





They have aggressive campus-wide carbon footprint reduction goals and have a carbon neutrality date of 2030, meaning a 70% reduction in their carbon footprint by 2020. When they began planning for a new multipurpose ice arena, they wanted to do everything possible to make it energy efficient.

Sustainability Officer

Their sustainability officer, Amanda King, was on the building committee from the beginning. Her job was to take the group through the due diligence process examining different options for energy use and water reduction in the building.

King said, "We started as a goal of getting a LEED Silver Certification, but even if we hadn't, I was determined to focus on energy use, because it will be an energy hog if we don't focus on that."

She had a big job ahead of her, because they had to make ice for use for eight months, keep fans warm in the stands, and dehumidify the ice so that it didn't get too humid and foggy in the building. "All those things are really hot spots for energy use," she added.



The biggest focus for the building from a cost standpoint was looking at energy efficiency, but also from a greenhouse gas-free plan. King said that matched up well with LEED because the biggest points category in LEED certification is energy in atmosphere.

The architects were really creative and very thoughtful about helping them achieve their goals of LEED certification and help them meet their carbon footprint reduction goals in the future.

Not Just Silver But Platinum

King continued, "We were given a budget, and we actually achieved LEED Platinum status instead of Silver status without going over our budget or not finishing on time." Every step of the way they explored sustainability options with an open mind.

They continued to "run the numbers" to see what the upfront cost is, what the operating cost is, and how much they could save in dollars and how much they could save in greenhouse gas reduction.





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They also considered what the maintenance of a piece of equipment meant for their facility management department. She continued, "We tried to apply due diligence cost benefit analysis that was open minded but practical in each of the technologies that we considered."

Sustainability Features

The standout sustainable features of the arena include a rooftop solar array that generates 40 percent of the building's annual electricity needs and innovative technology that captures heat generated from the rink's ice-making equipment to heat water throughout the building.

Bentley University reached their goal of having a multipurpose arena with D1 ice for the hockey surface, and also a building that would be useful to everyone on the campus, not just the hockey players.

They were also able to put an insulated floor down over the ice to use the building for other things like concerts, speakers, and media fairs. Not only that, they were also able to make this building something that could be used in the classroom as well.





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A Living Laboratory

King stated, "It is a living laboratory." They provide data showing how much electricity the solar array is producing every 15 minutes to a professor teaching energy topics in a classroom in the science department. They use that data to run a calculation of how much electricity it is producing and is it actually running 40 percent of what the building is using. They also know how much natural gas and water that the building is using. All that data is provided to professors for use in the classroom.

Advice For Beginning Energy Efficiency Goals

King's advice to other private universities who want to embark on a plan for energy efficiency and a reduction of their carbon footprint is to have a sustainability officer on the planning committee from the beginning.

She stated, "Even if you aren't going for a LEED certification, nobody is going to say no to the opportunity to build a building that's going to cost you less in operating dollars every year." She continued, "We were able to take



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something that was potentially going to be a big energy hog and going to produce a lot of greenhouse gasses and turn it into a building that's quite lean on energy use.

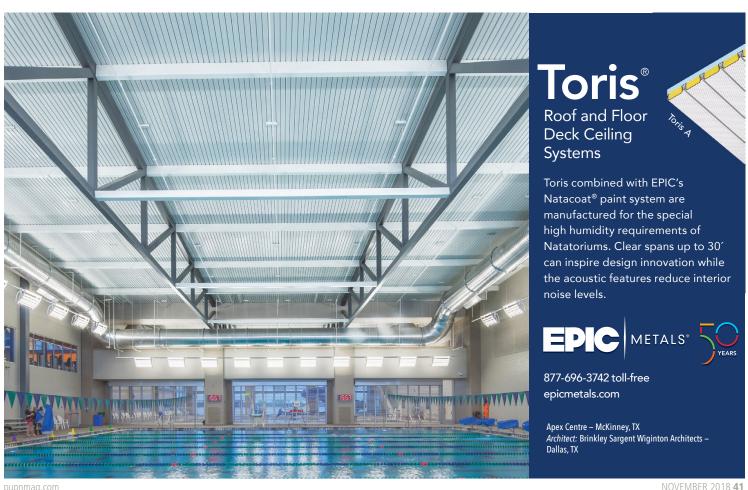
We also created an opportunity for our students, faculty, and staff to learn about climate change and greenhouse gasses and energy efficiency."

Second Nature: Presidents' Climate Leadership Commitments

She strongly recommends joining the signature program of Second Nature, The Presidents' Climate Leadership Commitments. The Climate Leadership Network comprises more than 600 colleges and universities in every state and the District of Columbia who have committed to take action on climate and prepare students through research and education to solve the challenges of the 21st century.

These institutions use the Second Nature Reporting Platform to publicly share their yearly progress—including their greenhouse gas inventories, climate action plans, and other initiatives.





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She thinks some people might be overwhelmed about signing, but she says that there is an incredible amount of support through this network.

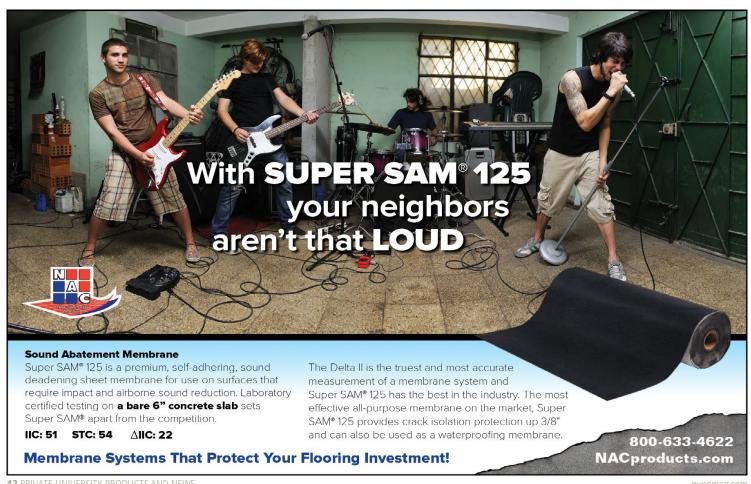
King concluded, "Quite frankly, this is a super important thing for us to do on campuses, because if we aren't talking about what the world looks like with regard to climate change, we are not adequately preparing our students to work and live in what the world is going to look like in 20 years or so and beyond."

For a list of institutions that are sharing their reports as part of the Climate Leadership Network, you can visit the Second Nature Reporting Platform at http://reporting.secondnature.org.

ABOUT THE AUTHOR: Sheila Wagner has spent the last several years working as a professional editor and recently became the

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