

LETTER FROM THE PUBLISHER

Dear Reader,

Welcome to a brand new report for Business Sector Media! Over the years we've published Awards Reports featuring the products and projects that are moving the sustainability and energy management industries forward — and those reports are useful for sharing innovations and ideas that will help you make decisions about your own initiatives. But products aren't made in a vacuum, and projects don't implement themselves. Exciting changes in the industry can't happen without the visionary people driving them.

That's why we're proud to launch this E+E 100 Report. It's an opportunity to learn from some of the movers and shakers who are making a difference. They're improving their companies' bottom lines while ensuring that the world we live in continues its transformation into a more wonderful, sustainable place for future generations.

It was particularly exciting to meet so many of the E+E 100 honorees at the 2019 ELEMCON in Denver last month. Better yet, our editors had the chance to sit down and pick the brains of more than 20 honorees. During these interviews, business leaders generously shared challenges they've overcome, lessons they learned, sound advice, and more. Check out the Spotlights throughout the report with their stories.

Let's not forget about the full 100. While the Spotlights feature those we were lucky enough to meet at the conference, the rest described in the report are equally innovative and have plenty to share. We hope that, no matter what your industry, there's someone here who inspires you.

And if you feel that we left someone out, stay tuned for our 2020 call for submissions later this year. We're always looking for new innovators. Nominate yourself or a colleague — we can't wait to hear from you!

Sarah Roberts
Publisher
Business Sector Media



JOE ADAMS

Corporate EHS Director,
Stanley Black & Decker

Adams is a member of the CSR team at Stanley Black & Decker. Under his leadership, the team committed to becoming operationally carbon positive, sending zero waste to landfill, and setting and achieving context-based water targets by 2030. In 2019, the first year working toward these goals, Adams and his team eliminated 113,240 tons CO₂e from the company's operations and transformed a quarter of their global operational footprint into zero waste to landfill.



ABDULATIF AL-SHAMI

Yanbu Refinery Manager,
Saudi Aramco

Al-Shami works on optimizing operations to drive continuous improvement, promotes "think outside the box" solutions for optimization, and empowers employees to implement their innovative ideas. He focuses on safety and the environment, along with economic benefits. As department manager, Al-Shami was instrumental in the acquisition of the following certifications: ISO 50001:2011, a certificate for the YRD energy management system for the department, and certified energy managers from AEE for employees.



ELENA ALSCHULER

Director of Real Estate
Strategy, View

Alschuler directs real estate strategy for View, which makes smart self-tinting windows designed to reduce glare and heat, improving the energy efficiency of buildings by 20%. Previously she worked as a building technologies project manager at the DOE. For View, Alschuler's efforts to scale up View Dynamic Glass in the office and multi-family sectors contributed to 40% volume growth, 100% price growth in target market segments within the first year. She also ensured successful resident leasing and onboarding experience for View's first installation in a multifamily building, a 450-unit Greystar property.



MARK ANDERSON

CEO and Founder,
Icarus RT

Anderson has spent more than 35 years in energy and environmental project engineering. He was project director and engineer for the 29-MW Chevron BrightSource solar-to-steam project in Coalinga, California. He also provides recommendations to the US Trade Development Agency. His participation in a mission to Morocco led to a 5-MW pilot PV plant that was granted more than \$600,000 by the US. Anderson leads Icarus RT, a new hybrid solar photovoltaic/thermal energy storage system.



BRUCE ARMITAGE

Energy Manager,
Tahoe Resources
(formerly Lake Shore Gold)

Armitage has achieved annual, verified, persistent energy savings of more than \$12 million despite being in a challenging and energy-intensive industry. He created an industry-leading holistic and sustainable energy management program for a precious metals mining company that has gold mines in Canada, Guatemala, and Peru. An energy incentive program rewards employee ideas. His energy management plan, emphasizing baseline data and achievable goals in conservation, saved more than 8,500 MWh of electricity in 2018.



DAVID BERTORELLI

Director of Environmental
Sustainability, Mastercard

Under Bertorelli's guidance, Mastercard became the first company in the payments industry to have Science Based Targets approved by the SBTi, committing to a 20% emissions reduction in Scope 1, 2, and 3 by 2025 against a 2016 baseline. In 2017, they reduced Scope 1 and 2 by more than 23% and Scope 3 by more than 35%. The company achieved 100% purchased renewable energy. In 2018, Mastercard surpassed their waste diversion goal of 75% at owned facilities.



JIM BELBAS

Director Operational
Excellence and Energy,
Berry Global

Belbas directs operational excellence and energy for the global plastic packaging products manufacturer's engineered materials division, and is corporate leader of their Unplugged energy reduction initiative. He shares hundreds of best practices from Berry manufacturing sites ranging from LED lighting to fixing compressed air leaks to converting DC to AC motors. At the end of every email, he reminds employees that the cheapest kilowatt-hour is the one that is never used.



ANNIE BEVAN

Global Head of
Sustainability, Superior
Essex Communications

Bevan helms global sustainability for Superior Essex, which makes cables and technology products for the communications industry. She works with major telecoms, including AT&T and Verizon, on sustainability leadership. In addition, she is educating the market on the value of sustainability, and aligning with the evolving IoT market to help Superior Essex become a market leader in showing how smart building can support green building initiatives — including energy savings, improved productivity, and well-being in the built environment.



SUTAPA BHADURI
Sustainability Global
Leader, Owens-Illinois

About four years ago, glass bottle manufacturer Owens-Illinois asked Bhaduri to revive sustainability activities. She revamped the enterprise-level sustainability platform, created a strategy that aligns with their corporate strategy, and performed an ISO-compliant LCA study for the glass manufacturing operation. Under her leadership, OI received Cradle to Cradle Certification and raised their CDP score in 2018. She convinced the C-level executives to set a Science Based Target, and is leading a renewable energy procurement project.



AMY BOND
Energy and Sustainability
Program Manager, Sprint

Bond was instrumental in securing Sprint's first virtual power purchase agreement (VPPA), which provides benefits to the company including the generation of up to \$23 million (NPV) in positive cash flow over 12 years, establishment of an indirect hedge against the rising cost of energy, and enhancement of Sprint's corporate reputation. She is also advancing sustainability initiatives across Sprint, such as CDP, waste stream management, electric vehicle charging, a bicycle program, and water reduction.



SPOTLIGHT INTERVIEW

AMY BOND

Energy and Sustainability Program
Manager, Sprint

Telecommunications company Sprint has worked hard to itself as a corporate leader in terms of renewable energy in recent years. One of its most recent initiatives includes a virtual power purchase agreement that positions Sprint as a key investor in a new wind farm that, among other benefits, will help the company hedge against the rising cost of energy. Bond played a key role in that project as well as multiple other sustainability initiatives.

What is the biggest challenge you have faced in the last year or two?

We've been working on a virtual power purchase agreement (VPPA). These are challenging contracts with deep internal education needs. Keeping up momentum with business units and colleagues who already have a full plate of "normal" responsibilities is no small task.

How have you addressed that challenge?

I'm delightfully persistent. Just own your leadership role and keep smiling.

Communicating with our internal business colleagues and moving the VPPA along involved visualization: showing them how it would work. We did a lot of graphics, showing how a company could potentially get revenue from the

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project. Once you don't feel dumb about something, you're willing to learn more. Nobody likes to feel uninformed.

What advice would you give other professionals as they try to accomplish their sustainability or energy management goals?

There are only three things to remember. You must persevere. You must do the work. Because every win is a win for everyone. 🌀



JEFF BROIN

Founder, Chairman, and CEO, Poet

Broin has led biofuels producer Poet from a single bioprocessing plant in Scotland, South Dakota, to 28 plants in seven Midwestern states. Poet's facilities have a combined annual production capacity of 2 billion gallons of ethanol. Broin believes that agriculture rather than fossil fuels can meet many global needs. His company produces 10 billion pounds of animal feed plus value-added co-products. Jive is a renewable nontoxic asphalt additive derived from Poet's BPX process.



MARK BRANTHAVER

Environment and Energy Facilitator, Belvidere Assembly Plant, Fiat Chrysler Automobiles

Branthaver has been the main developer of an environmental scorecard to track environmental and energy KPIs for the FCA plant in Belvidere, Illinois. He also developed energy curtailment plans so that targets are assigned to each main department, driving engagement and ownership in reduction projects. His numerous environmental and energy projects over the past five years — including automating and monitoring air handling equipment — resulted in millions of dollars of savings and rebates from local utilities.



TAIMUR BURKI

Global Green Building Program Manager, Intel

Burki leads Intel Corporation's green building, waste, and recycling programs, and serves as a water conservation project manager. In his 20-plus years with Intel, he contributed to sustainability programs that achieved LEED Gold and Platinum certification of more than 15.4 million square feet of building space, recycling programs with a 85–92% global average, hazardous waste landfill diversion, and water management that saved around 4 billion gallons of water worldwide in 2018.



SPOTLIGHT INTERVIEW

TAIMUR BURKI

Global Green Building Program Manager, Intel

Burki has been focused on environmental leadership at Intel for more than 20 years. Among his many accomplishments, he led the development of company-wide construction, building, and landscape specifications as well as a green building policy that incorporate the energy and water savings of LEED certification across the globe.

What is the biggest challenge you have faced in the last year or two?

In the last year we've kicked off some very large projects. A lot of the head construction managers I used to work with have retired. There's a whole new crew and it's relearning how to positively work together to achieve our aims — recycle 90% of our solid waste, minimize haz waste-to-landfill.

Then the question comes in: Who has the data? That's the hardest. It's knowing whom to call, how to get the data, and how to present it effectively.

How have you addressed that challenge?

The most important thing is how I add value to a project. Whether I'm building a wafer factory or an office, how do I show I'm adding value and helping them drive change while at the same time not being a burden? If I can bring "here's what we need to do" and "here are options for cost savings," suddenly a lot of the roadblock goes away.

I've had the pleasure of having some fabulous mentors. They were all about "you have to be a partner." I call into meetings at 11 o'clock at night to work with teams in Asia. I'll call into meetings at 6 in the morning to work with teams in Ireland. I need to show that I'm willing to be there for them.

What advice would you give other professionals as they try to accomplish their sustainability or energy management goals?

A lot of people look for the silver bullet. There are many ways of doing things. Let's not close our minds, let's work together. It's okay to fail. Learn from your failures. Have that willingness to say, "I don't know. What do you know?"

To quote Operation Ivy, "I don't know nothing." I know very little, but if we all get together we know more.

The other thing I would say for anyone coming into the field is you need to have a technical skill set. In the world I live in for work, someone will want to be involved, they're passionate, but they don't have the technical skill set to be at the table yet. And "yet" is the key word. 🌀



ANDY BUSH

Principal, Morgan Creek Ventures

Bush founded Morgan Creek Ventures, a real estate development and consulting group based in Boulder, Colorado, in 2001. The company develops a variety of sustainable real estate projects that have received LEED Silver, Gold, and Platinum level certifications and include leading technologies in building management systems, green roofs, solar installations, and water treatment. Recently Bush developed Boulder Commons, a 100,000-square-foot mixed-use net zero project powered by a full solar roof array and an east-facing, exterior solar wall.



ANGELA CASLER

CEO and President,
Sustainability Management Association

Casler helped start the Sustainability Management Association to engage students and professionals in the field of sustainability, and has grown the association's board of directors. She also worked to launch the Strawless Challenge, which continues spreading around the world to eliminate disposable plastic straws unless requested. Her focus groups with industry professionals led to the two certifications that the association offers: Sustainability Management Certified Professional and Sustainability Management Certified Associate.



SHANNON CARROLL

Director of Global Environmental Sustainability, AT&T

In just a few years, Carroll helped AT&T go from having a few onsite solar panels and fuel cells to being one of the largest corporate renewable energy purchasers with more than 820 MW in wind power deals. Carroll argued that wind power is a smart investment to ensure consistency, continuity, and cost savings for AT&T. His efforts led to the company signing VPPAs with subsidiaries of NextEra Energy Resources for four wind energy centers.



LESLEY CLARKE

Manager, Environmental Performance, Walker Industries

Clarke manages environmental performance for Ontario-based diversified company Walker Industries, which has grown significantly in the past five years. She developed and implemented a program of environment subject matter talks and self-assessment checklists for front-line supervisors. The Enviro-Check program helped the company realize improvements in compliance performances at facilities across the organization. In addition, Clarke streamlined the environmental due diligence process for a pending acquisition of a business, giving all the parties involved more certainty around environmental matters.



DANIEL CORDOVA

Multi-Site Director,
Ingersoll Rand

For nine years, Cordova has been responsible for manufacturing operations and new product launches at an Ingersoll Rand complex in Mexico that makes Trane HVAC units and chillers. The site has two plants and more than 1,200 employees. Cordova supported certifications that include ISO 14001 and OHSAS 18001. The Nuevo León state government has repeatedly recognized the site's facilities for greenhouse gas reductions. The complex also achieved ISO 50001 certification and Superior Energy Performance at the Platinum level.



LAURA CRAFT

Head of Global
Sustainability, Heitman

Craft leads environmental, social, and governance for real estate investment manager Heitman. Her mission to "invest today with a focus on tomorrow" embeds ESG into investment decision-making and management. One of Heitman's funds has completed more than 350 sustainability projects and audits related to energy retro-commissioning, onsite solar installations, LED lighting installations, smart irrigation upgrades, and recycling programs. Recently Craft partnered with the Urban Land Institute on a report exploring methods for assessing and mitigating climate risk in real estate.



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**KEVIN CROSBY**

Sustainability Manager,
Xanterra Travel Collection,
Mount Rushmore

At Mount Rushmore, Crosby led a solar canopy parking project that came online in December 2018. This 346-kilowatt solar carport system mounted on an existing parking facility generates around half the electricity needed to power Xanterra's restaurant and gift shop there. It represents \$40,000 in yearly electricity savings and reduces the building's overall GHG emissions by 24%. Crosby also manages activities for the company's commitment to the National Park Service that Mount Rushmore achieve LEED EBOM certification.

**CHRISTOPHE DEFERT**

Vice President, Centrica
Innovations, Centrica

Defert is vice president of international energy and services company Centrica's \$140 million venture fund, called Centrica Innovations. Defert and his team invested in Driivz, an end-to-end EV charging software company. He also oversaw investment into LO3 Energy, a startup specializing in blockchain-based solutions for energy transactions and microgrids. Recent investments that he and his team led include EtaGen, which is developing a linear generator that offers businesses affordable, flexible onsite clean power.

**DHANUSHKA DE SILVA**

Environmental Compliance
and Planning Manager,
SriLankan Airlines

An environmental professional with more than 20 years of experience in aviation environment-related activities, De Silva is responsible for SriLankan Airlines' environmental compliance and sustainability efforts. He founded the airline's environmental division and was instrumental in developing their emissions management and quantification process, which earned him the airline's internal Highflyer award in 2012. In addition, he is involved in industry committees locally in Sri Lanka and overseas, including as an observer for IATA's Environment Committee.

**BRIJESH DHRUVE**

Chief Environment Officer,
Emirates National Oil
Company

At Emirates National Oil Company (ENOC), Dhruve leads environmental efforts to develop sustainability partnerships and networks that provide policy and strategic support across business units located in 12 countries. He executes strategies that enhance social responsibility issues, and developed a comprehensive annual environmental sustainability plan in cooperation with ENOC's business units. Dhruve's strategies include launching the first solar-powered gas station in the UAE in 2017, and introducing Biodiesel 5, a product for diesel engines derived from renewable resources.



SPOTLIGHT INTERVIEW

KEVIN CROSBY

Sustainability Manager, Xanterra Travel Collection,
Mount Rushmore

Crosby is responsible for the property-level management of sustainability and energy programs for Mount Rushmore National Memorial as well as Rocky Mountain National Park, which are both part of the Xanterra Travel Collection. The park and resort management company is based in Greenwood Village, Colorado.

What is the biggest challenge you have faced in the last year or two?

Time. Everybody probably says that, but it's not just in the sense of not enough hours in the day but more that Xanterra, as a company, we are running out of time to meet sustainability commitments. Projecting forward we need to start making more progress. At a higher level as a society we are running out of time to address climate change at a global scale.

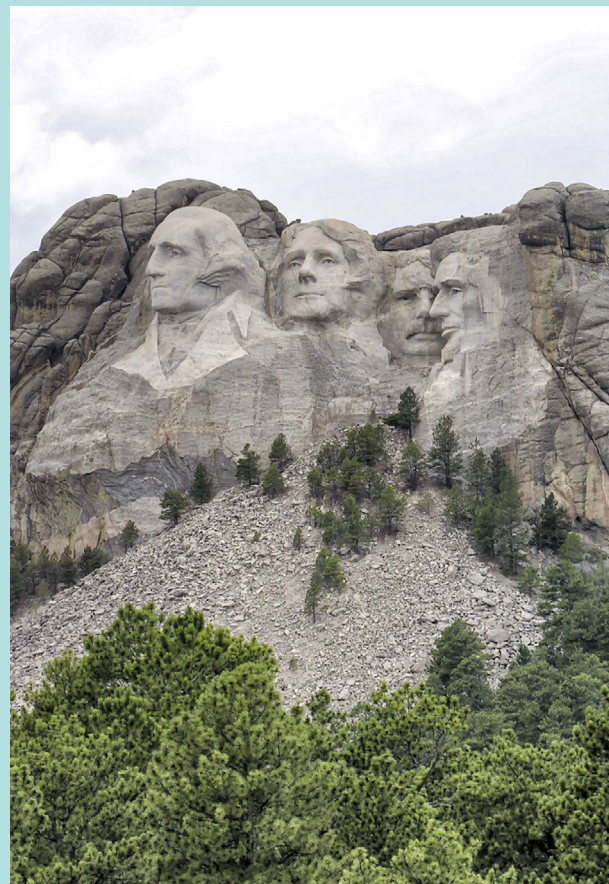
How have you addressed that challenge?

Talking about it helps. What we're doing here today is one of the most important steps in addressing it. At a company level, we need more resources, we need to continue to advocate for the importance of sustainability — for the bottom line and for the societal benefit. Keep telling the story and talking about it and asking for that focus to be put on that. We must continue to communicate and raise our voices on the issue.

What advice would you give other professionals as they try to accomplish their sustainability or energy management goals?

Same thing — be vocal about it. Attend conferences such as this. It's so good to connect with people and hear what other professionals are doing. Get out there.

There was one ELEMCON session on the anatomy of an effective sustainability leader. I thought, "I already do that, I know that," but I learned so much. One of their main points, tying back to what I was saying, was about networking. Bringing entire institutions on board and making sustainability everyone's job. 🌀





DEREK DIGIACOMO

Senior Director, Energy
Management Programs,
SCTE•ISBE

DiGiacomo has been with SCTE•ISBE, a technical cable telecommunications professionals membership organization, for almost 20 years. He is responsible for their management programs, including the Energy 2020 program, an industry-wide effort to help shape what energy will look like for cable into the future. He also serves as project manager for the SCTE Standards Program's Energy Management Subcommittee. Under DiGiacomo's leadership, the organization has seen a 50% reduction in the dependency of grid-supplied power at its Exton, Pennsylvania, headquarters.



CYNTHIA FIGGE

CEO and Co-Founder,
CSRHub

Figge co-founded the pioneering sustainability consulting firm Ekos in 1996, and co-founded the sustainability ratings and information database CSRHub in 2007. CSRHub provides transparent access to the corporate ESG performance metrics of 18,000 companies from 136 industries in 132 countries. Automating a number of benchmark and analysis tools reduced costs and improved the scope and quality of Figge's analysis. She helps a wide range of clients, including smaller and mid-sized companies as well as large multi-nationals.



KIRBY DIPERT

Field Engineer, Lockheed
Martin Energy

As a champion for sustainability along with energy efficiency and renewable energy, Dipert completed NREL's Energy Execs program in 2017 and the professional certification in sustainable studies at Indiana University South Bend in 2018. He launched a new local USGBC community in his town, and has been accepted into the Virginia Tech Executive Master of Natural Resources (XMNR) program, which starts in 2020. In addition, Dipert is active in ASHRAE and USGBC.



GIL FRIEND

Founder and CEO,
Natural Logic and
Critical Path Capital

Friend is known as one of the 10 most influential sustainability voices in America. He is founder, chair, and CEO of Natural Logic, which helps companies design, implement, and measure profitable sustainability strategies. He also leads Critical Path Capital. For five years Friend was the first chief sustainability officer for the City of Palo Alto, California, setting an 80% reduction in GHG emissions by 2030 goal, reaching a 56% reduction when he returned to Natural Logic in late 2018.



SPOTLIGHT INTERVIEW

DHANUSHKA DE SILVA

Environmental Compliance and Planning Manager, SriLankan Airlines

De Silva is responsible for the airline's environmental conservation and regulatory compliance, as well as the company's Green Social Responsibility programs. He has been with SriLankan Airlines for 20 years.

What is the biggest challenge you have faced in the last year or two?

Taking an initiative and establishing it with people, changing their mindset. The biggest challenge is getting immediate colleagues — the team working with you — on board with initiatives. If that works perfectly, then the customers and third-party suppliers see what you are doing and how well that is captured by your colleagues.

Reducing costs is a big challenge as well, especially when it comes to environmental management.

How have you addressed these challenges?

Making information available and being transparent about what you are doing is the way to get everyone to buy in. Our airline has been here for about 30 years. Me saying that we have to think about costs, efficiency enhancements, the environment, the future — there's resistance at first.

In 2008, when we were starting our aviation fuel management program, a barrel of oil was \$180. We had to cut costs and do efficiency management. When we developed this program, there was huge resistance from the pilot community. Suddenly we're trying to restrict their fuel.

We had to quantify the savings and show them: You are reducing the carbon footprint by this much. SriLankan Airlines' emissions are going to go down. Your fuel expense is going to go down. Efficiency is going up. It's all yours. We're just helping you. Now they come up and say, if we do this, we can save this much fuel.

What advice would you give other professionals as they try to accomplish their sustainability or energy management goals?

Be consistent. Do the right thing by the company and the environment because the big picture is the environment. Yes there will be heartaches. There will be criticism. But if you're being honest with yourself and doing the right thing, everything will work out. That is my experience. 🌀



WILLIAM GAGNON

Vice President of
Marketing and Key
Accounts, Excel Dryer

Gagnon leads marketing and sales for Excel Dryer, which manufactures the high-speed energy-efficient Xlerator Hand Dryer. He and his team created product category rules (PCR), for the hand dryer industry with the business division of Underwriters' Laboratories, UL Environment. These guidelines combat greenwashing in the industry, and led to Gagnon's signature products receiving Environmental Product Declarations, offering transparent product information. Gagnon and his team also developed a green curriculum for students nationwide.



ALEXANDRA GOLUBOVIC

Lead Field Robotic
Engineer, Diakont

Golubovic successfully led the first inspection of an online jet fuel storage tank using the Diakont Stingray, a special robot certified for use in Class 1, Division 1 Hazardous Locations. The oil and energy pipeline inspection services company Diakont says the robot reduces VOC emissions and increases personnel safety. Golubovic led the field service team and was the primary tool operator, navigating around obstacles using the robot's sonar and cameras. She'll continue to lead deployments worldwide.



JULIEN GERVREAU

Vice President of
Sustainability, Jackson
Family Wines

Gervreau, vice president of sustainability for Santa Rosa, California-based Jackson Family Wines, sets the bar for sustainability. The company's GHG emissions inventory is among the most detailed in the industry, and they have achieved impressive waste diversion and water efficiency rates. An advocate for the regenerative agriculture movement, Gervreau has been working to implement more sustainable practices in the wine company's vineyards while encouraging a larger commitment to practices that sequester carbon and combat climate change.



ADAM GORDON

Engagement Director,
Global Compact
Network USA

A thought leader and event organizer in the corporate responsibility space, Gordon brings diverse companies together under the aegis of Global Compact Network USA, the local network chapter of the United Nations Global Compact. Through the nonprofit, he helps US-based entities collaborate on shared goals, especially UN Sustainable Development Goals. Gordon creates helpful programming in the environmental performance, measurement, and reporting space. He brings diverse participants together in a global dialogue on corporate environmental sustainability.



SPOTLIGHT INTERVIEW

KIRBY DIPERT

Field Engineer, Lockheed Martin Energy

Lockheed Martin Energy provides energy management and efficiency programs including smart grid technologies for utility customers. Dipert works directly with utility customers to help them put programs into place — from lighting retrofits to manure pumps to anything else that saves a utility kilowatt hours. Dipert is also passionate about sustainability education and works tirelessly to champion the synergies of sustainability along with energy efficiency and renewable energy.

What is the biggest challenge you have faced in the last year or two?

My work involves meeting with utility customers and folks that are eligible for incentives and helping them with energy efficiency programs. Basically, we're just trying to give money away and it's hard to convince people that we really are trying to give money back to them. People think it's too good to be true. That's a real challenge, trying to rope commercial customers in and convince them the programs really will give them money back.

How have you addressed that challenge?

We communicate it through networking events, outreach events, referrals, face-to-face meetings. We have opportunities to spread the word through large presentations. They tell the newspaper, other people hear about it. It's all about communication. We have account managers that interface with large customers, so they're good at saying, "You might want to talk to Kirby."

Specifically, one of the best ways of communicating the benefits is to give them calculations on the cost of doing nothing.

What advice would you give other professionals as they try to accomplish their sustainability or energy management goals?

A lot of folks are interested into getting into energy efficiency or energy management. My recommendation is to stick with it, stick with your heart, continue to work hard to make connections, and eventually, doors will open up. Also get credentialed for things like CEM (certified energy manager) or LEED AP O+M (LEED certification for existing buildings). Only a small population of people has that certification. 🌀



DAVID GRANTHAM

Executive Director,
National Research
Consortium at Innovation
Pointe Labs

Grantham is the executive director of the National Research Consortium (NRC) at Innovation Pointe Labs, a national nonprofit that connects research universities and national labs with industry partners to market technologies in the clean energy economy. He has developed research initiatives that support the convergence of renewables and hydrocarbons. Since joining NRC in 2018, Grantham has garnered policy support, driven conversations, and created strategies that create value through mature asset management in advanced resource recovery and investment.



JESSE GROSSMAN

Chief Executive Officer and
Co-Founder, Soltage

Grossman, who has more than 15 years of experience project finance, emerging markets, and renewable energy, co-founded Soltage in 2005. The independent renewable power producer develops, finances, and operates distributed utility solar and solar-plus-storage project portfolios across the United States. In October 2018, Grossman and his team led Soltage to close its first round of investment in a 100-MW solar project portfolio located across 38 sites in North Carolina, South Carolina, Georgia, Virginia, and New Jersey.



SPOTLIGHT INTERVIEW

GIL FRIEND

Founder and CEO, Natural Logic
and Critical Path Capital

Critical Path Capital is a boutique strategy firm that works with companies, cities, leaders, and investors to help them orient themselves successfully and profitably to the very uncertain business landscape of the 21st Century. The firm focuses on business strategy grounded in sustainability. When you look at business through this lens, you see ways of operating you didn't see before, and that's a good thing: Billions of dollars of value move to your side, Friend says.

What is the biggest challenge you have faced in the last year or two?

After all my experience doing this — I've worked with Coke and Levi, Avery Dennison, Hewlett-Packard, I've been in the game for decades — I find that most people, most of the time, still assume you're either going to be environmentally responsible or profitable. But you don't need to choose between making money and making sense. If your sustainability program is costing you money, you're doing it wrong.

Also, people argue about whether they should invest in an energy management system because it's a six-year payback instead of five, but they put marble in their lobby and there's no ROI to that. Companies are applying different standards to environmental sustainability. It's still pervasive, more than I would have hoped at this time.

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How have you addressed that challenge?

It depends on the person, their mood, the nature of their skepticism. We bring examples of their peers or others they respect who have accomplished things. We always say, "Don't take my word for it, here's evidence." Another way is to ask, "What are your business concerns?" We say, "Here's what we're seeing in your company, here's where there's waste, what can we do to help?" We try to engage them in the discovery themselves, because you don't learn by being told.

Then, often, a company will think, "Wow, what's going on here? What I've just learned is at odds with what I've always known. Why is this so different, and what opportunities are open to me?" So at the very best, we take clients into that process.

We can learn from the Earth and we ignore it at our peril. If we pay attention to that, we discover opportunity where other people are seeing risk. That's a good thing in business.

What advice would you give other professionals as they try to accomplish their sustainability or energy management goals?

We seem to be trying to build a bridge between the human economy and the living economy, which is the Earth. That's already a mistake. As my wife said, "There's just one economy."

My advice is to understand the relationship of your business to the life support systems on this planet that sustain everything we do. Those systems have to work well for us to thrive. We pretend that that's not real. We pretend that only money is real. The advice is to get real. 🌱



Congratulations to Kraig Westerbeek, senior director of Smithfield Renewables and hog production environmental affairs for Smithfield Foods, for being recognized as an Environment + Energy 100 honoree. We would also like to congratulate the entire Environment + Energy 100 Class of 2019 for their leadership in sustainability.

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TIM GUARNIERI

Eastern Region Project
Portfolio Manager,
Mitsubishi UFJ
Financial Group

Guarnieri runs Mitsubishi UFJ Financial Group (MUFG)'s East Coast real estate portfolio, including Rockefeller Center. When presented with an opportunity to improve operational efficiency and reduce greenhouse gas emissions, Guarnieri pushed MUFG to pursue a new subscription-based model. As a result, the financial group is rolling out the Sparkfund Technology Subscription across its entire portfolio. Their new lighting and IoT technologies are expected to produce 80% savings, and help MUFG maximize energy efficiency while reducing carbon.



KEVIN HAGEN

Vice President, ESG
Strategy, Iron Mountain

Hagen leads the effort around environment, social and governance (ESG) issues for Iron Mountain, a global storage and information management services company based in Boston. He recently produced a solution called Green Power Pass that provides data center colocation customers with verifiable information on their renewable energy consumption. Prior to joining Iron Mountain, Hagen was director of corporate social responsibility for REI, where he produced the co-op's first formal sustainability strategy, leading to new industry standards.



JACK HACHMANN

Managing Partner, Madison
Energy Investments

Hachmann started his own solar venture, Madison Energy Investments, in February 2019. Within a month, he secured \$200 million of outside investment in the company along with an initial group of solar projects. Previously he was director of commercial operations at WGL, where he helped deliver 300 MW of solar assets to the company. His strategy allowed him to seek out new projects while his team succeeded in maintaining a high performing portfolio: 98% or higher, weather adjusted year-over-year.



ALYSSA HARDING

Corporate Social
Responsibility Manager,
Justin's

Harding champions waste management and deferment as the corporate social responsibility manager at organic nut butter company Justin's. She holds annual trainings for company team members to make sure they have current information about composting, recycling, and landfill waste. In addition, Harding works closely with the company's operation team to find more sustainable ways of sourcing ingredients and packaging products. She was instrumental in a new USDA Organic product line packaged in post-consumer recycled materials.



SPOTLIGHT INTERVIEW

ALEXANDRA GOLUBOVIC

Lead Field Robotic Engineer, Diakont

Diakont is a pipeline and aboveground storage tank floor inspection service provider that uses robotics to access hard-to-reach areas within assets. Golubovic successfully led the first inspection of an online jet fuel storage tank using the world's only Class 1 Division 1 Hazardous Location certified inspection robot, the Diakont Stingray. She also develops procedures for crews to be able to use the robot safely.

What is the biggest challenge you have faced in the last year or two?

Our robot is certified to be safe, but just because the robot is not going to cause a spark doesn't mean that the person using it isn't going to cause a spark from static electricity by dragging their feet or something. So we had to do a lot of learning ahead of time to discover what safety features we needed. I want to make sure everyone is safe and that everyone makes it home afterwards.

How have you addressed that challenge?

We created a safety kit for the personnel that are in the field. It includes safety elements like things for their shoes so they're not causing static electricity, harnesses for their hard hat so it doesn't fall in. If there's anything left in the kit, you know you're not safe.

We also use step-by-step communications, making sure, verbally, that everyone knows what they're doing — saying what they're doing out loud, then doing it.

Knowledge is power, so I give the crews as much info as I can, but I'm also open to criticism: what can we do better, what could be done so the next time it's easier?

What advice would you give other professionals as they try to accomplish their sustainability or energy management goals?

The only time you fail at something is if you give up. Keep trying to go toward those goals. Maybe involve other people who weren't involved the first time. Use your coworkers, use their knowledge. You have multiple iterations. You say, "This might work, this might not," then you try it and see.

And when it comes to safety, when you see something that is unsafe, you stop immediately. 🌀



KRISTEN HAZARD

Founder and CEO,
Wildnote

In 2017, Hazard created Wildnote, a cloud-based platform for collecting, managing, and reporting environmental data. Her technology aims to make data collection more uniform, fostering greater discussion and deeper analysis, leading to meaningful solutions. Hazard's past experience as a principal in an environmental consulting firm led her to build a platform for professionals working on renewable energy, ecological cleanup, restoring native habitats, and searching for answers to the pressing problems associated with climate change.



MARK HEINTZ

Director of Sustainability,
Sonos

Heintz has successfully led sustainability at the Santa Barbara, California-based consumer electronics company Sonos since 2015. He brought sustainability from a low-awareness base to a place where the company now has a corporate sustainability plan, an internal dashboard, and every employee is aware of the program. In addition, Heintz mentored the team at a remote conferencing services company on how to create their own corporate sustainability plan, sharing what he has learned with those just starting out.



SPOTLIGHT INTERVIEW

ADAM GORDON

Engagement Director, Global Compact
Network USA

Gordon is senior director of FrameworkESG, a management consultancy that helps corporate leaders create value by engaging new social, environmental, and economic realities. Since 2017 he has been on secondment to the Global Compact Network USA, which serves more than 500 local members of the United Nations Global Compact.

What is the biggest challenge you have faced in the last year or two?

Initiative, however sustainability has not played traditionally as active a role in the community of companies as perhaps it should have.

My job is to build up a local network. The challenge is in a global organization or community where you have other local networks with governmental support. In the US you have a wide variety of companies on different levels of maturities. How to build a cohesive community of best practices under the UN global compact is the challenge — how to bring diverse stakeholders together for a common goal.

There's a good amount of US leadership on sustainability issues. But how do we highlight that in the UN context? And how do we bring the rest of the country along?

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How have you addressed that challenge?

We are addressing it through a lot of listening and a lot of relationship building, understanding what the UN Global Compact wants from US companies and vice versa. There are a lot of people involved. We try to be that connector and be of service to them.

In terms of creating a strategy for the US, we try to figure out the role the UN Global Impact should have on the US, which is such a dynamic and large country. Just the size of the US can present a problem. There's also the political diversity around sustainability issues. We have to find the US voice and how can we respectfully represent it.

What advice would you give other professionals as they try to accomplish their sustainability or energy management goals?

It's not enough to be a topical expert; it's about how you leverage that in your relationships. Sustainability is about making connections across silos and across organizations. It's so important to invest in those relationships that can help deliver in those goals.

It's important to develop relations both internally and externally. You have to understand where external partners should be and understand when an external partnership will further your ambitions for the organization. That could be the UN global compact, or it may not but understanding how to build those relationships will help us get to where we need to go to change the world. 🌀



JOE HILL

Vice President, Solutions,
Facility Solutions Group

Hill has been with Austin, Texas-based Facility Solutions Group (FSG), for more than a decade. In April 2019, he joined the Smart Buildings Division of the company, which provides lighting and electrical products, electrical services, electrical construction, and energy management solutions. Before that, he led the Energy Division, specializing in building control systems that allow enterprise level control of thousands of sites and visibility to “anything you can put a sensor on.”



SHEA JAMEEL

Sustainability Manager,
Welltower

Jameel led the health care real estate investment trust Welltower to numerous sustainability accomplishments. Recently she helped the company complete its 200th LED lighting retrofit. These retrofits should save Welltower \$4.2 million in utility costs, 35 million kWh of electricity, and 26,000 metric tons of GHG emissions annually. Her Kil-a-Watt challenge for Welltower's medical office portfolio reduced electricity usage by 2.8 million kWh in one month. She also champions renewable energy, water-saving upgrades, and recycling.



SPOTLIGHT INTERVIEW

DAVID GRANTHAM

Executive Director, National Research Consortium at Innovation Pointe Labs

As executive director for the nonprofit National Research Consortium (NRC) at Innovation Pointe Labs, Grantham designs and directs technology-to-market research initiatives connecting universities and advanced resource recovery.

What is the biggest challenge you have faced in the last year or two?

There are two camps that don't always work well together: oil and gas plus utilities.

There are two incumbents: utilities sector and oil and gas sector. They don't know how to get to the middle ground right now. We try to supply policy support to both. But they have to go out into this new frontier to understand what renewables can do to supplement. It's a little counterintuitive to them. They're ready to improve their environmental stewardship — it's just getting there. They're all cost saving measures. Understanding it in sector specific ways has been important to us but them understanding it in each sector is difficult. We have a lot of factors that come into this as adversaries and we try to turn them into collaborators.

How have you addressed that challenge?

Relationship building. I establish trust with both oil and gas and power companies so that they realize that the goal is to follow the science and the markets toward these solutions. We have to look at it as a formula with electrons and molecules, and how can we use that most efficiently that works with the natural cycles of the planet rather than against it.

What advice would you give other professionals as they try to accomplish their sustainability or energy management goals?

Measure at least twice, probably three or four times. It's a really complicated space so the difference is there's a solution for complexity. Keep your eye on the solutions. Eliminate barriers to the solutions. What seems to be insurmountable could have a solution that's emerged from dialogue and collaboration that involves detailed metrics and discussions. 🌀



ANNE KELLY

Vice President of
Government Relations,
Ceres

In 2009, Kelly founded the Business for Innovative Climate and Energy Policy (BICEP) coalition committed to working with policymakers on meaningful climate and energy legislation. Under her leadership, the coalition transformed into the Ceres BICEP Network, which now has more than 50 companies, including Microsoft, Nike, and Unilever. When President Trump announced the US would be pulling out of the Paris Agreement, Kelly and her team mobilized hundreds of businesses to form the We Are Still In coalition.



BRUCE KLAFTER

Vice President, Corporate
Social and Environmental
Responsibility, Flex

When the multinational technological manufacturer Flex became a founding participant in a multi-stakeholder initiative aimed at eliminating toxic chemicals from electronics production, called the Clean Electronics Production Network, Klafter served as a member of the steering design team. He and his colleagues have also worked on assessing the social effects of automation in manufacturing. This project yielded findings that are expected to help Flex improve its management of the automation events and enhance employee welfare.



SPOTLIGHT INTERVIEW

ALYSSA HARDING

Corporate Social Responsibility Manager,
Justin's

Justin Gold began selling batches of organic nut butters at the local farmers market in 2004. Now Boulder-based Justin's has national distribution and is expanding into Canada. Harding started with the company three years ago and her broad role includes working on sustainable packaging, ingredient sourcing, certifications, and CSR planning.

What is the biggest challenge you have faced in the last year or two?

The most daunting and urgent challenge we're facing is around sustainable packaging. In consumer packaged goods (CPG) there is no one best sustainable package. Everyone has different requirements for oxygen, moisture, shipping. Packaging has to do so many things. In addition to nutritional content, maintaining shelf life, and communicating to consumers, you have to address environmental impact. A good portion of our products is currently recyclable, but we have some flexible films that present an issue.

How have you addressed that challenge?

One of the ways we've been tackling that is through the development of strategic partnerships. In 2010, Justin hosted the world's first Sustainable Squeeze Pack Summit. We brought GreenBlue and the

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Sustainable Packaging Coalition to Boulder to crowd-source and pre-competitively collaborate.

Last year I organized a summit, where the Sustainable Packaging Coalition trained over 100 industry leaders in best practices. Then we launched three action groups around office operations, trade shows, and sustainable packaging, and we assigned each group 12-month goals. I'm chairing the sustainable packaging action group with a packaging engineer from Danone. No one brand can solve this issue alone.

What advice would you give other professionals as they try to accomplish their sustainability or energy management goals?

Work with your industry and within your peer network. Developing a network and fostering collaborative scalable impact models is really the solution.

Try to think holistically and don't be afraid to fail. We've been through a lot of iterations, especially with packaging. You don't want to solve a packaging problem by creating a food waste problem.

Fight the good fight. We're at a point where consumers are demanding more from companies. It's never been easier to make the business case for sustainability. 🌀



TERRILL LAUGHTON

Vice President and General Manager of Energy Optimization and Connected Equipment, Johnson Controls

Laughton manages several offerings in Johnson Controls' Digital Solutions business, which is focused on creating value-added offerings that incorporate data and information from multiple systems in complex building environments. He is responsible for the full product line, and recently helped a building in Australia with comprehensive technology to monitor and measure efficiency and energy consumption. The project saved 600,000 kWh and \$13,500 per month over 12 months, and the building became Australia's first to receive WELL gold certification.



JENNIFER LEITSCH

Vice President, Corporate Responsibility, CBRE

Leitsch was recently promoted to vice president of corporate responsibility at CBRE, the world's largest commercial real estate services and investment firm. She leads corporate responsibility strategy and disclosure, including the annual corporate responsibility report and responses to the RobecoSAM Corporate Sustainability Assessment, CDP climate change, and supply chain disclosures. Leitsch helped CBRE become the first real estate services firm to disclose using the Sustainability Accounting Standards Board (SASB) Standards.



SPOTLIGHT INTERVIEW

TERRILL LAUGHTON

Vice President and General Manager
of Energy Optimization and Connected
Equipment, Johnson Controls

At Johnson Controls, Laughton provides software as a service (SaaS) applications to the company's Digital Solutions business customers, helping them better manage their buildings and facilities.

What is the biggest challenge you have faced in the last year or two?

Finding the right stakeholders and gaining alignment within our customers to move forward with energy and sustainability initiatives.

How have you addressed that challenge?

We addressed it by identifying the key decision makers and what their primary goals and objectives are so we could articulate the value of our offerings to address their most critical needs. It has been successful thus far.

What advice would you give other professionals as they try to accomplish their sustainability or energy management goals?

As it relates to our customers, I'd say you need to set a plan for what you want to do within your buildings and facilities and then you need to start taking steps toward that plan. You have to start taking some action; you can't just keep waiting for that perfect solution. 🌀



**LUKE LEUNG**

Director of Sustainable Engineering, Skidmore, Owings & Merrill

Leung is the director of the MEP and Sustainable Engineering Studio for Skidmore, Owings & Merrill (SOM). His large portfolio includes more than 40 LEED certified or registered buildings, including a LEED Platinum building with the first large-scale horizontal wind turbine in Chicago. Recently Leung initiated the SOM Climate Change Committee to accelerate actions for a sustainable low-carbon future. In addition, he is working with the National Renewable Energy Laboratory on energy usage modeling software for architects and engineers.

**MEREDITH LINDVALL**

Recycling and Waste Diversion Manager, Cox Enterprises

As the recycling and waste diversion manager at Cox Enterprises, Lindvall helped launch 134 zero waste to landfill projects, realizing savings of more than \$6 million. To track progress, she developed Cox's first zero waste to landfill benchmarking system. Lindvall's zero waste efforts with the Watkins Warehouse in Phoenix achieved a 94% waste diversion rate. In 2018, Cox Communications celebrated its first location to be awarded Zero Waste to Landfill certification by the USGBC.

**IAN LIFSHITZ**

Vice President of Sustainability and Stakeholder Relations, Asia Pulp & Paper

Lifshitz manages Asia Pulp and Paper (APP)'s North American engagements with NGOs such as the Forest Trust and helps support the company's Integrated Forestry and Farming System (IFFS) program to educate local farmers in sustainable farming practices and protect forestlands from encroachment or fires. In addition, Lifshitz manages the North American representation of APP's partnership with the nonprofit Belantara, which brings together companies, NGOs, governments, and community organizations to protect the Indonesian landscape.

**BHANU MURTY MADDALA**

Senior Operations Engineer, Saudi Aramco Yanbu Refinery

Maddala is a certified energy manager and energy leader for Saudi Aramco's Yanbu Refinery. His roadmap for accelerated performance at the petroleum company's refinery led to a low-cost closed loop circulating cooling water system that improved air compressor performance. Besides reducing compressor-related energy, the system conserves 90 million gallons of water annually. Maddala's other innovations include using waste steam to heat utility fuel oil tanks and optimizing chemical consumption with better corrosion control.



SPOTLIGHT INTERVIEW

IAN LIFSHITZ

Vice President of Sustainability and Stakeholder Relations, Asia Pulp & Paper

The APP Group is a vertically integrated pulp and paper company with more than 18 million tons of annual pulp, paper, and converting products capacity. Lifshitz leads North American sustainability efforts for APP, which entails working with all stakeholders involved in paper and packaging.

What is the biggest challenge you have faced in the last year or two?

From APP's side, it's working with the marketplace. How do we educate the marketplace on different options for sustainable options? For example, everyone thinks of sustainability as recycling but there are alternatives that deliver true value. Brands need to look at sustainability wholly, including supply chain, community engagement, etc. It's a holistic view of sustainability.

Also, developing the right products. How do you expand the product offering?

How have you addressed that challenge?

We've worked with R&D teams and developed a Foopak, a biodegradable line of food packaging. As a result, you can have a biodegradable cup. So we look for alternatives and more sustainable options. We've been launching Foopak to major quick-serve restaurants.

Grubhub, Uber Eats — how are they going to meet their commitments? We developed Foopak to keep consistency for food but with a biodegradable product.

What advice would you give other professionals as they try to accomplish their sustainability or energy management goals?

Understanding the market needs, understanding trends and customer needs. Put that all together. Sustainability isn't one size fits all. You have to adapt and take it to market and deliver a sustainable solution. Peel back the onion and understand the needs. Look at ways to capitalize on the expanding food market and do that sustainably. 🌀





ANDREA MANCINO

Director of New
Construction, Bright Power

Mancino manages new construction and commissioning projects for the energy management services provider Bright Power. Her team focuses on integrating efficiency and renewables into new multi-family developments in the New York metro area. She co-founded the New Construction division as a way to help developers build green multi-family buildings. Mancino and her team work closely with designers to conduct construction phase inspections and testing as well as comply with programs and certifications like Passive House.



ANH MARELLA

Global Director of Films,
Avery Dennison

Marella has a track record for driving the adoption of clean technologies. At labeling industry giant Avery Dennison, she champions the company's CleanFlake adhesive technology, which enables polyethylene terephthalate (PET) recycling. The adhesive separates from PET during recycling, resulting in pure recycled PET (rPET) flakes, conserving virgin PET resources and decreasing landfill waste. Marella's global marketing efforts were so effective that the company asked her to look at how to incorporate more recycled content into its film products.



SUBHASIS MANDAL

Head of Solution,
Technology and New
Services,
EcoEnergy Insights

As the head of EcoEnergy Insights' solution, technology, and new services units, Mandal has been instrumental in conceptualizing and architecting data-enabled, platform-driven services such as energy efficiency, maintenance, and associated solutions. He was the driving force behind the design and launch of the product-agnostic Cortex Building IoT platform, aimed at improving building efficiency and performance while reducing operational costs. Mandal also spearheaded the company's AI and machine learning strategy, defining the context around which the models are built.



JUAN MARIN

Energy Solutions Manager,
Kimberly-Clark

Marin, who has been with Kimberly-Clark for more than 20 years, joined the personal care corporation's energy solutions team in 2007. Ever since, he has been instrumental in designing and delivering strategies in energy management to achieve significant cost and GHG reductions across the enterprise. He and his colleagues are making measurable progress toward the company's energy and climate goals for 2022 through a combination of energy conservation, alternative and renewable energy, and lean energy management.



TOM MARTING

Facilities, EH&S, and
Sustainability Director,
Gojo Industries

Marting joined Gojo in 2011 as a specialist in lifecycle analysis, and has helped embed lifecycle thinking in new product development for the company, which makes Purell products. In 2017, he oversaw retrofits in two facilities that installed more than 20,000 LEDs. Besides being a champion for resource efficiency and inter-facility reusable packaging, Marting oversaw an onsite solar installation that helped Gojo accomplish its 2020 goal of powering distribution operations with renewable electricity two years early.



CHARLES MCEWEN

GEMS Program Manager
and Industrial Hygienist,
Atlanta Veterans Affairs
Health Care System

McEwan is a manager for the Atlanta VA's Green Environmental Management System (GEMS) program for environmental performance. One of his team's biggest sustainability initiatives was an Eco-Safe Digester with BioHitech Cloud that diverts food waste from the landfill. In one year, 30.5% food waste diversion was achieved, reducing waste disposal by nearly 500 tons. The machine also reduced GHG emissions and improves the Atlanta VA's overall efficiency in dealing with waste, producing cost savings.



RUSSELL MAYHEW

Senior Director, Global
EHS&S, BioMarin
Pharmaceutical

Within three years, Mayhew has taken the EHS&S department for global pharmaceutical company BioMarin from a reactive state to a skilled team that leads comprehensive environmental, health, safety, and sustainability initiatives. Accomplishments include moving the EHS&S function into BioMarin's global engineering and facilities services organization in 2017 and completing a global EHS&S risk assessment in 2018. Currently his team is developing a comprehensive strategic plan to build frontline ownership of EHS&S risks and opportunities across the enterprise.



DAVE MEYER

Principal Consultant, BSI
EHS Services and Solutions

Meyer is a principal consultant with BSI EHS Services and Solutions, a full service environmental, health, safety, and sustainability consulting firm. He has 40 years of expertise in corporate and institutional EHS, ISO 14001 and ISO 45001 management systems, multi-media compliance and permitting, supply chain responsibility, and corporate responsibility programs. With experience that extends across numerous industry sectors, Meyer helps organizations achieve EHS program excellence, leverage regulatory compliance risks, and optimize their organizational effectiveness.



LIZA MILAGRO

Resilience and
Sustainability Manager,
Hartsfield-Jackson
Atlanta International
Airport

As resilience and sustainability manager for the world's busiest airport, Milagro created GreeningATL to reflect ATL's triple bottom line commitment and intention of becoming the world's greenest airport. She spearheaded the Food Heroes Program with blockchain-based food waste management company GoodR to collect 800 to 1,000 pounds of food daily from concessionaires and get it to those in need. During the 2019 Super Bowl, ATL diverted 17,000 pounds from landfill and reversed the carbon impression of 71,000 fans.



MARIA MILESCU

Environment, Health, and
Safety Manager, Kokomo
Transmission Plant, FCA

Milescu manages EHS for Fiat Chrysler Automobiles' Kokomo Transmission Plant in Indiana. She launched a community outreach project with plant employees and local organizations called Pallets with Purpose that teaches students life skills. The project also works to improve the environment. Through Milescu's leadership, Pallets with Purpose brought together FCA KTP employees and students to revitalize an old alley in downtown Kokomo and transform the plant's pallets into furniture and art with support from a community makerspace.



SPOTLIGHT INTERVIEW

ANDREA MACHINO

Director of New Construction, Bright Power

Machino oversees a team of engineers that works on ground-up new construction projects, ensuring that the buildings are built as efficient as possible through optimizing design and performing quality control inspections throughout construction. Her team focuses on programs such as LEED, passive house, and enterprise green communities.

What is the biggest challenge you have faced in the last year or two?

I took over as director of new construction during a time when the team was going through a huge workload and financial boom. I came in at a time when we didn't have capacity, processes or resources to grow at scale since we were still young in the industry.

How have you addressed that challenge?

Keeping up with the workload and the demand in our industry involved tripling our team in the span of about six months, from five to 17 people. It also included overhauling internal processes and revamping the restructure of the team to allow for more collaboration between team members. I did this all while having to ensure members were adequately trained and the quality of our services remained strong. We go through it though and we

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are stronger than we've ever been. It was a stressful and greatly challenging time but the team persevered.

What advice would you give other professionals as they try to accomplish their sustainability or energy management goals?

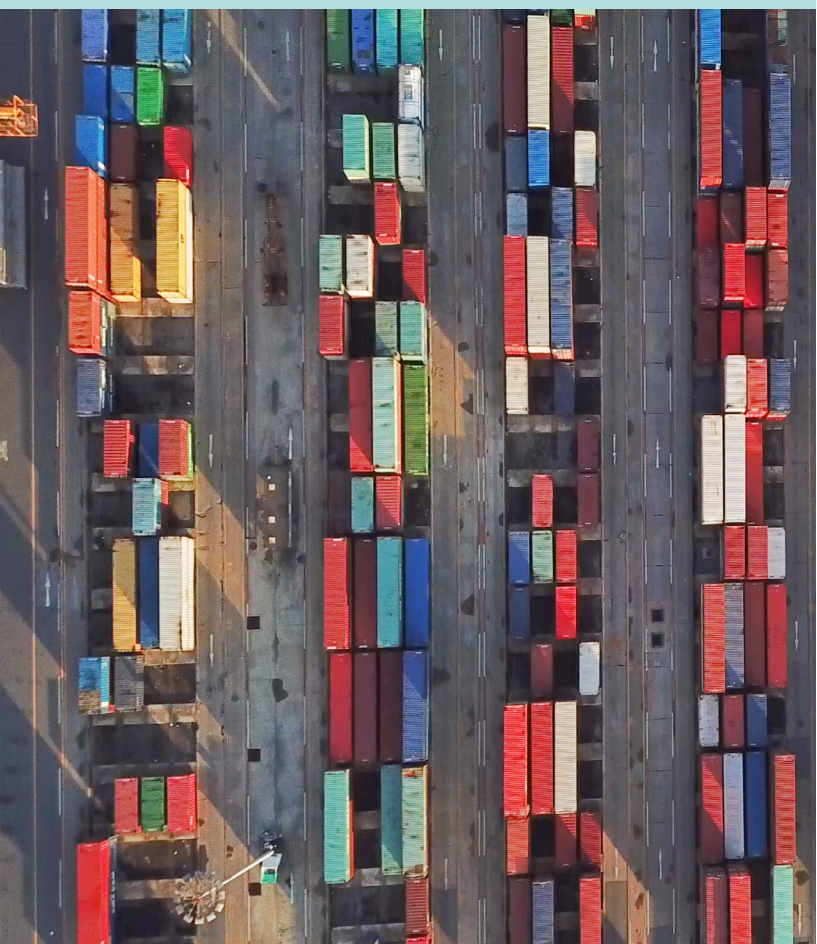
I always tell people you're only as strong as your contacts in the industry. Networking is one of the most beneficial ways you can get ahead both as an individual and on a company level. Go to conferences and events and see who's out there. Whether you're finding a new career opportunity or collaborating on a project level, having a list of contacts can bear opportunities you never thought were possible. 🌀



MEG MOYNIHAN

Director of Strategic Marketing, Stericycle Environmental Solutions

Moynihan has played a pivotal role in growing Stericycle Environmental Solutions' drug takeback program, which consists of Seal&Send Medication MailBack Envelopes and Medication Collection Kiosks. She keeps track of all the pharmaceutical waste that Stericycle diverts from landfills and water supplies. As a result of her dedication, the company has seen record collection volumes. In addition, Moynihan established Stericycle's relationship with the National Safety Council in a partnership aimed at stopping America's opioid epidemic.



CHELSEA MOZEN

Sustainability Lead, Etsy

Mozen envisioned that e-commerce website Etsy could go carbon neutral on shipping as her capstone project for Bard College's MBA in sustainability program. The company subsequently hired her to their sustainability team and Mozen went on to become Etsy's sustainability lead. In February 2019, the company committed to carbon neutrality for shipping. As part of that announcement, Etsy used the methodology that Mozen had developed to offset the entire e-commerce industry's shipping emissions for one day.



SPOTLIGHT INTERVIEW

ANH MARELLA

Global Director of Films, Avery Dennison

Avery Dennison is a leading manufacturer of pressure sensitive labels and adhesive technologies. As head of marketing for the films product line, Marella is in charge of building the product portfolio based on the desires of the marketplace and of existing customers.

What is the biggest challenge you have faced in the last year or two?

Our labels touch a wide variety of things: beverage applications, personal care, food. With the recycling process for PET products, the label is a contaminant. It sticks to the flakes, and you can't reuse that in a pure form. So we have designed a process that allows the label to separate cleanly so the flakes can be used back into the bottle.

Now, we want to provide a broader set of solutions for our customers: We have a solution for PET containers, but not for HDPE — your shampoo bottles or other bottles that are opaque. Our challenge is how to create more products that can be reused in bottle-to-bottle type recycling and help enable recycling for a wider range of stuff. How do we take the niche product that we have and expand it?

How have you addressed that challenge?

As a marketer or product developer, you're always talking to customers and their customers. But we're living in the ecosystem outside of those immediate stakeholders, so we're working with different types of recyclers to understand their pain, their challenges. We're talking with municipalities to help them get people to actually recycle, and recycle the right way.

And we're getting out there and learning. In Europe, the challenge is there's legislation trying to drive recycling, so we're trying to stay ahead of that. In some Asian countries, they don't have established recycling infrastructure, so we're following what they're doing. Are they going to follow the established processes or look for new technologies?

Then we have a mergers and acquisitions team and other teams that look at disruptive technologies. What could happen to eliminate our industry? What happens if you don't need a label anymore because it's printed right on the bottle? All customers, all brands, have slightly different goals. We continue to ask how we can provide broad solutions to meet those goals.

What advice would you give other professionals as they try to accomplish their sustainability or energy management goals?

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Curiosity. Always, it starts with the end-customer in terms of where you need to focus, then you need the curiosity to learn. Stretch yourself to look beyond your horizon, your business, for the nuggets of information to help you learn, like I'll go to a materials recovery facility and put on boots and climb in a dumpster to look at the garbage.

Bring in experts, because you don't know everything. And be good with gray. Put a line in the sand and make a decision, but be agile enough to change as you need to. You won't always have all the info you need, but you make a decision and don't worry about having the perfect product. Over time, you learn and it gets better. If you wait for perfection, you won't learn. You wear the hat you're wearing for today and look around the corner for tomorrow. 🌀



MARGARET O'GORMAN
President,
Wildlife Habitat Council

The Wildlife Habitat Council (WHC) is an NGO that collaborates with companies on practical approaches to science-based biodiversity actions. This business model has garnered positive outcomes, due in large part to O'Gorman's ability to bridge the conservation and corporate worlds. She is the lead designer of Conservation Certification, a cross-sectoral voluntary sustainability standard for site-based corporate conservation efforts that currently recognizes over 600 conservation programs across 30 countries on more than 2 million acres.



JAMES L. NEWMAN
Owner and Managing
Partner, Newman
Consulting Group

Newman has been promoting initiatives to reduce energy use for more than 40 years. In 2002, he formed Newman Consulting Group (NCG) to help building owners and managers improve indoor air quality, increase energy efficiency, and reduce costs. NCG's recent projects include saving the historic Whitney restaurant in Detroit an estimated 25% in energy costs and leading a retro-commissioning project for Wayne State University's Academic Administration building projected to save more than \$20,000 in the first year alone.



CINDY ORTEGA
Founder and CEO, Blue
Heron Strategies

As MGM Resorts International's SVP and chief sustainability officer for nearly 28 years, Ortega's achievements include a 100-MW solar array, reducing food waste, and catalyzing local agriculture. She also engaged front-line employees, inspiring actions over the past five years that saved 17,000 metric tons of carbon, 60 million gallons of water, and 1 million pounds of waste. In April 2019, she founded an advisory company for large organizations focused on next-generation sustainability and climate resiliency planning.



SPOTLIGHT INTERVIEW

CHARLES MCEWEN

GEMS Program Manager and Industrial Hygienist, Atlanta Veterans Affairs Health Care System

The Atlanta VA Health Care System provides health care for veterans in the Atlanta area. As program manager for Green Environmental Management Systems (GEMS), McEwan is in charge of everything from compliance to sustainability. He works closely with Joshua Jenkins, another GEMS program manager. With just a two-person team, the GEMS program implements sustainability and energy management initiatives across a 26-acre hospital and 16 clinics.

What is the biggest challenge you have faced in the last year or two?

Growth, budget, and education. In terms of growth, Atlanta is a big city, and as it grows, we grow. That means more clinics and more opportunities, so as an environmental person, you need a place at the table.

I work closely with the engineers. We're on the front end of all the contacts, because if we aren't, the engineers get in there first and they want to do everything the cheapest they can. We need the chance to talk about things like environmental impacts, sustainable alternatives, or automation. If I don't say, "What about automated systems?" they won't use them. So I go in with the numbers and educate them.

How have you addressed that challenge?

We can't do it all with only a two-person team. We needed a place at the table and the opportunity to find more champions. Then we inspire them, educate them. They could be employees, veterans, nurses, anesthesiologists. It's very important to get champions in different service lines.

How do you get the champions? Data. Numbers and money. Like LEDs cost more than fluorescents. But then you need the manpower to take fluorescents down when they burn out. Or they break and you have an occupational health claim. Not to mention LEDs are a better product, especially in garages and parking decks and parking lots. The return is awesome when we give them the right information.

What advice would you give other professionals as they try to accomplish their sustainability or energy management goals?

Find your champions and think about yourself as a coach. And when you get your team, it's about your players. Inspire them. Set goals and objectives that are measurable. Share your results with your champions. Have quarterly Q&As and lunches to share results.

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Everybody loves food. They look forward to that. Then get feedback from them, which gives them ownership. It's not just a job at that point.

Let everyone know, "It's not Charles that did this." We've won the Practice Green health award three years in a row, so I go out and say, "This is what our champions have done." I make a certificate for each award we win. Each person as a champion gets a certificate, and the higher-ups sign them, so leadership knows it's working and then it's easier to get support.

Finally, be visible. It's one thing to crunch numbers from a desk but you have to go out and touch people. Be proactive. 🌀



JOSEPH PARISI

Sustainability Programs
Manager, TD Bank

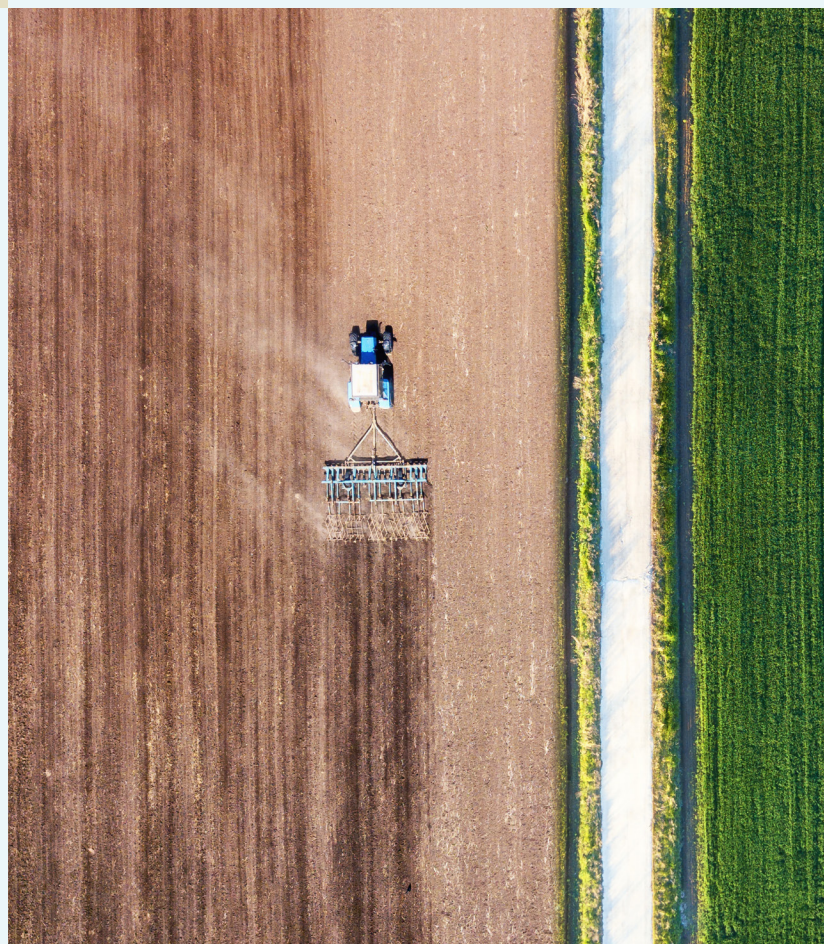
For TD Bank, Parisi manages initiatives that include renewable energy, wellness, EV charging, energy and water efficiency as well as waste avoidance and diversion. He revised TD Bank's green lease template language to address LEED updates and incorporate wellness, identified waste diversion improvements, and turned the bank's first WELL certification project into a strategy for their corporate and retail design portfolio. Parisi also took the lead on power purchase agreement options to advance the bank's renewable energy goals.



REBECCA OTT

Director of Sustainability,
J.M. Smucker Company

Ott has more than 20 years of international business and supply chain management experience with consumer packaged goods and food companies. At J.M. Smucker Company, she coordinates a cross-functional sustainability team that focuses on employee engagement, operations excellence, communications, supply chain, and packaging. Ott has helped the food and beverage company make strides in waste diversion, GHG emissions reductions, water conservation, renewable energy procurement, and certified sustainable ingredient sourcing.





SPOTLIGHT INTERVIEW

MEG MOYNIHAN

Director of Strategic Marketing, Stericycle Environmental Solutions

Stericycle Environmental Solutions provides environmental and regulated waste management solutions, including the award-winning pharmaceutical consumer takeback suite of Seal&Send Medication MailBack Envelopes and Medication Collection Kiosks. In her role at the company, Moynihan focuses on product development, change management, and new business scoping.

What is the biggest challenge you have faced in the last year or two?

The drug take-back program has been the fastest growing new business line for Environmental Solutions in the last five years. The biggest challenge we face is trying to manage communication and scaling across all the different stakeholders external to the company.

Within the retail environment, market forces are driving them to be cost-conscious. Coming to a national retail chain or a regional retail chain and saying, "This is something you can do for your community but it's going to be a new cost line on your P&L" can be a challenging argument to make.

Customers have so many questions: Is somebody going to break into this thing? What's my liability? How are you going to help me manage this? We have to be more than a service provider because people fill in unknowns with fear, uncertainty, and doubt.

How have you addressed that challenge?

Procurement is a huge part. We've put several of our critical manufacturing components out to RFP in the last six months. And cost modeling helps us provide solutions affordably to clients.

Additionally, we work closely with regulatory agencies to guide future regulations. One example is the type of disposal mandated. I can imagine why regulators with the best intentions would want material to go to a hazardous waste incinerator — which tend to be the most highly regulated — but there's a limited number of those facilities in the US and some are not permitted to take this waste stream. You hamstring the ability of industry to manage that material in a cost-effective manner.

It's a balance between managing the downstream environmental impact and being able to offer this in a way that's affordable. A lot of our efforts in the last year have been designed to help us find that sweet spot, guide regulatory agencies there, and bring the rest of the industry along.

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What advice would you give other professionals as they try to accomplish their sustainability or energy management goals?

The most effective strategy is collaboration. If we're launching a new product or program, sustainability-related or not, the first thing we do is build a cross-functional team internally, and then bring that same principle outside the organization. We don't want to operate in a vacuum.

Nobody can do this by themselves. Sustainability requires us to think about how we can work together, both within our organization and with others, to meet these goals. 🌀



JEFFREY PERLMAN

President and Founder,
Bright Power

Perlman is president and founder of the energy management services provider Bright Power. An experienced energy auditor, energy analyst, and solar-energy-system designer, Perlman built the company from a single rented desk to an enterprise with more than 150 employees. In 2018, he co-authored a report with Building Energy Exchange and Sustainable Energy Partnerships that evaluated New York City's multi-family building energy data for savings opportunities. The report's tearsheets include conservation measures at key milestones in a building's lifecycle.



BRIAN PAYER

Director of Strategy for
Industry Solutions, Sphera

Payer works closely with integrated risk management software provider Sphera's prospects and customers to develop solutions for their environmental management and compliance business needs. He helps decision-makers in top power and utilities, chemical, and oil and gas companies navigate government regulations. For one leading energy company, Payer and his team replaced 20 redundant systems and hundreds of spreadsheets with one enterprise energy management information system (EMIS), centralizing the tracking of more than 80,000 tasks for over 200 environmental permits.



KIM PEXTON

Director, Paladino and
Company

Pexton oversees project strategy and delivery for the Seattle-based green building and sustainability consulting firm Paladino and Company. She ensures that projects deliver winning outcomes and maximum value for clients. A LEED fellow with more than 20 years of building industry experience and an internationally published author on the development and implementation of green building practices, Pexton assists organizations in strategic sustainability and climate resilience planning that goes beyond rating systems to target true innovation.

**SCOTT PHILLIPPI**

Senior Director, Automotive Maintenance and Engineering International Operations, UPS

Phillippi oversees a global fleet of 119,000 vehicles, including the Rolling Laboratory of more than 10,000 alternative fuel and advanced technology vehicles, for UPS. He leads the shipping company's vision for electrification, which entails developing and testing new vehicle prototypes as well as charging infrastructure and battery storage systems. In addition, Phillippi builds on the company's long alternative fuels testing history by exploring and investing in the EVs paving the way for widespread medium- and heavy-duty implementation.

**MATTHEW PRASKE**

Energy and Sustainability Manager, Washington Real Estate Investment Trust

Praske oversees the energy management, LEED projects, Energy Star benchmarking, and corporate reporting for Washington Real Estate Investment Trust (REIT), which has a portfolio of commercial office, multifamily, and retail properties. The company has achieved a 9.2% reduction in energy consumption and a 9.9% reduction in GHG emissions against a 2015 baseline. Praske also spearheaded a community solar power on the headquarters rooftop, and his hands-on waste audit improved the office's diversion rate from 60% to 86%.

**JASON POPE**

Director of Sustainability, Hinds Community College

Pope has been in charge of energy conservation and recycling at Hinds Community College in Raymond, Mississippi, for nine years. His leadership in campus-wide educational programs has led to faculty and staff becoming more aware of opportunities to reduce their energy footprints. During his tenure, the college has saved millions of dollars in energy costs, allowing the school to develop new academic programs and hire additional faculty and staff. Through Pope's work, Hinds was able to expand recycling efforts beyond campus.





JOSH PRIGGE

Founder and CEO,
Sustridge

During the past decade, Prigge has made a positive difference as the sustainability lead at Hawaii Pacific University and Fetzer Vineyards. Since starting his own sustainability consulting firm in 2017, Prigge worked with a number of businesses, from small startups to several Fortune 500 companies. His achievements include conducting detailed GHG emissions inventories, leading sustainability reports, providing B Corp certification guidance, and helping one client become the first TRUE Zero Waste certified business in Las Vegas.



DINA RINGEL

National Director
Environmental Compliance,
Alpha EMC

Ringel's role at the environmental consulting firm Alpha EMC involves assisting some of the top residential homebuilders in the nation. Colleagues and clients praise her decade-plus experience with environmental compliance in the construction industry. During a major client merger, Ringel led the development of a procedure to standardize symbols for erosion control best management practices and inspection language. She has also optimized inspection routes for fuel efficiency and improved technology used in the field.



SPOTLIGHT INTERVIEW

BRIAN PAYER

Director of Strategy for Industry Solutions,
Sphera

Payer works with Sphera's customers on their environmental performance and responds to their sustainability questions. He helps them conceptualize their systems and select software and tools, and then get the systems implemented. On the creative side, Payer looks at developing the next generation of technology solutions.

What is the biggest challenge you have faced in the last year or two?

Just growth in the economy and in our company. There's more good work to be done. And we're trying to keep pace. Our core markets are changing rapidly. They're having fundamental shifts, especially in oil and gas, chemicals, power and utilities.

How have you addressed that challenge?

Within Sphera it's hiring the best people, people that are adaptable and hungry to learn. We've also taken a laser focus on our customers and what their needs are and tried to develop deep open relationships so we can help them on their journey.

What advice would you give other professionals as they try to accomplish their sustainability or energy management goals?

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I would say be agile, so think creatively about your core capabilities and your past experience and how you can adjust that and repackage that and add adjacent skills so you can grow. Things are changing quickly. You have to be able to fine-tune your own skill set and value to keep up.

You must tie into these macro trends. So you make your EHS not just EHS, but you make it part of a digital transformation, or industry 4.0 or process improvement. Tie it into one of these things at the corporate level. 🌀



KATIE ROSS

Global Real Estate and
Facilities Sustainability
Lead, Microsoft

Ross leads sustainability for Microsoft's 32 million square-foot real estate office portfolio. She analyzes approaches to reach the company's targets for energy, water, carbon, circular economy, and ecosystems. Her achievements include helping facilitate Microsoft's first PPA in India, and transitioning Building 25's café and kitchenettes on the Redmond campus to 100% zero waste. Ross is also pursuing LEED Platinum, Net Zero Water under the Living Building Challenge, and WELL Gold certifications for the company's new Silicon Valley campus.



CAITLIN ROOD

National Environmental
Sustainability Director,
Mercy Housing

Rood heads environmental sustainability for Mercy Housing, a large affordable housing nonprofit with nearly 23 million square feet in 22 states. She created a portfolio-wide environmental sustainability program and grew the team to three full-time employees. Hundreds of efficiency and renewable measures have been implemented in about 200 Mercy Housing properties, mainly through the Green Hope program that Rood leads. In 2017, the nonprofit achieved a reduction of around 28% in source energy use intensity.



BECCA RUSHIN

Vice President,
Sustainability and
Corporate Social
Responsibility,
Jamestown LP

Rushin oversees all ESG reporting, stakeholder engagement, and communications efforts for real estate and private equity firm Jamestown LP. She grew transparency efforts from no formal monitoring and tracking program to a comprehensive GHG inventory management plan assured by a third party. In addition, Rushin helped achieve over 5 million square feet of LEED-certified space and a 53% improvement in Jamestown's Global Real Estate Sustainability Benchmark score for its privately held REIT between 2013 and 2018.



SPOTLIGHT INTERVIEW

JASON POPE

Director of Sustainability, Hinds Community College

Pope focuses on energy conservation for Hinds Community College. Since he started in 2008, he has trimmed energy usage by 32%. The money saved from energy conservation helps fund other projects. In addition, he manages recycling and waste management.

What is the biggest challenge you have faced in the last year or two?

New technology. Mississippi is kind of behind in that. So LED and solar, we are just now getting active with LED projects. It kind of falls on deaf ears sometimes, in terms of selling these ideas — they all agree it's a great idea but it's also groupthink. "We can't afford that," they say. Getting it approved and passed has been an obstacle.

How have you addressed that challenge?

So, you can't let it get you down, especially with slashed budgets. I know getting a solar project approved is going to be difficult so we focus on what we can do such as energy conservation, waste management and recycling. Most schools pay to have waste hauled off. We use student workers, volunteers, honor society members or other student organizations to sort, bail and process our materials and we sell it and the money is used for scholarships.

What advice would you give other professionals as they try to accomplish their sustainability or energy management goals?

Keep learning and don't give up. Bring those wild ideas back, knowing that they may not get passed but you may get something less, and that's progress. Also, keep telling your success stories. We get a lot of support when we tell people about our recycling project. 🌀





SPOTLIGHT INTERVIEW

MATT PRASKE

Energy and Sustainability Manager, Washington Real Estate Investment Trust

Praske is responsible for all aspects of Washington REIT's energy management program, including real-time monitoring and analytics, demand response, electricity and natural gas procurement, and energy conservation measures. In addition, he oversees the company's LEED project management, Energy Star benchmarking, and corporate reporting initiatives. During his tenure, Washington REIT has surpassed 2.6 million square feet of LEED certified space and achieved the GRESB Green Star designation.

What is the biggest challenge you have faced in the last year or two?

In 2018 we announced our long-term energy and GHG reduction targets: to reduce by 20% by 2025. Getting our whole team on board, collecting the data necessary to understand what current usage is, having confidence in quality of the data and then wanting to balance ambition and what we can implement in a way that makes sense for the company is our most recent challenge. And of course, getting everyone on board with that.

How have you addressed that challenge?

We did pure benchmarking. We got a sense of what other community real estate companies have set in terms of targets. To give leadership some context as to where our industry is on that. And then we took some steps to better understand metrics of what we want to implement.

We also did a little bit of a look back to see that what we've been doing is working. Since 2015 we've already achieved a 9% reduction. We don't expect that every three years, but it's good news. That's how we got everyone aligned and on board. We are currently on track to meet our 2025 goal. It's rewarding not just for me but all of our property teams. It's a cumulative effect. And it helps build momentum and morale.

What advice would you give other professionals as they try to accomplish their sustainability and energy management goals?

I've learned that someone's done this before. So knowing who your peer group is and interacting with them is so important. A lot of people are very open in sharing what's been successful for them. Resources are out there among your peer group. There's some competition but in general we are all working towards same goals.

Network. And don't be afraid to ask that network for help. 🌀



ARIEL RUSS

Sustainability Initiatives
Manager, Macmillan

Russ is sustainability initiatives manager for the global publishing company Macmillan, overseeing annual carbon emissions inventory and employee engagement across around 25 brands in four countries across 40 offices. In 2018, she submitted the company's first ever CDP climate change report and is currently developing sustainability strategies for each country and their respective imprints. In addition, Russ revised Macmillan's paper policy to better reflect the company's sustainability values, and established an assurance protocol to ensure enforcement.



SCOTT SAVRE

Director, Facilities and
Energy Management,
Best Buy

As director of facilities and energy management at Best Buy, Savre handles asset planning for HVAC, lighting, and power generation. He led a lighting retrofit project for the consumer electronics retailer at 840 stores that was completed in four months. Replacing the old metal halides delivered tens of millions in expense reductions to Best Buy's bottom line and reduced annual lighting maintenance costs by 92.5%. Savre and his team are now implementing a nationwide LED upgrade.



DENNIS SALAZAR

President and Co-founder,
Salazar Packaging

Salazar is known as a dynamic force in the green packaging industry. In 2007, he and his wife Lenora left their packaging industry jobs to start their own packaging business in Oswego, Illinois, with a sustainability focus. Since then, they have worked directly with manufacturers, collaborating on designs and bringing new products to market. Their Globe Guard product line includes 100% post-consumer waste recycled content shipping boxes, tape, labels, and void fill products.



GREG SCANDRETT

Director of Global Solutions,
Adec Innovations

As director of global solutions for Adec Innovations, Scandrett leads a team of more than 30 technical professionals in designing, developing, and delivering ESG software. With his leadership, the company's CleanChain data management and communication tool gained more than 700 active brands and suppliers as users, and amassed a database of more than 50,000 registered chemical formulations. Scandrett also had a hand in developing the CDPI Insights platform to help companies improve their environmental disclosures.



SPOTLIGHT INTERVIEW

JOSH PRIGGE

Founder and CEO, Sustridge

Prior to founding his own Las Vegas-based sustainability consulting firm in 2017, Prigge directed sustainability and regenerative development for Fetzer Vineyards in California, helping them go carbon neutral, get certified as a B Corp, and become the world's first Zero Waste certified company.

What is the biggest challenge you have faced in the last year or two?

Initially it was going from managing sustainability for one organization to launching a consulting business where I'm working with all sorts of businesses in different industries. A lot of that includes developing new knowledge and skills.

For one client, I did their greenhouse gas emissions inventory and now they're interested in doing climate scenario analysis. That's a fairly new initiative brought on by the Task Force on Climate-related Financial Disclosures (TCFD) reporting. There is not a lot out there. I've been spending a lot of time researching.

How have you addressed that challenge?

My network has been extremely valuable, so reaching out to colleagues and other sustainability professionals. I also launched the Sustainable Nation Podcast a year ago and have now interviewed more than 100 sustainability leaders from around the world. I'm asking for insights and advice. It's taught me so much and expanded my network.

At night, instead of watching Netflix or a baseball game, now it's relaxing with a bunch of PDFs on my iPad, reading through technical documents and case studies. It's been great.

What advice would you give other professionals as they try to accomplish their sustainability or energy management goals?

The number one piece of advice that has been given on my podcast is to establish partnerships and develop strong relationships. Grow your network where you can. I wasn't really surprised because that's what I've found from my decade-plus in the sustainability field.

As sustainability professionals, it's so important to know the business case and why sustainability is important, not just because it's good for the environment and the right thing to do. Stay familiar with the new research that's coming out around the benefits that sustainability brings to an organization, from attracting customers to more engaged employees, and then of course how sustainability mitigates risk and drives innovation. It's going to help you sell sustainability. 🌀

**MARTA SCHANTZ**

Senior Vice President,
Greenprint Center for
Building Performance, The
Urban Land Institute

Schantz leads the Urban Land Institute's Greenprint Center for Building Performance, a worldwide alliance of leading real estate owners, investors, and strategic partners committed to improving the real estate industry's environmental performance. In 2018, ULI Greenprint members improved energy efficiency across more than 8,000 buildings, reducing utility expenses by \$30 million and creating over \$500 million in new real estate value. Schantz shared members' sustainability strategies with the broader ULI membership, helping over 44,000 members achieve similar success.

**TARAS SENYUTA**

Environmental Manager,
Civeo

Senyuta manages environmental stewardship for Civeo, a global hospitality company that provides accommodation services to oil and gas industry workers. He has worked on building an environmental management system that includes elements like mandatory environmental orientation and training for all employees, an environmental incident reporting system, and an environmental inspection system. Two of the company's internal departments have received ISO 14001 certification, and Senyuta's one-man department has expanded to three environmental professionals.



SPOTLIGHT INTERVIEW

DINA RINGEL

National Director Environmental
Compliance, Alpha EMC

Based in Winter Springs, Florida, Alpha EMC is an environment, safety, and energy consulting corporation that serves clients nationwide. Ringel is responsible for ensuring that they deliver the highest quality work product to clients in construction, storm water, energy efficiency, and housing, and safety.

What is the biggest challenge you have faced in the last year or two?

A little over a year ago, one of our largest clients went through an acquisition of another one of our larger clients. We had to partner with our client through the acquisition, and our goal was to keep them in compliance with federal and state regulations, as well as balance their own internal procedures and requirements — and navigate them through that to merge to a common goal.

We work in 17 different states so we had to cater our approach on how we partnered with them at a local level while maintaining the goals of the larger company at the same time.

How have you addressed that challenge?

We're still working on it, but we started by partnering with the local divisions, trying to understand their approach so we could complement that. If we don't

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listen to our clients and understand what they're looking for, we can't offer them the proper solution.

Company-wide, we looked at what we were doing in the field and tried to break it back down into basics: what was working, what was not working, and what areas could we improve on and change, ideally to continue to stay relevant with the larger entity. It was a lot of communication with the client as well as with our teams.

What advice would you give other professionals as they try to accomplish their sustainability or energy management goals?

One of the things is how important listening is in the workplace. Not enough people do it well, and it is crucial. If you don't listen and find the root of the problem, you're never going to fix that problem. Listen to your clients: What do they need? What do your coworkers need?

Something else that I've learned is that your team tends to mirror how you lead them. I try to be self-reflective and understand what I'm putting out to the team to see if it's congruent with where I want the team to go.

A coworker said I'm very consistent. I don't get into the emotion side of it. I get into the fun side of how can I work this out. That provides stability to the team. So problems bubble up and instead of blowing them out of proportion, we take a step back, we listen to the problem, we address the problem, we fix it, and we move on with the day. 🌀



SHANNON SMITH

Founder and CEO,
PointGuard

Smith is founder and CEO of PointGuard, an Abundant Power company based in Charlotte, North Carolina, that offers a cloud-based software platform for building teams, helping them increase building comfort while lowering operating and capital costs. In addition to assisting commercial building owners and managers, he is a founding partner of the Better Building Initiative that President Obama launched in 2011 to incentivize retrofitting with the aim of reducing companies' energy bills by about \$40 billion annually.



TRAVIS SOLBERG

Chief Sustainability
Steward, Solberg
Manufacturing

Itasca, Illinois-based Solberg Manufacturing makes filtration, separation, and silencing products that protect machinery. Since 2009, Travis Solberg has had the family-run manufacturer on 100% electrical wind RECs. Through his efforts, the company has 1,270 solar panels to power their production facility. In addition to collaborating with suppliers on reducing chemicals in products, he worked on a number of equipment efficiency upgrades as part of Solberg's membership in the DOE Better Plants Challenge.



TONY SPARKS

Staff Project Manager
for HVAC Systems,
Albuquerque Public Schools

Sparks works to make meaningful improvements in building design and operation as the staff project manager for HVAC systems at Albuquerque Public Schools (APS). He is also the coordinator for APS' Water and Energy Conservation Committee, which has a 10-year plan to reduce energy and water use by 20% across 160-plus campuses. Five years in, Sparks and his team achieved 98% of their energy reduction target. To date, the school district has over 50 LEED certified buildings.



SUSAN HUNT STEVENS

Founder and CEO, WeSpire

Susan Hunt Stevens founded WeSpire in 2010 as a consumer app to drive behavior change focused on health and sustainability — a kind of “LEED for daily living” that combines social mechanics, game mechanics, personalization, and mobile. Since then WeSpire has expanded to running employee programs for customers that included Cox, MGM, Unilever, Sony, Comcast, Dell, Mondelez, and Timberland. Collectively, her platform has saved 26,000 metric tons of CO₂, 78 million gallons of water, and 1,062 tons of waste.



BRANDON STEELE

Sustainability Engineer,
Big Ass Fans

Steele has led the charge to reduce waste and limit both corporate and customer facility energy for Big Ass Fans, which manufactures energy-efficient fans and lights. His efforts include monitoring elevator usage, encouraging employees to use the stairs, and improving both lunch wares and recycling at the company's cafeteria. In addition, Steele worked alongside Big Ass Fans' principal engineer of codes and standards to submit DOE enforcement letters, pushing for accuracy and consistency in companies' public portrayals.



DAVID SYMONS

Future Ready Program
Leader, WSP

Symons leads WSP's Future Ready program, which challenges the global engineering and professional services firm staff to design to today's standards while considering future codes. In 2017, he launched a series of Future Ready Innovation labs that have been attended by around 1,000 colleagues and identified 800 practical ideas on how WSP projects can address future trends, from loneliness to climate adaption. Currently Symons is leading recommendations to accelerate the circular economy and increase resource efficiency.



SPOTLIGHT INTERVIEW

CAITLIN ROOD

National Environmental Sustainability Director, Mercy Housing

Rood is responsible for environmental sustainability aspects of all areas of Mercy Housing operations, including development, operations and maintenance, resident services, and office practices. In her previous position as sustainability manager, she was responsible for developing and implementing a national environmental sustainability program encompassing design, construction, operations and maintenance, resident services, and office practices.

What is the biggest challenge you have faced in the last year or two?

Portfolio-wide efficiency implementation. All of our properties are snowflakes, none are like any other property, none are designed the same, none have the same systems within. None have the same type of people. All have different locations with different managers. There's no one-size-fits all solution to sustainability and energy management.

They all have different cash flow situations. Because they're all individual 501(c)s and I can't invest and pay back into an individual bucket. We have 325 properties in 20 states.

How have you addressed that challenge?

Various approaches. Some efficiency gets taken care of during our 15-year refinancing when we have an influx of cash. We look for utility rebates, we look for pay-from-savings programs, we look for when the property has money it needs to spend and has no higher priority. We look for operational efficiencies and product standardization and we combine all those things together.

We have some recent success stories. One, all of our portfolios in Xcel territory — more than a dozen — are now signed up for community solar gardens offsite. They use virtual net metering. That's very new, not quite done yet.

Big picture item: We've been working on reporting and transparency. This year, we're currently seeing reduced energy usage by 26% for the 74% of properties reporting.

What advice would you give other professionals as they try to accomplish their sustainability or energy management goals?

Number one is to have tenacity. We have to always make the business case and keep looking for ways to do what we do and why we should keep doing it. To me, it feels like as a community we are shifting to agreeing we have a crisis. Feels like there's a shift. Perhaps now that the world community is coming to that place this is our opportunity to strike and be effective at our jobs. 🌀

**ANDREW TANG**

Vice President, Energy Storage, Solar and Integration, Wärtsilä Energy Business

For more than a decade, Tang has helped facilitate the modernization of the electric grid. During the last five years, he led global business development for Greensmith Energy, a Wärtsilä Company, and their GEMS software, a platform that maximizes power grids with AI and machine learning through multiple applications, such as renewable integration. Recently he was appointed to lead energy storage, solar, and integration for Wärtsilä's Energy Business, which envisions a 100% renewable energy future.

**EMILIO TENUTA**

Vice President, Corporate Sustainability, Ecolab

Tenuta's decades-long tenure at Ecolab, a global provider of water, hygiene, and energy technologies and services, includes leading their sustainability, corporate responsibility, and environmental stewardship. In partnership with Trucost, part of S&P Global, Tenuta led the development of the Water Risk Monetizer, a modeling tool to assess water-related risks. In 2019, he and the same advisory team launched the Ecolab Smart Water Navigator, a publicly available tool that encourages smart water management practices at facilities.



SPOTLIGHT INTERVIEW

MARTA SCHANTZ

Senior Vice President, Greenprint Center for Building Performance, The Urban Land Institute

Schantz leads the Urban Land Institute's Greenprint Center, a worldwide alliance of leading real estate owners, investors, and strategic partners committed to improving the environmental performance of the global real estate industry. Through measurement, benchmarking, knowledge sharing, and implementation of best practices, Greenprint and its members strive to reduce greenhouse gas emissions 50% by 2030.

What is the biggest challenge you have faced in the last year or two?

Skeptics. Working for a real estate industry group, we have many folks who are hesitant to jump on the bandwagon. They'll choose marble columns instead of LED lights and controls. They stick to what they know. Maybe they were burned once 10 years ago and they've never gotten over it. So, for me, skepticism is the biggest challenge.

How have you addressed that challenge?

I've been focusing on going big on the business case of projects and the numbers and financial metrics. It also helps to show that others have done it before — especially competitors. This has worked well and has made all the difference.

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ULI has about 40,000 members. We have a bunch of local chapters. I spoke at a ULI Michigan event recently. They are all about making money and sticking to what they know. I presented a case study and their jaws dropped and eyes popped. Seeing the payback period for solar, an example of LED retrofit across portfolio, showing them ROI. People were very interested. They were actually engaged in how they can incorporate that into their practice. Energy efficiency may not be sexy, but it's so impactful.

What advice would you give other professionals as they try to accomplish their sustainability or energy management goals?

Whomever you need to get buy-in to achieve your goals it's really helpful to think of the situation from their perspective. Think about the facility engineer, think about the financial decision maker, think about the tenant — why would these people care about your goals and projects. Being able to think of different benefits from their perspective is an effective way to get outside stakeholders on board with your goals. 🌀



MONTEY THAMES

National Director
of FM Operations,
MUFG Union Bank

Thames runs the facility management operations for MUFG Union Bank, operated by Mitsubishi UFJ Financial Group (MUFG). When presented with an opportunity to improve operational efficiency and reduce greenhouse gas emissions, Thames pushed MUFG to pursue a new subscription-based model. As a result, the financial group is rolling out the Sparkfund Technology Subscription across its entire portfolio. Their new lighting and IoT technologies are expected to produce 80% savings, and help MUFG maximize energy efficiency while reducing carbon.



MATTHEW THURSTON

Director of Sustainability,
REI

Thurston leads sustainability initiatives on behalf of REI, North America's largest consumer cooperative. His work spans a wide range of areas, including labor rights in manufacturing, sustainable chemistry for REI's products, resource efficiency in store operations, and environmental advocacy at the local and national level. Thurston and his team of sustainability professionals collaborated closely with more than 60 brand partners and introduced new product sustainability standards in 2018 for all brands sold at the co-op.



SPOTLIGHT INTERVIEW

TONY SPARKS

Staff Project Manager for HVAC Systems, Albuquerque Public Schools

Albuquerque Public Schools (APS) is New Mexico's largest school district — and one of the largest in the US, serving more than a quarter of the state's students. During the 2013–2014 school year, Sparks helped create the policy for a 20% reduction in water and energy use over 10 years. The district achieved 98% of its energy goal at the end of year four.

What is the biggest challenge you have faced in the last year or two?

My biggest challenge is two-fold: resources and culture. APS is a huge district and nobody was looking at anything holistically before. People can be resistant to change, and the objectives of each person are different. The objectives of a building operations manager would be to keep the lights on and the complaints down. That's the kernel of the culture: "It's my building, I'm going to do what I need to do."

We've had to address the culture challenge, then address the challenge of resources.

How have you addressed that challenge?

The first thing we had to do was get some visibility, then get some control, then set some sort of strategy and standards, then get buy-in.

We have an energy educator on our team. He creates energy teams at as many schools as possible. Then he tries to quantify the changes he's making with his teams. The rest of the culture piece is getting the story out, so people know what we're doing. We share on social media; we've gotten some TV coverage, a lot of recognition about hitting our milestones. Things are starting to come together.

Finally, we're getting the district itself to recognize us as a core part of what the district does.

What advice would you give other professionals as they try to accomplish their sustainability or energy management goals?

My little group of five full-time staff wasn't going to get anywhere alone. My boss and I said, "Let's get the right people in the room." That led to the creation of our Water and Energy Conservation Committee (WECC), comprised of operational managers from APS, Albuquerque utilities (gas, water, and electric), the state energy office, and other entities like municipalities and community colleges. Get buy-in from leadership. You have to have it from the top to make any difference. 🌀



SPOTLIGHT INTERVIEW

BRANDON STEELE

Sustainability Engineer, Big Ass Fans

Big Ass Fans, headquartered in Lexington, Kentucky, has become well known for manufacturing energy-efficient fans and lights that improve comfort in large spaces lacking air conditioning. Steele is the company's dedicated sustainability employee, focused on energy conservation, environmental stewardship, and projects related to those areas.

What is the biggest challenge you have faced in the last year or two?

The biggest has been creating awareness within the company. A lot of people are not entirely aware of some of the impacts that we're making and the issues we're facing, from pollution to emissions.

Along with that, we have an energy audit of our Lexington campus, which includes our global headquarters, manufacturing, and R&D lab. We're working with the University of Kentucky Industrial Assessment Center on a large-scale energy audit of all three facilities to generate new ideas for projects that we can improve on as a company.

How have you addressed that challenge?

We focus on educating all employees through onboarding classes, which I instruct. It's more of a conversation than a lecture. Everyone has different levels of experience. Internally, we highlight what is going on within our facility operations, what kind of impact are we making as a company, and what projects we are doing to make improvements.

For example, posting effective signage in strategic areas about our ongoing recycling program, what is recyclable, what isn't, and what our local recycling program will accept. Something as simple as promoting not using the elevator if it's not necessary — taking the stairs. It's a benefit to grab a bit more exercise and save energy on the elevator.

Our manufacturing facility relies on our high volume low speed (HVLS) fans to circulate the air, and so do our R&D lab and headquarters. The manufacturing facility also uses our high bay LED fixtures. We practice what we preach.

What advice would you give other professionals as they try to accomplish their sustainability or energy management goals?

The biggest one is education, promoting awareness of the relevant issues we are facing as a society — and relate them to the business.

It's impossible to move without momentum, and it's impossible to move without support from the entire company. Creating this unity, it's a lot easier to move toward a goal. 🌀



GLENN TROUT

President and CEO,
VelocityEHS

Trout is president and CEO of the world's largest EHS software company, VelocityEHS. He pioneered the electronic management of material safety data sheets (MSDSs) in the late 1990s with his Chicago-based company, MSDSonline. In 2015, the company rebranded to VelocityEHS and has since grown to 15,000 customers worldwide and more than 10 million users from across diverse industries. This year the company released motion capture and AI to speed up and simplify ergonomics assessments.



MICHAEL VARGAS

Client Advisor, CMTC

Vargas advises clients for CMTC, an organization that provides consulting services to aerospace, automotive, defense, and distribution industries in California. He helps clients develop profitable, robust, and scalable environmental businesses and investment portfolios. His work at CMTC is affiliated with the National Institute of Standards and Technology (NIST) and is part of the Hollings Manufacturing Extension Partnership (MEP) program. Recently Vargas worked with a large municipal utility to review their compliance and assess their energy risk management activities.



SPOTLIGHT INTERVIEW

SUSAN HUNT STEVENS

Founder and CEO, WeSpire

Stevens helped design WeSpire, a tech platform used primarily by companies to inspire their employees to be more sustainable, inclusive, healthier, and engaged in communities. Throughout its history, WeSpire has worked with nearly 100 companies, doing short- and long-term commitments mainly with large organizations. Currently they are working with about 40 companies.

What is the biggest challenge you have faced in the last year or two?

There's a convergence happening between many teams under the purpose and responsible business side, but I think companies are still wrestling with who owns what and who does what. So, we end up having a lot of education and a lot of people at the table for decisions. We love facilitating that process, but we are pioneering — along with a lot of our customers — this world of collaboration between teams that may have been siloed in the past.

Our job is to activate every employee. The hard part is getting people to be aware of what the strategy is and what their role is for bringing that strategy to life in the company. But that's the problem we help solve essentially. We are successful if every employee knows their role in achieving the company's impact and

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they're excited about it. And once they understand them, they tend to be. It's creating a movement, a culture change. And culture change is hard. The impact is the power of a social network to inspire change.

How have you addressed that challenge?

By working closely with our customers to ensure it's not just a great program but that they have great people who understand what their role is in participating in the program and that it's really localized and relevant and resonates with different groups of people in the organization. We catalyze ambassadors and local champions and make sure the programs are resonating with all teams.

What advice would you give other professionals as they try to accomplish their sustainability or energy management goals?

The biggest observation I've had over the last nine years is how often people are forgotten or leaders may feel engaging people isn't in their mandate, but most breakthrough change requires behavior change and culture change.

It's not just about technologies to deploy, but how will you motivate and inspire your people. That's just as important. And it's forgotten all too often. 🌀



AARON WELCH

Environmental Supervisor,
Central Arizona Project

Welch manages environmental compliance for Central Arizona Project (CAP), a 336-mile system designed to bring water from the Colorado River to Central and Southern Arizona. CAP has more than 56 waste containers spread out over hundreds of miles of the canal. Welch modernized their waste management program using software that streamlined the process, reducing environmental and safety risks while ensuring regulatory compliance. He and his staff are now looking for ways to eliminate entire waste streams.



KRAIG WESTERBEEK

Senior Director of
Smithfield Renewables,
Smithfield Foods

Westerbeek leads Smithfield Foods' efforts to implement renewal energy initiatives for their hog farming operations. Starting several years ago, he began exploring technologies to convert biogas generated by anaerobic digestion of hog manure at Smithfield farms into a usable energy source while reducing GHG emissions. A 2018 pilot project at several contract farms in North Carolina is producing 80,000 dekatherms of renewable natural gas per year, and is expanding to 90% of company-owned and contract farms.



SPOTLIGHT INTERVIEW

DAVID SYMONS

Future Ready Program Leader, WSP

Global engineering and professional services firm WSP has a staff of around 48,000 and works on projects across 65 countries, including the California high-speed rail system and LaGuardia Airport's Central Terminal B. Symons leads WSP's Future Ready sustainability program, which challenges their experts to envision a future world and design with that in mind.

What is the biggest challenge you have faced in the last year or two?

The biggest challenge I've had in the last year has been a really nice one. Future Ready has gone stratospheric in WSP. The argument is won. Our global board completely gets it. Now let's execute on it — and how do we do it really fast?

How have you addressed that challenge?

I've learned a lot from our market chief operating officers, who have skills on process. That's helped me set strong governance programs across the business. It's helped mobilize and empower people so I now have a Future Ready leader in each country, with subject matter leaders for our service lines and teams that are all pointing in the same direction. We've got global leader learning programs. We've got great ways to capture case studies.

Then it's actually letting go a bit, otherwise you just become a blocker in the process. Sometimes people talk about Future Ready, and that's not quite how I'd describe it. But they're talking about it. Future Ready is about the heart and the passion as much as the logic. I am increasingly light touch on this.

What advice would you give other professionals as they try to accomplish their sustainability or energy management goals?

Get out of the present. We've been thinking about what does our world look like in 10 or 15 years. There's the enormous area of climate change. Markets across the world are moving to zero-carbon economies. Three of our big markets — the UK, Sweden, and now New Zealand — have all committed to becoming zero-carbon economies in the last 12 months.

Think about the issues that your customers or your board or your supply chain are going to need to address. The role of a sustainable leader is to think about the future, not just the here and now. 🌀



TODD WILLIAMS

Senior Counsel, Lean & Green Michigan

Williams is a property assessed clean energy (PACE) lawyer who advises property owners on financing energy-efficiency, renewable energy, and water conservation measures on their properties. He served as general counsel to the Northwest Ohio Advanced Energy Improvement District, helping them deploy millions of dollars to property owners. In Michigan, he provides support for the energy finance marketplace Lean & Green Michigan. Williams has built relationships throughout Michigan and Ohio to close more than \$50 million of PACE deals.



JEFF WILZBACHER

Director of Energy and Sustainability, DaVita

Wilzbacher joined DaVita in 2014 to lead a building management system rollout for the healthcare company, which is one of the United States' largest providers of kidney dialysis services. His work contributed to a 6% reduction in energy per dialysis treatment through 2018 compared to 2015. In addition, Wilzbacher helped lead a project team to the signing of two virtual power purchase agreements with Longroad Energy in April 2019, providing 100% renewable energy for DaVita's North American operations.



CHARLES WRIGHT

Project Engineer, Axium Solar

Wright left a long career in aviation electronics to pursue renewable energy as a project engineer responsible for photovoltaic specification, design, and permitting at Axium Solar. Having been with the Plano, Texas-based solar company for several years now, Wright lends his vision to every project he designs, including a 2018 off-grid system for one customer that uses Iron Edison batteries for backup. This customer continues to work with Axium Solar toward building out additional equipment.



SPOTLIGHT INTERVIEW

KRAIG WESTERBEEK

Senior Director of Smithfield Renewables, Smithfield Foods

Smithfield Renewables was formed in 2017 as a platform to help the world's largest pork processor and hog producer cut carbon and advance renewable energy. Westerbeek noted that in 2016 Smithfield became the first major protein company to announce a greenhouse gas emissions goal, targeting a 25% reduction by 2025.

What is the biggest challenge you have faced in the last year or two?

Our biggest challenge is how to realize the full energy value of manure when faced with clusters of farms. Farms are generally in the same general area but not necessarily connected. It's very difficult to make the manure energy projects work because the farms are too small. So we're trying to find ways to connect our farms in a way that makes sense.

How have you addressed that challenge?

You can either move the manure or move the energy. We've determined that transporting biogas from manure digesters rather than transporting manure is the best way to provide the economies of scale necessary to make manure-to-energy projects work.

We're connecting farms with biogas-gathering pipelines, and that allows us to leverage the more capital-intensive parts of these projects, which are the biogas cleaning and pipeline injection.

What advice would you give other professionals as they try to accomplish their sustainability or energy management goals?

To make projects work, you've got to challenge traditional project structure. As it relates to manure energy projects, it's essential that projects create a solution that is mutually beneficial to all that are involved. You can't just have projects that are beneficial to investors. They also have to be beneficial to farmers.

I've been strongly encouraged with some of the markets for the renewable energy that's being produced. We're focused on renewable natural gas because it has a lot of markets. Pay attention to the markets because they have gotten to a point that makes these projects work.

We've got a really big project in Central Utah. In that particular valley, we're putting new farms in, and there are approximately 200 to 300 huge wind turbines. Most of them are 2–3 MW turbines. There is also about 300 acres of solar farms, and on the side of the hill there is a geothermal plant. When you sit on top of the ridge and look at that valley it's amazing to see all the renewable energy production taking place. 🌀

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