles area, and I grew up with asthma. The human health impacts of the environment and sustainability were very real for me. Looking out the

window at the smog, I kept thinking, "Why does it have to be this way?" My parents also had inherent sustainability values which influenced me.

As I continued through my civil engineering degree, I learned more about the built environment's impact on our world. This interest evolved into a passion. Looking at our industry, I saw tremendous opportunities for improvement.

Charlie: By the time you were entering the construction industry - when I got out of Georgia Tech and joined a GC in Atlanta - we weren't really talking about carbon and titles with "carbon" in them. Maybe LEED was on the scene. Could you tell us about your first experiences with LEED projects?

Mark: I took a green buildings class in college that focused on LEED certification. Then at my first position with a commercial general contractor, we had several projects pursuing LEED certification. I earned my LEED Green Associate credential to ensure I understood the system. In my current and previous sustainability roles with Skanska, LEED remains an important part of what we do.

Charlie: Well, I love that word 'gnarly', but considering the processing power of a smartphone nowadays, it's fascinating to think about what's needed for data centers and AI. You were ahead of the curve with machine learning. You made a leap to Autodesk for over 10 years, which got you involved with not just computation but building aspects. What brought you to Autodesk?

Mark: What brought me to Autodesk was their desire to harness computational power becoming more accessible through the cloud. Given my experience in leveraging large computational systems, I was brought on to help understand and create novel ways to use this burst of available computing power to improve engineering applications. I moved to Autodesk

specifically to foster the use of advanced computational methods in pursuit of better engineering designs.

Charlie: That was important timing. Revit had been around for several years as just one component of Autodesk's tools, and you were helping speed everything up. Looking back, were there any mentors who influenced your journey?

Mark: Absolutely. In my early days at Turner, the preconstruction department team members taught me a lot, including how to have fun on the job. At Skanska, our former director of sustainability, Stacey Smedley, who pioneered the EC3 tool and is now executive director of that nonprofit, was a huge mentor. I learned from her weekly and feel lucky to have worked directly with someone so ahead of the curve.

Beyond these key mentors, I've had many colleagues at Skanska who've taught me valuable lessons and helped build strong relationships, particularly on the sustainability side.

Charlie: That's exciting. I know Stacy well and her push on embodied carbon has been transformative. We've seen that shift in buildings - not just operating carbon and energy efficiency, but embodied carbon during construction. What are some of your proudest accomplishments so far?

Mark: The Microsoft campus modernization project in Seattle was where I really cut my teeth. Working alongside Stacey at the beginning, I learned much of what I do in my day-to-day job now. That project stands out as one I'm most proud of. Additionally, my current role as National Carbon Manager is essentially my dream job. I truly enjoy what I do and find it extremely interesting.

Charlie: I love that. Credentials and trade organizations have helped my career - I've taught many LEED prep classes. What are your thoughts on credentials and trade organizations? Any recommendations?

Mark: Early in my career, I volunteered with the International Living Future Institute (now Living Future) in Seattle. Similar to your LEED training experience, we focused on education around the Living Building Challenge and green building certifications. It provided both educational opportunities and valuable connections that I maintain today. For listeners, volunteer work offers dual benefits: learning and networking with like-minded professionals.

Charlie: Let's talk about your present role. National Carbon Manager is an impressive title. Tell us about how you got there and more about Skanska.

Mark: My work centers on two main areas. First, Skanska has committed to reducing our greenhouse gas emissions by 70% by 2030 compared to our 2015 baseline for scope one and two emissions. By 2045, we aim for net zero across scopes one, two, and three. I handle data collection, analysis, and greenhouse gas emissions accounting for our U.S. operations, developing annual climate plans to reach these targets.

Mark: Second, I provide project support. We offer consulting services for clients with their own carbon emissions goals. I work on specific projects where clients want to account for and reduce their carbon footprint.

Charlie: Skanska is consistently recognized as one of the world's top contractors. Looking at your bio - Living Building, Zero Carbon, Passive House - these are elite programs. While LEED remains valuable and is undergoing updates, you're taking sustainability further. How do you approach embodied carbon and greening up construction sites?

Mark: Embodied carbon encompasses all upfront carbon emissions from constructing a building - from raw material extraction through manufacturing, transport, and installation. At construction sites, we're pushing for alternative clean fuels, particularly renewable diesel. Long-term, we're researching all-electric equipment and hydrogen-powered

vehicles. For material transport, we're considering distance in sourcing and exploring alternative transportation modes.

We're also implementing these initiatives as part of our climate commitments. By 2030, we aim to reduce emissions by 70% from our 2015 baseline, and achieve net-zero across all scopes by 2045.