

Hannah Debelius: Welcome everybody. We're going to be started in just another moment here, as I see more are joining our Zoom. All right, we have a tight schedule today, so I'm going to go ahead and jump into it. Hello, everyone, and welcome to the 2023 Better Buildings summer webinar series. We are dedicated to bringing you the latest actual insights and leading industry experts. This annual series is a chance to explore the topics, technologies, and trends that affect your organization as well as efforts to accelerate decarbonization and energy efficiency adoption. We're glad to have you here with us today. You are in the right places if you are joining us for a webinar that's called It Just Gets Better and Better: Highlights from Better Projects and Better Practice Award Winners. Next slide.

Before we dive in, there are just a couple of housekeeping items that I'd like to go over with everybody. The first is that this webinar is being recorded and will be archived on our Better Buildings Solutions Center. So, we'll send it to you – this recording – after the fact. You can reference it again, share it with a colleague, or just see it on the Better Buildings Solutions Center if you want to go back and see something. That also means that everyone is in listen only mode. So, you are muted. That doesn't mean though we aren't going to have a chance for questions and discussion. I'll talk about a tool for that. However, if you're having any AV issues, please do use the chat function to put in your AV issue there and we'll be able to hopefully address that and get you back online with us. So that's in the chat Q&A box. It's within Zoom. All right. Next slide.

My name is Hannah Debelius, and I'm with the U.S. Department of Energy. And I have the wonderful pleasure of working with commercial partners in our Better Buildings Program on the Better Climate Challenge. Next slide.

Today, we have a very packed agenda with a lot of great speakers for you. We are going to first kick off with just a couple of polls to get to know our audience better. Then we are going to have some rapid-fire speaker presentations highlighting a lot of great projects from across sectors, and across buildings types and geographies which is going to be wonderful. Then we will have time at the end for Q&A. So, I hope you all are paying attention and are ready to put in some questions throughout this whole time.

What we are up to today – next slide – is that we are actually celebrating some of our DOE Better Project Better Practice award winners from this year. These projects and practices demonstrated

significant savings of replicable and actual pathways to decarbonization within buildings and industrial facilities. This recognition opportunity, we expanded this year to more sectors because we really wanted to recognize partners and highlight so many of these wonderful accomplishments in implementing decarbonization, energy and water efficiency, waste reduction, and practices overall about overcoming these barriers. It's a great way for all of our partners to highlight the important milestones that they're achieving in their organizations, so I hope that you'll not only celebrate with us the winners from this year but also consider applying yourself for the coming years. Next slide.

This year, we did a poster session at our Better Buildings Better Plants summit in the spring where we were able to highlight many more of our award winners. These posters are also available in our Better Buildings Solutions Center, so I hope that you'll join me in learning more about all of the award winners, even more than the ones we are highlighting on today's webinar. The next cycle for this will open up at the end of this year. So, I hope you'll stay to the Better Buildings emails if you're interested in applying for the next year. Next slide.

Congratulations, again, to all of the winners for this year. The Better Projects award winners are all recognized for their outstanding accomplishments at individual facilities whereas the Better Practice award winners are recognized for implementing their practices, procedures, or policies more broadly. So, there's a lot for all of us to learn here and to celebrate and again, you can find all of these in the Better Buildings Solution Center. Next slide.

So, congrats to all of our winners. I know we are seeing a lot of familiar logos here today, and I hope that you will get excited about celebrating a taste of these accomplishments that we have on our webinar here today. Next slide.

So today, you should be familiar with this tool if you've joined us for other webinars. We're going to be using Slido for a quick poll and then all of our Q&A. So right now, if you could open up a new browser or your mobile device, go to slido.com and enter the event code DOE. You'll be able to access this platform. Again, slido.com. The event code DOE. I'm going to say it again, just so you're opening it and doing it in real time. Excellent. So not only are we using this for a poll right now, and thanks for those of you that are already jumping in and participating to tell us what sector you're from, but throughout the entire webinar today, you will also be able to use it for the Q&A. You can put in questions anytime.

There's also even a little thumbs up function where if you like someone else's question, you can hit that thumbs up, and it moves it up to the top of our queue making it more likely we will be able to get to it when we do Q&A at the end of this.

All right, looks like we have a strong presence from local government. We're really glad to have you, as well as contractors and consultants, state government, nonprofits. We've got some industrial, some commercial real estate. Excellent. This is great because it's looking like our sectors are as diverse as our speakers today. All right, oh yeah, more from commercial real estate. That's my sector, so I'm glad to see you all coming out. All right, and with that, we're going to go, I think, to our next poll, which is one more poll for you here. We are also just curious to know from our audience, what are innovative projects and practices at your organization that could be interesting to highlight as a success story? This is anonymous. You don't have to tell us, although I do hope you shout your successes from the rooftop. But we've love to hear more about this. It could be something that you might be considering for a Better Practice or Better Project award next year, something that's just making your week better. I know for my commercial real estate folks, you also probably all finished a big reporting season the last couple of weeks. So, we'd love to hear from those again. And if you are interested in how you are participating, you can go to [slido.com](https://www.slido.com) and enter that event code, DOE. I see some participants are typing, so I'm waiting with bated breath to see what successes we are highlighting.

All right, on demand energy modeling to streamline energy models for prototypical buildings. Great. Energy treasure hunts. I know that our industrial partners are well versed in those. And a climate action plan. Always love to see those. Finding a way to routinely incorporate future emissions into menu development. All right. Solar and microgrid systems and with an exclamation point. Excellent. I know the Better Climate Challenge. We're doing more on that this year. All right, we have a few other folks typing, but I think for time, we are going to go ahead and move forward here since we have so many wonderful presenters. So, we will – we can close that poll and hop back over to our presenters.

I'm not going to introduce all of these wonderful eight people. That'll take a while, but all of their bios are available on the Better Buildings Solutions Center and will be included with the material that we send out after this webinar. So, I'm actually going to introduce people as they move forward for their speaking. So, thank you all to presenters. We are going to go ahead and jump

into our first presenter. So welcome, Luis Quinones. He's the corporate sustainability engineer at Bendix Commercial Vehicles Systems. We're so glad to have you. Luis, go ahead and take it away.

Luis Quinones:

Thank you, guys. Can you guys hear me again? Okay. Thank you and good morning, everyone. Yes, as Hannah was mentioning. I work for Bendix Commercial Vehicle Systems. We do have a pretty nice project that we were fortunate enough to be awarded last year one of those Better Projects award. Can we go to the next slide please?

So, for the 2023 DOE Better Project Processes, we submitted what we have on our Huntington, Indiana site which is a wastewater recovery operation that it's helping us with our wastewater at that location. Can we go to the next one please?

So just a quick overview of our company. It's Bendix Commercial Vehicle Systems. So, we're a member of the Knorr-Bremse Group which is a German company. Basically, what we do is we develop and supply leading edge active safety technologies with energy management solutions. They're freight charging dual systems on their Bendix brand for medium- and heavy-duty trucks, tractor trailer boxes and other commercial vehicles throughout North America. We have over 4100 employees within Bendix and our wholly owned subsidiary, R.H. Sheppard. We're driven to deliver the best solution for safety performance and overall operating cost. We do have manufacturing operations – I'm sorry. We are headquartered in Avon, Ohio with manufacturing footprint in Bowling Green, Kentucky, Hanover, Pennsylvania, Huntington, Indiana, Lebanon, Tennessee, Wytheville, Virginia, and some operations in Acuna, Mexico. Can we go to the next one please?

So, a quick overview of our Huntington manufacturing campus. We do have great milestones in growth, performance, and mostly corporate sustainability since it was first opened back in 1980. Now, we do have four facilities with 576 employees. They're basically leading the way for multiple ESG-related projects like we've been recognized by the DOE back in 2021 with our zero-waste landfill certification process. We also have for 2022, we have an on-site solar PV system that generates around 1,400,000 kilowatt hours every year. And for 2023, we were recognized by the Sustainability Manufacturing Practice of the Wastewater Recovery System for our washing operation. Bendix is a pretty well-established community member with a long story of commitment to the city of Huntington, and state of Indiana. That's

a quick description of the awards that we've been getting on that side. So, can we go to the next one please?

So specifically for our Plant 2 operation, it's fairly recently expanded damper manufacturing business, which was started at the – when we started it in the location, we faced a complicated task of continue to support the washing operations with better – want to reduce environmental footprint because the raw materials that we use for this damper product, they need to be clean, and in the past, they've been – they were cleaned via a paper degreasing operation, which relied on some harmful chemicals, mostly TCE. This is basically to remove the RPOL from our parts. So, part cleanliness, it's a key characteristic for the next step on the assembly process which is the EB or electro beam welding process, which basically requires the part to be pristine in order to be properly welded. So based on our environmental commitment and the protection of the environment, we sourced or we changed that washing process to a new, vapor-based water system, washing system – sorry – that was implemented. Although we solved the first issue which was that it had a huge impact on the chemicals that we were using. Another issue came to light. We were not expecting to use as much water as we were with this new system. So, can we go to the next one please?

So, we started a second project, which is basically – we needed a source, a new treatment technology that would allow us to support our sustainability goals. Ultimately, we ended up implementing a high vacuum distillation system that actually allows for the water to be reused in the same washing operation. As you can see there in those pictures, we do have four big tunnel washers. Roughly they do have 1200 gallons each, but those waters are – that water has been keep up in the same system. So basically, what the process does, it reintroduces the wastewater as a high-quality distillate and also helped us on the achieving that zero-discharge status with the city. So, we don't have to be in compliance with any wastewater permit as we keep that zero discharge status. For 2022, we actually were able to reuse 500,000 gallons between the – in the same washing operations. Can we go to the next one please?

So, in a nutshell, what we have is – once we wash our parts, we send it to the wastewater operation, and it's basically a high vacuum distillation process. It basically works by creating a vacuum that can boil some water at a much lower temperature. Then it proceeds to clean its steam that it's generated and condense it back into water so that where we create that high quality

distillate. The process allows us to reuse 90 percent or recover 90 percent of the wastewater that we put through the system. The other 10 percent gets collected and it's disposed as a concentrate. So technically, the technology is a bit complicated, but it's technically a heat pump vacuum evaporation with forced inhalation and external shell heat exchanger. It is 100 percent electrical and in summary, I like the fact that the equipment pulls that vacuum allows the temperature needs to be significantly reduced, so that also saves energy in there. So, the direct savings from projects mostly measured on those gallons that we're able to reintroduce and send back to those washing operations, which is the same process that generated that wastewater from the start. So, 500,000 gallons. It's a bunch for 2023. We are expecting to go above the 600,000 with a couple of improvements that we made. So, we're just aiming to keep reusing as much water as we can. Can we move to the next one? Just the last one.

We're going to use the same technology as our older sites in Huntington, and we're also sourcing this process for our Bowling Green, Kentucky site. Can we go to the next one?

I just want to thank you, thank everyone for your attention. Thanks again to the DOE for allowing us to share these practices. I'm really interested in hearing what we have coming up next. So, thank you guys.

Hannah Debelius: Excellent. Thank you so much, Luis. I really appreciate it. It was great to hear about your perspective, especially since I don't always get to hear from industrial folks, and I appreciate that. Next up, I'd like to welcome Cassidy Jenney and Jeremy Hyer, who are both joining us from the Ohio Department of Rehabilitation and Correction. So, thank you both for joining. Go ahead and take it away.

Cassidy Jenney: Thank you. So, like she mentioned, we're from the Ohio Department of Rehabilitation and Correction. Next slide.

So, my name is Cassidy Jenney and my title is Energy Conservation and Sustainability Administrator.

Jeremy Hyer: My name is Jeremy Hyer, Project Manager for ODRC and also the project manager for the building we'll be speaking about today.

Cassidy Jenney: Next slide. So, the building we're talking about today is called the Ohio Reformatory for Women, and it's a residential treatment unit. So, if you ever see any work saying RT on the slide, that's what

that means. So ODRC reports that 19 percent of our residents have a mental health diagnosis, so that's about 10,000 individuals. And of that, 3,700 of them are severely mentally ill. Creating the RTU is really a first step in us creating a healing center for our population to not only receive a higher level of care, but also to assist with them heading to an outpatient status faster. Also, the new RTU is really implemented for staff wellness, and staff retainment. Next slide.

Jeremy Hyer:

So, efficiency was a big key, as you can see. Top left, that's the old Margaret Reilly that is now scheduled to be demoed, and then the new Margaret Reilly. So, we got 70 years of useful life out of the old Margaret Reilly. So, it did its job. It definitely did its job, but it wasn't conducive to programming and confidentiality and those types of things for this population. So, calculations, as you can see some of the numbers here that we got from our engineers. When we look at the efficiency, we always look at what can we do ourselves? So, a lot of the landscaping design and stuff like that, we incorporated the offenders, so native plants as you can see. Water usage was cut down extremely from a typical building or a typical design. We did design our roof structure to accept future PV solar installation if we choose to do so at a later date. We didn't have the funding in this project. That's something we'll look at later. And as you can see, there's some numbers there in energy savings.

Cassidy Jenney:

Next slide.

Jeremy Hyer:

All right, so leading WELL. That's always a big, pointed discussion when we're starting a project. So, we get all the stakeholders involved. WELL was something new to our agency. We've done a couple LEED projects and we've had success with that. We are tracking, as you can see, the goal for this building. The WELL was a big component because of – it has a lot of policies and procedures that we would need the stakeholders, the end users, to help develop and then also adhere to. So, they were open to that. They loved the idea. So, we see the WELL certification along with LEED. WELL comes after occupancy. We're having a ribbon cutting today, so we're hopeful – and everything is tracking that we're going to get our WELL certification. So, you can kind of see some of the things we did. Here's the courtyard. There's the flexi-pave, which is impervious pavement. It's also gentle enough they can do yoga out here. We did do EV charging stations, and these were the insta charge, so if we had somebody coming for a visitation, they will be able to charge their vehicle. It's not an 8-hour charge. It's a quick charge.

So that's something new for our agency. So, we're interested in seeing how that works. The biggest thing about that was how we get payment for that. So, we figured that out with our department of administrative services. Soundproofing panels are used throughout the facility because a lot of hardened surfaces with some of it being the higher security level mental health patients. And a lot of them look like artwork so you don't even know that they're soundproofing panel. We are again tracking the goal. So, everything is good there. Next slide.

Cassidy Jenney:

So, because this building is the first of its kind, we are really using it for a research opportunity. So, this is going to be to help us establish our green building standards and that's going to be for any new construction, so anything over 100 square feet that will apply to. So, two of the main studies we're doing are circadian lighting study. So that's going to be the fluctuation of the lighting change through the day, so the tones go from warm to cooler and then brighter to lower throughout the day. We're going to have a case study group that's going to partake in a study with a handful of universities and doctors. So, we're really excited about that. Then, the other one will be staff retainment and employee wellness. We've already issued out a pre-survey and we received 86 percent back and that's for individuals in the Margaret Reilly building you saw in the second slide. Then, once the building has held occupancy for a handful of months, we're going to issue a post-survey. Next slide.

Additionally, with this building, while we already have programing in place, we're really amplifying it to tie into the whole story of the LEED and WELL facility. So, we have a horticulture program but with this facility there's a healing garden, which all of our residents planted and made the landscaping plan like Jeremy said. They will be able to have garden beds and partake in growing food themselves. Another thing, as you can see in the picture, is our individuals are able to take a class from Ohio State. They're able to get their compost certification, and we had to have a handful of our folks who are employees be able to get certified to be able to train this inside of our facility. So instead of them coming out and saying, "Here's a certificate that says Department of Rehabilitation and Correction", it actually has Ohio State, and it has a little bit more emphasis to external companies with that. Another thing we're implementing is for them to be solar installers. So that'll just be a level 1 but we're looking into getting them to be level 2 certified. That's also through Ohio State. There's also art therapy and then we also have a testing kitchen where they'll be able to learn nutrition and healthy lifestyles within the facility. Next slide.

That's it. I just want to say thank you to the Department of Energy and the Better Buildings group, and thank you to all of our partners, K2M, HOK, our architectures, engineers, and then obviously our leadership that supported this building. It's fingers crossed hopefully the first LEED and WELL facility in the world. Hoping no one comes along during that year while we're tracking WELL to sneak in there on us, but it will also be the first corrections building that is WELL certified. Thank you, guys.

Hannah Debelius: Excellent. Thank you so much, Cassidy and Jeremy. The health and wellness aspect was really interesting to me and seemed really unique. I appreciate you sharing that perspective, and congrats on your award. Next up, we will be joined by Kevin Durocher, who is the Sustainability Function Specialist at ABB. So, Kevin, thank you so much for joining.

Kevin Durocher: Absolutely. Hi, everyone. My name is Kevin Durocher. We have an awesome project here at one of our facilities in Pine Tops, North Carolina that I'm going to be telling you guys about today. Next slide.

So, we're going to start with a little bit of a science lesson here. So, the target of this project was emissions of SF₆ gas, which is sulfur hexafluoride. SF₆ gas is really used in a lot of different industrial applications. Specifically, it's really used commonly as an insulator, an electrical insulator. It absorbs heat really well, displaces oxygen, and reduces the amount of – essentially protects the equipment that we're running a ton of voltage through, and it makes it more efficient. On the backside, unfortunately SF₆ gas is the strongest greenhouse gas known to man currently. So, one kilogram of SF₆ being released into the atmosphere is equal to 22,900 kilograms of carbon dioxide. Next slide.

So, when we're looking at the actual project itself, ABB has set some pretty aggressive carbon reduction goals. We want to be carbon neutral by 2030 for our scope 1 into emissions. SF₆ gas emissions took up a large chunk of our scope 1 emissions across the company. So, there was really a big initiative, a big push, to start eliminating that from our operations. Just to give some historic context here about how the gas is actually used at our Pine Tops facility. Essentially, it's used within our medium voltage switchgear line as an insulator. The product previously was put into a chamber where the oxygen was removed in a vacuum, and then SF₆ gas was put into the chamber around the product so that it would fill all the small bits and spaces where air used to be, and

then the product would be sealed. At that point, the chamber would be opened and all of the SF6 gas would be evacuated out through a fume hood out of the building and into the atmosphere. Next slide.

To give you guys just a quick overview of what we're looking at, this is ABB's in the U.S. our 2019 scope 1 and 2 footprint. This is called a Sankey diagram. So essentially, all the individual sources of our carbon emissions, it shows how much of those are flowing into that final percent, the final total for our 2019 baseline. At that point, SF6 gas emissions just from our Pine Tops facility made up 15.7 percent of our total carbon footprint for the country. So, a pretty significant amount, and so it was pretty quickly identified. We have a great opportunity here to knock off quite a bit of our carbon footprint and improve the operations at our facility there. Next slide.

So, the solution that we identified was a capture system. So instead of the gas being just evacuated from the chamber, we wanted to find a way to capture as close to 100 percent of that emission as possible. We found this great system from a company called DILO. It is their reclaimed system. So, we worked with DILO to design essentially a system that's purpose-built for SF6 gas. From the time of getting the project started, ordering the system, receiving it and completing it, we're looking at about a full year between that process. So pretty quick turnaround which was great. What the solution does, what this new system does essentially, we have instead of that vacuum chamber opening through the top and then being exhausted through a fume hood, there's a collection system underneath because SF6 gas is actually denser than air, and it will sink. So, we have a vacuum system that will pull SF6 gas out of the bottom of the chamber into a collection system where the gas itself will then be tested for its purity. It'll be tested for how clean it is. Can it be reused? If it's above a certain amount of pure SF6 gas, it'll actually get bottled, stored in the facility and then repurposed and recycled, reused through the same system. For any amount that's not quite as pure, we'll bottle that and have it sent back to the manufacturer. So, we're eliminating the amount of SF6 that we're emitting out into the atmosphere, and then we're also eliminating quite a bit that we have to purchase directly from our supplier. Next slide.

So, the results from this were absolutely amazing. We saw a 97.99 percent reduction in the amount of gas emissions. There's still that small percent that we're working on operationally, getting people trained on the system to make sure that everything is working smoothly. We saved a pretty amazing amount of 15 million

kilograms of carbon dioxide per year on our carbon footprint just from this project. We were really happy with our team. This was a business-led initiative. We have a lot of our goals and targets around sustainability being pushed from our corporate side. This is where a great initiative where we saw members from our business and at our facility reaching out to us to assist in this process. There was a lot of business led growth here which is awesome. Next slide.

Yeah, so I think that's it for me. Thank you everyone for attending and listening in.

Hannah Debelius: Great. Thank you so much, Kevin. We appreciate it. As a reminder to all of our audience, you can submit questions anytime for any of our panelists if you go to slido.com and use that event code DOE, or you can also just click the link that we've dropped into the chat, and that will take you directly to it. You also have the option to hit the little thumbs up to upvote some of those questions, and we can get to them first. Excellent. Next up, we have Suzanne Savanick Hansen, and Jessica Livingston from Allina Health. Thank you much for joining us, and take it away.

Suzanne Hansen: Thanks for having us. Next slide, please.

So, we're from Allina Health. We are in Minnesota. We have 90 clinics and 12 hospitals about an hour outside of the Twin Cities more or less. Next slide, please.

We started a formal sustainability program in 2020 when Allina hired me, and we have a brand new climate action plan as part of that. We have a goal – subgoal of diverting 50 percent of our waste from a landfill or incinerator. We've had a long history of our staff people being very interested in waste reduction. I had heard anecdotal stories that especially when we have a clinic closure or renovation, we had quite a bit of material being thrown into the dumpsters that could be reused. Next slide, please.

I had heard about Rheaply from a colleague. Rheaply is an online platform that facilitates reuse for us across our clinics and hospitals and also with local nonprofit partners. And I had a clinic closing, and I convinced Dakota County, who had waste reduction grants, to let us try Rheaply as a pilot project because this fit our problem of not having an easy way to connect our sites that had excess material with ones who needed it. We'd done a survey. About 90 percent of our sites had things that could be reused across the system. This could also save us some money from not having to

repurchase things that somebody else has in excess. So, next slide, and I'll pass it off to Jessica.

Jessica Livingston: Thanks, Suzanne. So, when we first started the Rheaply pilot project, we really wanted to make sure that we could integrate this new platform into all the existing systems within Allina Health that had been previously organizing reuse projects. So, the first thing we did once we got the platform was to work with our interior designers to make sure we had a standardized list of what items can be reused internally and what items fit the Allina Health Standard, and which items should be listed for only external donation and not reused internally. So, working with our interior designers to develop that standardization was really helpful, so we could start identifying projects that had a lot of available items to be reused. So, we started with three different clinic closures and we uploaded I think it was about 100 items each for each of those clinic closures, things ranging from furniture to medical supplies to office supplies, really a large range of items with that first pilot project. Once we got those listed in the platform, we started working with Rheaply to develop staff trainings for our team at Allina, so everybody could understand how they could get access to the platform, how they could post items if they wanted to do reuse at their sites, and really how it was going to work with the current reuse projects that were already happening. We also worked on developing some educational materials which included some FAQ documents, a how-to guide explaining what can and can't be posted and then facilitating things like pickups and deliveries and that sort of thing. Next slide, please.

So, our pilot lasted eight months and we had a pretty successful impact with just this eight-month pilot. We had almost \$50,000 in cost savings from items reused which came from \$85,000 in value identified and 786 items ended up being posted within this first eight-month pilot project, and two of the items are highlighted over there on the left. One of them was that exam table, and also a microwave that was able to be reused internally within another clinic, which was really cool to see. We had 156 users signed up, and over 6,000 pounds of waste diverted from our first pilot project. Next slide, please.

This is one of our sites that was really a star user within the pilot. They were able to make a lot of things happen and revamp some of their area with items that were going unused at other clinics. This was at our United Hospital Hastings Regina campus, and our River Falls area hospital campuses. And something cool that they were able to do with these items was to reuse cubicle modules and create

a whole new workspace in an area that was formerly a storage space. So, it was really great to see this team get on the Rheaply platform, find all these usable items, and actually put them to use right away. Next slide, please.

So, after the success of the pilot, we decided to expand Rheaply system-wide all throughout Allina. To this date, we've estimated saving about 860 kilograms of carbon, which is equivalent to charging over 103 million smart phones. Right now, we have 781 users on the platform from Allina Health. We've been able to identify \$226,000 in value and capture \$107,000 in savings, which has led to 14,000 pounds of waste diverted from our reuse. Next slide, please.

This slide just shows how this fit into our circular economy within Allina Health. So, we have that \$226,000 identified at the top left, which goes into the \$107,000 that was able to be recaptured through successful reuse projects in the organization. Then 14,000 pounds of waste diverted from that. The system sustains itself from there. Once we identify more, we can recapture and reuse it, and put it back into that waste divergence. So, we really create a system that's able to support our waste divergent goals through the organization long term. Next slide, please.

We also had a really good success with connecting with some external donation partners. Right now, we're connected with 16 different nonprofit organizations in the Twin Cities. Some of them include Bridging Matter, and the Salvation Army, and then we've been able to divert almost 3,000 pounds through these local donations. Next slide, please.

When we started the reuse project, we came across a couple challenges which was staff uploading materials because people weren't super familiar with the platform at first, and they didn't fully understand how it worked. So, developing trainings on how exactly to use it was really helpful with that, as well as having that guidance of what items are standardized and what can be reused internally, versus what should be posted only for donation. We also had a couple challenges centered around connecting with donation partners locally, was a bit of a challenge at first too. But we've been able to get into a good community here at the Twin Cities area. Then coordinating pickups for big items was a bit of a challenge at first, but we were able to develop a delivery system that kind of helped with coordinating some of those big reuse projects. Next slide, please.

And then finally, our next steps for this project are to continuously identify more projects for reuse and improve some outreach which includes the Rheaply Reuse Ambassadors Program where people at sites can become reuse ambassadors, which basically means they're the point of contact for reuse at their sites. Then continue outreach and training and spreading the word and telling our story. Next slide, please.

That is all we have for you today. Thank you.

Hannah Debelius: Great. Thank you so much Jessica and Suzanne. We appreciate that. That's a really interesting tool. I haven't seen something like that before. Excellent. With that, we'll move forward to our next presenter, Dana Schneider, who is with the Empire State Realty Trust. Thanks, Dana.

Dana Schneider: Thanks for having me. Go to the next slide. So, I'm the Director of Energy, Sustainability, and ESG for Empire State Realty Trust. We'll try to keep up in the chat if anybody has questions to ask, I'll try to integrate them into the presentation. So, it's 11:42. I think we have seven minutes. I wanted to take a step back for us because we are lucky to be awarded the successful practice and successful project awards. So, I wanted to talk about both of those things, and give a bigger picture of all the things that we do. Not all of the things are listed here, but really what we do that's relevant for these studies and the Better Building challenge. So, we have almost 10,000,000 square feet of property, primarily office, also retail, and multi-family. We have achieved net zero for the entire portfolio as of January 2022. We have committed to achieve – sorry, we're carbon neutral as of January 2022, and we have committed to achieve net zero for the whole portfolio by 2035, and for the Empire State Building, by 2030. So, our project work is largely based on the work in the Empire State Building, which has become a world famous case study, and which we'll talk about some today. That primarily, for this team, and the reason that we have the practice award, is because we actually scale everything they do in the Empire State Building into the entire portfolio. So, it's really important for us to distinguish carbon neutral versus net zero. We also include the entire portfolio in those commitments and in all of our reporting and disclosure. We include all the scope 1, scope 2, and scope 3 downstream leads to assets emission. At the same time, the whole portfolio is WELL safety rated. We were the first portfolio to achieve that rating in September 2020. We helped to write the standard. We're also Footwell Energy Star sustained excellence and participate in a lot of other programs.

We're also science-based targets verified at 1 ½ degree targets. On the next slide...

We wanted to be really clear in how we define carbon neutrality and net zero. Of everything that we are hearing from the other award winners are amazing. These are great examples in specific projects. I'll take a step back for programmatic standards and the way that we establish our goals, and then the rigorous work that we do to develop the projects, develop the business case, and make the case to implement and then measure the performance of actual net zero goals across the portfolios. So, I think there's a lot of greenwashing in the industry, and there's not a lot of consistency requirements around reporting disclosure and legislation nationally in America. So, I think it's really important for those of us who are doing this as prime movers to share what we're doing and how we're doing it. So just to be really clear, carbon neutrality and net zero are not the same thing. Reporting on one building when you have millions of square feet is also not indicative of a company-wide goal. So, I think it's really important to be clear how we define this. So, carbon neutrality, I think most people in this call would know, involves offsets, and that's part of a reasonable pathway to get to net zero especially in existing buildings where that work may take time and especially in order to deliver on our economic fiduciary responsibilities, all of us have to make that business case. That could be part of 5-, 10-, or 15-year capital plan. So, we make that really clear. We've reduced emissions so far by 43 percent portfolio-wide, by 56 percent at the Empire State Building and we offset 100 percent of all fossil fuels used through renewable energy and through support of a diverse, preserved forestry preserve project. as well. Our net zero commitment is to get to a carbon reduction of 80 percent by 2030 and the Empire State Building by 2035 portfolio wide. We're also – much of our portfolio is based in New York City, where we have local law 97, the most aggressive building greenhouse gas emissions legislation in the world, and we're working really – we're part of that local law 97 board, and we work on those groups. So, on the next slide...

We talk about some of the measures that we've already implemented and the way that we evaluate them. So, we develop calibrated energy models and we understand the cap backs over the next 10 – 15 years. So, we understand exactly what the building's plans are, what the infrastructure is, when it needs to be replaced. We develop very aggressive programs to retro-commission ad technology, replace equipment, and when it gets replaced, that incremental cost to payback is where we make our business case.

So, what you see in the EV packages, the actual business case for the Empire State Building's investment. On the next slide...

We just give a little bit more detail on the different measures that we've implemented. But we only have a minute left, so let's go to the next slide.

What we've done is that we've implemented over 100 measures – energy and emissions reduction measures in the Empire State Building already, and we have also committed to net zero when we did that. We, actually, as we developed our net zero programming for the Empire State Building, we created a playbook: how to do this, why this is important, shared our entire case study transparently, made the technical and the economic business case and published it in partnership on ACERTA. We announced it with President Clinton, Governor Hochul, and Mayor Adams. And at the link that you see here, that playbook on how to achieve net zero in large commercial office buildings is public and free to use. It gives the Empire State Building and five of my other buildings case studies for everybody to use as their example, and we're working on the case for multi-family now and hope to have that ready by the end of the year. So, I think there's one more slide, but I also think we're out of time. So, if anyone ever needs a tool to understand the distinction between net zero carbon neutrality and how to have a really robust plan for achieving those, you're welcome to leverage some of this information. For more information, see our sustainability.

Hannah Debelius: Great. Thank you so much, Dana. I know you all received two awards this year. I guess double congrats on that. Excellent.

Dana Schneider: Thank you.

Hannah Debelius: With that, we will move forward with our last presenter for today, Casey Dupuie is from Steelcase. Thanks so much, Casey.

Casey Dupuie: Thanks, Dana. Hi, everyone. I am excited to be here with you and happy that we were able to receive this Better Practice award from DOE. So, I will be going through what Steelcase has done in what we call a scrap playbook. Next slide.

Before we get into that, I'll set the scene a little bit on what our environmental commitments look like. We have a core value that we've had at Steelcase for decades for protecting the environment. In 2020, in August, we also announced that we were carbon neutral and that we publicly committed to STVI targets, but even before

then we had waste goals and those were actually going to be sunset in 2020. So, we've had a long history of having these different goals in waste reduction and having this level of commitment within the company has been super helpful too. It's really gained a lot of alignment and helped us to push forward on many initiatives. Next slide.

One way that we are able to support some of the goals that we have as a company is by coming up with ways to reduce our waste. That's something that we were looking at being able to share with all of our facilities. One thing we knew we had at all of our facilities was manufacturing waste. So, we were piloting a new program at our Kentwood site, and that was – consisted of putting together a scrap team and also putting together a new scrap tracking tool through Smartsheets. So, we were working over about two years on that Smartsheet tool and getting the process right, and being able to turn that into a better practice that we could use in all of our facilities everywhere. That's how the scrap playbook came to be. It documents all of those best practices and it's something that we're hoping to use in all of our facilities so that they don't have to recreate the wheel every time. Next slide.

So, the project partially came to be because the team realized that in order to improve scrap, we actually needed to improve our communication. The left side of the slide that has the graph with the crazy one, that was the process when the team first started on how to record scrap. The one on the right actually represents what the scrap tracking tool was aiming to do for us. We figured that once we had this effective communication, not only was that going to help clear the air between all of the different places that scrap tracking could go, but it also would help us to turn parts around faster, have more accurate inventories, and address any broad issues that we would potentially find. Next slide.

The team knew this wasn't going to be easy though. We had to change the way people talked about scrap. So, we had to put a value to what that material was. Instead of saying, "Let's just scrap this out." On top of that, we had to make it easy so that people would actually adapt to that new process and then be able to integrate that into the programs and processes that we already have. But before we could implement any changes throughout the plant, we had to get everybody aligned and on board with what was going to happen next. We knew we had to have accountability and we did that by putting ownership to different parts of the process. We had our plant manager as a product owner, the plant scrap champion to oversee all of the different projects that were

happening in the site, and also scrap champions for all of our zones, so that they could enact change at the line level. We also needed to make this visual, partially because it helps with awareness and engagement, but also this fits directly into our continuous improvement methodologies that we already use across all of our facilities. Next slide.

It wasn't all smooth sailing. We did run into issues. First, just generally speaking, change is really hard for anybody but because that change is hard, we also needed to find people who were either passionate about this topic or looking for growth opportunities to help lead these efforts. I know most of us don't do this job because it's easy. We do it because we have a passion for it. That's also something that we were looking for in somebody to be that scrap champion for the plant. The last thing that was probably the most difficult was building data visualizations. So, we needed to find the right data to use. We needed to find the people who knew the right SAP transactions to use. We needed to find the financials, the right ones to look at, someone who could actually build what we were looking for in Tableau and then being able to display that in a way that made sense, and give it functionality, so that people could slice and dice this in any way that they needed. Next slide.

But we did have a lot of success in implementing this. The first thing that we were really needing to do was establishing where we were today, and that's something we would recommend too. What is your baseline and what makes sense for you to measure, and agree on that? And then taking time to actually talk with the employees that were going to be impacted with this change was super helpful. Hear what they have to say, listen to their concerns, understand what they need to do, or what they need so they can do their jobs effectively. Then just really making that extra step with those employees ultimately led to better buy-in and a better end product. Training everyone on scrap, that means everyone from the line to the plant manager, make sure everyone is on the same page and speaking the same language. The last thing, which is really important for me is to integrate into the things that we're already doing so it's easy and second nature and a part of our normal process. Next slide.

We constantly look at results at Steelcase, and some are really easy to quantify, so a reduction in material tonnage or looking at emissions for the site, that's pretty easy. But there are other benefits that are harder to quantify. So how do you put a number on behavior changes, or inventory accuracy, or making sure that we're meeting customer expectations, and having these time

efficiencies gained throughout the entire plant? It's hard to put a number to those. But within the first year of this whole program, the team was able to reduce 288,000 pounds of steel which ended up being a 26 percent reduction in emissions from our baseline of FY20. What we're looking forward to this year is implementing this system and two additional facilities. Next slide.

That is all I have for you today. Thank you for your time and I appreciate. Thank you.

Hannah Debelius: Great. Thank you so much, Casey. And thanks everybody to all our speakers. I will say unfortunately, we are coming up on the top of the hour. We tried to pack in so much in this webinar, because we had such great stories to highlight. We are not going to get to the Q&A live, however, I will say that actually a couple of our panelists did, I saw, hop on and reply on Slido to some of your questions. So, thank you so much. And if you still have an outstanding question, we'll also have a slide with our panelists' emails as well as ours, so you can reach out and we'll try to make that connection. If you like this webinar, I've got great news for you. We've got tons more coming down the pipeline. You can see the entire webinar series on the Better Building Solutions Center. The next webinar we have coming up is on July 18th – next slide – which is called Build Your Workforce: Understanding your Role in the Workforce Ecosystem. You can join this to learn more about how employers stay on track with their climate commitments. And finally, I would just like to say a sincere thank you – next slide – to all of our participants and all of our panelists today. I have been incredibly impressed by the caliber of all the applications for the Better Project Better Practice awards and really appreciate that we were able to highlight so many diverse projects on this call. I know I got a lot of ideas and I've seen so many of these applications and the things you all have referenced on the solutions center, so thank you so much. Keep up the amazing work, and I can't wait to see what other applications we get next year. That application again will open again at the end of the year. So, thank you so much to our panelists. Congratulations and thank you to all of our audience members for joining for this webinar. I hope to see you at our future webinars in this series.

[End of Audio]

Speaker Bios:

Luis Quinones: Luis is an industrial engineer. He has been 8 years with Bendix in several Health, safety and environmental roles, in the Mexico operations, 2 years in the Huntington facilities and the last 3 years the Corporate Sustainability Engineer supporting the company's efforts regarding SDG12 (Responsible Consumption) and SDG13 (Climate Action). Focus on the environmental footprint of our manufacturing operations ISO14001, water and chemical consumption, wastewater operations and waste disposal activities, he is also in charge of the corporate reporting of various Sustainability related disclosures by the company EU CSRD, EU Taxonomy, GRI Reporting and TCFD.

Cassidy Jenney: Cassidy Jenney is the Energy Conservation and Sustainability Administrator at ODRC. She oversees sustainability efforts for 28 facilities across the state of Ohio. Her role involves overseeing green buildings, conservation, fleet electrification, green job training, energy, waste management and more. Cassidy completed her undergraduate from The Ohio State University majoring in Environment, Economy, Development and Sustainability and is pursuing her Masters of Science in Environmental Engineering at The Ohio State University. She is currently doing research on Lifecycle Assessment in the Energy Sustainability Research Lab at OSU outside of her role at ODRC

Jeremy Hyer: Jeremy Hyer is a Project Manager with the Ohio Department of Rehabilitation and Corrections and has managed 200+ construction projects totaling over 400 million dollars. He has worked for ODRC for 19 years in different roles as a Building Maintenance Superintendent, Facilities Planning Project Manager, and a Health & Safety Program Consultant. He manages a team of project managers that plan, design, and construct projects at seven large prisons. Prior to working for ODRC he worked as a Site Superintendent for a large construction company. Jeremy has completed Project Management Professional (PMP) training, Building Operator Certificate (BOC) training, and has completed over 200 hours of project management courses over the last 8 years.

Kevin Durocher: Kevin Graduated from University of Connecticut in 2017 with a B.A. in Environmental Studies and a Minor in Women's & Gender Studies. Joined ABB in June 2017 as an Environmental Intern. Began working full-time for ABB in 2018. Kevin's role focuses on: Sustainability within ABB's operations; achieving carbon neutrality, zero waste to landfill, water reduction projects, and energy reduction projects. External reporting; Sustainability & ESG disclosures, Carbon Disclosure Project, Eco Vadis, etc.. Upstream and Downstream Operations; working with customers, transportation services, supply chain, and others to achieve sustainability goals.

Suzanne Savanick Hansen: Suzanne Savanick Hansen, Ph.D. has more than 20 years of experience leading sustainability programs. She launched a new systemwide sustainability program at Allina Health in 2020 and has developed a sustainability strategic plan and is currently implementing system-wide initiatives to reduce waste, energy and greenhouse gas emissions. She received a grant from Dakota County to try a new way to manage excess furniture and supplies from a clinic closure using the Rheaply platform and

successfully expanded the program for the rest of the Allina Health system.

Jessica Livingston: Jessica Livingston, MPH started her career in sustainability at Allina Health in 2021 as an intern for the new sustainability office. At the beginning of her internship position, she started working on a project focused on creating a better system to facilitate reuse in the organization. After completing her internship, Jessica graduated with her Master's in Public Health in Environmental Health and started a full-time role on the sustainability team at Allina Health. Since starting her new role, Jessica has remained the point person for waste related sustainability projects, including reuse, and has continuously worked to reduce the amount of waste going to the landfill or incinerator while supporting improvements in workflow to create Allina Health's circular economy.

Dana Schneider: Dana Robbins Schneider is Senior Vice President, Director of Energy, Sustainability and ESG for Empire State Realty Trust. Dana is responsible to define, lead and execute a comprehensive program for all company and property level energy and sustainability initiatives and industry leading best practices and to coordinate and develop the company's ESG and wellness programs and reporting. Dana focuses on analyzing and implementing actionable measures which drive energy efficiency and performance at the whole building, systems and tenant level including proactive planning for LL97 and 80X50. We focus on measurable actionable impacts in energy, water, waste and indoor environmental quality to drive ROI and healthy buildings

Casey Dupuie: Casey has been with Steelcase since July 2014, working in several sustainability-focused roles spanning customer relations, communications, data, packaging and waste. She has spent the last three years in Global Operations where she has been program managing Steelcase's environmental strategies across 19 facilities.