
TODAY
BE POSITIVE
JOY
LOVE
TO BE OK
SAY THANK YOU
SUNSHINE
STAY CLOSE TO PEOPLE THAT FEEL LIKE
GIVE FREE HUGS
BE BRAVE
LET IT GO
RESPECT NATURE
PRACTICE PEACE
STAND TALL
YOU ARE LOVED
BE KIND
THINK GREEN
Debra Sue

Turning turbines into works of art for the good of the community

From generating energy from the wind to brightening up public spaces and bringing communities together through creativity and art, Canvus breathes new life into retired wind turbine blades in a unique recycling initiative. PES was keen to find out more about the idea from Managing Partner Brian Donahue. He tells us where the concept came from and how it is demonstrating a sustainable model for environmental responsibility and public engagement.

PES: Firstly, if we may, it would be great to start by getting an overview of Canvus and its mission within the wind industry?

Brian Donahue: Canvus manufactures products from retired wind turbine blades. We saw the issue in the industry for years with the blades, and not having a viable solution at scale to upcycle them as opposed to grinding them up for use as alternative fuel or aggregate. That's where we came up with the idea to actually make products that go to public spaces, and inspire communities and their citizens.

PES: Tell us more about where the inspiration for the creation of Canvus and its unique approach to repurposing wind turbine blades into pieces of functional art for public spaces came from.

BD: One of our founders was taking a look at a number of different options for a good recycling solution for the fiberglass blades. In any case, when you're recycling fiberglass blades, you have to cut them in the field to move them off the farm safely and efficiently, so we cut them into what we call cross-sections along the blade. This individual looked at that and, I don't know exactly where his inspiration came from, but realised if you just kept cutting them into smaller cross sections, which we ended up calling filets, you could add other materials to that to create benches and planters and tables out of them.

PES: The process involved in upcycling wind turbine blades into benches, planters, and picnic tables must by quite involved. Tell us more about it.

BD: It is involved, and it was one of those things that we really had to figure out. No one has ever done this before at scale, no one is doing this at scale in the world besides Canvus, and it required a lot of trial and error.

We were familiar with technologies used in the field to cut the blades, which is the first big challenge, and so we were able to adapt that technology to a manufacturing facility, using a rope saw to cut the blades into the filets that I mentioned earlier. Beyond that, then you have to figure out there are edges with exposed glass and wood, potentially metal, and how do you seal that? There's damage that happens to the blade up in the air when it comes down to the ground; what materials do you use and who do you hire to perform that work to smooth the services? And then what coating do you put on it so that it will last out the community for 20 to 25 years?

As we moved forward, it is a simple upcycling solution that required a lot of trial and error to figure out the optimal process to get as many products as we can out there.

PES: Your Request Program provides renewable energy companies and other corporate partners an opportunity to donate upcycled products back to communities that support the renewable industry, is that right?

Brian Donahue

BD: That is right. Our products are designed for public spaces, to be out in communities, to be in parks, to be at schools. And in doing that, we have a sales team that communicates directly with these communities. They issue a purchase order and buy products for their community.

However, there are 19,500 communities across the US and not all of them have the financial resources to purchase Canvus products. We refer to them as underserved communities. What they do have though is public space that they would like to amplify and inspire their citizens. We work with Corporate Partners, mainly wind farm

owners and operators, who are part of this problem and want to be part of the solution, to purchase our products and donate them back to these underserved communities to go ahead and make their spaces better.

PES: What has the impact of this been like on communities supporting the renewable energy industry? Do you have any success stories to share with us?

BD: The communities have really taken to our products, and for a number of reasons. Not all communities are near renewable energy, are familiar with wind, or familiar with the problem. But they do realise we created a unique product. And so, putting that product out in their spaces gives people not only a place to sit but a place to think and reimagine things in their own life. In doing that, combined with the program we have called PAR, which allows artists to paint our pieces before they go out to the community or once they arrive, has really been an incredible way for communities to bring people together around our products.

PES: You also run the PAR, Primed and Ready, program, which again has significance in community engagement, how does that work?

BD: PAR stands for 'Primed and Ready'. Our pieces have a huge surface area because wind turbine blades are large. So, we can send them out in a color called Stone, which is a light beige with a two-part epoxy paint to protect it and blend in with the environment that it's gonna go into.

However, PAR gives communities an opportunity to bring people together through art. We have programs that are called 'On-site PAR Events', where artists come to our design studio just west of Cleveland, Ohio to paint these products. They have a vision, they have a design, and each product is different. And then it goes out in a community, so not only is someone sitting on a bench made out of a retired wind turbine blade, they're sitting in art, which we then refer to as functional art.

Beyond that, every community has artists, whether they be professionals, employees of the community, students, senior citizens, or veterans. Our products can go out unpainted just with a primer coat on them, and cities can create events around the painting of these products. Art always brings a community together, it's really a great way to put art out in public that isn't just looked at, but actually interacted with.

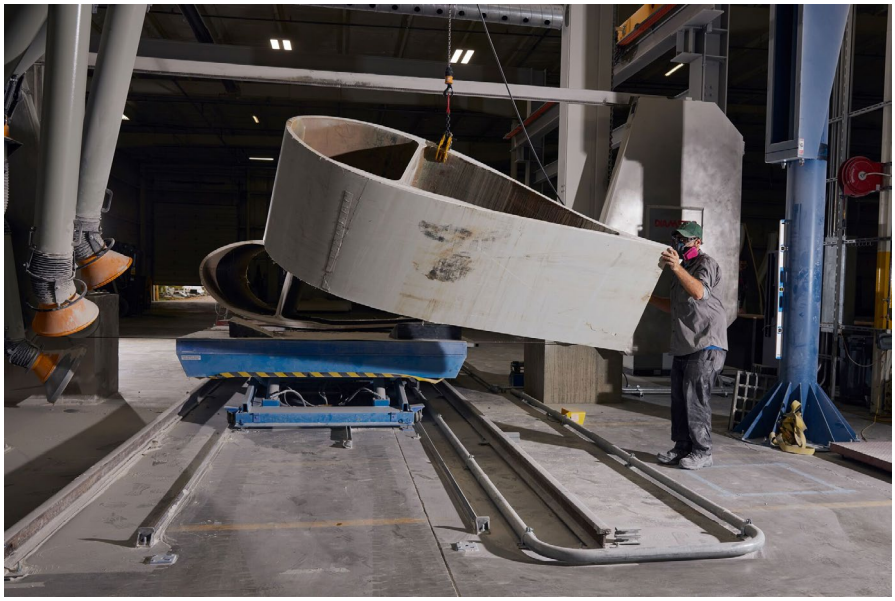
PES: How does the PAR program encourage collaboration between Canvus, artists, and communities?

BD: PAR is based on collaboration. It's built on the idea that an artist runs out of space to paint, and a community always wants to engage artists further to beautify their spaces. We give them new opportunities, new surface area, and no pun intended, new canvas to put their mark on.

PES: What criteria do you use to select corporate partners for your initiatives, and what benefits do they receive from their involvement?

BD: In starting out with a new concept like our Corporate Partners giving back our products to communities, the main criteria we look at is making sure they have a strong connection to the material itself, that they're aware that the fiberglass blades are a problem. That translates well into them knowing the scope of the problem, the scale of the problem, and the benefit that Canvus brings.

By buying our products and giving them back to these communities, these are companies that are already good stewards of the community in which they operate, where they have wind and solar farms. But this is a very tangible, long-lasting way to demonstrate commitment to that community.



PES: Please can you highlight some of the corporate partners you've worked with and the impact they've had on fulfilling community requests?

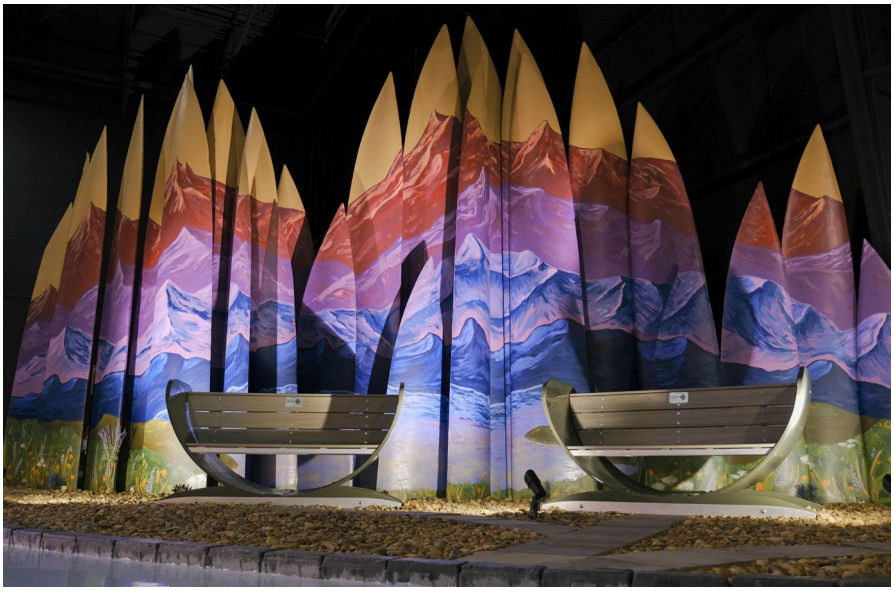
BD: Absolutely, the companies that have been involved first are mainly energy companies. Firms like Invenergy, MidAmerican Energy out of Iowa, ALLETE Clean Energy, Onward Energy, Shell, and National Grid Renewables. They've been able to get our products out into communities that would have had no other way to get them and be recognised for that commitment to communities.

PES: Could you describe your typical customers, what draws them to Canvus products and tell us what their feedback has been like?

BD: Our customer base is mainly made up of the communities that I mentioned. That involves cities, villages, townships, and counties. We look at schools, both universities and K-12, and then parks at every level, whether it be a local park all the way up to the federal park systems or national park system. Those are our customers, and the response has been pretty overwhelming.

Due to the unique nature of our products, the low maintenance that they require, and because of how long they'll last and how easy they are to set up, they are fully assembled, you take it off the truck and place it down, there's been a lot of great traction with these customers as we've presented to them. The feedback has been incredible.

When our products arrive, we have an entire team of Community Success Directors that will reach out and make sure that everything is as it was supposed to be with their order. People cannot believe how big these products are, how well made they are, and how incredible they look in the environment where they're placing them.



PES: Sustainability and environmental responsibility are important, of course, so what measures do you take in this regard throughout your operations?

BD: The basis of what we do is rooted in sustainability and in diverting waste in the form of wind turbine blades from landfill to a product that can be out there in the community. We're very conscious in our operation to make sure that we're not throwing any material away. All material that we can't use, our manufacturing scrap, is then ground up and used as fuel and used in cement kilns across the country so that it does not end up in the trash.

Our products at end of life can be fully recycled. Whether it be going to cement kiln, or 20 years down the road where new technologies have emerged for the recycling of fiberglass, every material we use, almost all of it, is 100% recycled content and all of it is 100% recyclable at the end of its life.

PES: Looking ahead, what are your plans for expansion or new initiatives within the wind industry and beyond?

BD: Our first manufacturing plant is in Avon, Ohio, just outside of Cleveland. There are different discussions that occur as to whether or not we should open additional manufacturing plants across the country or continue to expand operations in Avon, that remains to be seen. We want to expand capacity to make the biggest impact that we can on the problem.

Right now, in any given year, there's about 5,000 blades that come down and need to be handled. Because of things like the Inflation Reduction Act and additional government stimulus in the industry, for the next five years they expect that to be between 10,000 and 15,000.

Our facility can currently handle about 2,000 blades per year, so we always have an eye on increasing capacity. We just haven't decided the best roadmap for that yet.

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