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Lowell Rasmussen: My name is Lowell Rasmussen and I'm the Vice Chancellor for Finance and Facilities at the University of Minnesota Morris. The spelling of my name is L-O-W-E-L-L R-A-S-M-U-S-S-E-N.

Christopher Butler: How did you come to UMM?

Lowell Rasmussen: Oh, that's going to be a hard question to answer in a short period of time. But basically I worked at the University of Minnesota at Waseca and when Waseca was closed Harold Fall [ph?], my predecessor here was entertaining the idea of retiring and so the university essentially connected us together and transferred me to Morris.

Christopher Butler: Prior your coming to UMM, what did you know about the school's reputation?

Lowell Rasmussen: Well part of the University of Minnesota system, even at the other campuses, Morris is well-known for its academic excellence and its, certainly its expertise in Liberal Arts education.

Christopher Butler: Well we're going to focus mostly on the sustainability and renewability. And I don't know if you identify yourself as an educator per se, but you certainly work in an educational institution. What do you see as being a relationship between our sustainability efforts and higher education?

Lowell Rasmussen: Well I think the challenge higher education has is to understand that the students that we're educating today will be in their career, faced in some sort of carbon constrained environment, whether it's through greenhouse gas issues or whether it's peak oil and the loss of cheap fuel. They're going to have to understand how their careers are going to play a role in making that change from our current fossil fuels to a more sustainable energy system.

Christopher Butler: And in what regard do you work with our educators here, our professors in sort of getting that message across to our students?

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Lowell Rasmussen: Well I think a lot of what Morris really is doing well, is integrating the whole package of sustainability. It isn't just one segment of our curriculum or one aspect of our campus operations that we can typlify [sic] and be a model or a leader in sustainability. It's understanding it's an integral approach, it's local foods, it's recycling, it's conservation. It's academic understanding and diligence and understanding the issues of carbon. And then it's also our physical facilities that become research labs in a sense, for promoting the issue of sustainability.

Christopher Butler: In this next question is, you're probably going to repeat some things you just said. But I'd like to ask it this way. It sounds- we can look around and we see the biomass facility. We see the wind turbines. We see a local foods dinner. But it seems like sustainability is much more a mindset than a set of tasks. If you agree with that, why do you agree with that statement?

Lowell Rasmussen: Well I definitely agree with that and I guess I think that sustainability is a cradle to grave issue. It has far-reaching impacts. It deals with our history. It deals with how we got where we are now. It deals with how will we move from where we are to where we need to be. So it deals with our culture. It deals with our public policy. It deals with our economics. It deals with our chemistry. And so it's really a wide swath of our curriculum that needs to be engaged when we talk about sustainability.

Christopher Butler: Let's talk about nuts and bolts. What are some of the campus's goals in terms of sustainability?

Lowell Rasmussen: Well I think our goal has always been to really look at trying to reduce our carbon footprint. And I think we have a master plan, a carbon master plan that would show us over time, how we can get to carbon neutral and at the same time, really benefit our community by using those resources that we used to spend for fossil fuel on renewable energy sources within a 20 mile radius of our community.

Christopher Butler: Let's talk about the wind turbine that we presently have and the one-- in terms of numbers, what percentage of you know, energy do we draw from those?

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Lowell Rasmussen: The current Vestas 1.6 mega watt turbine we have, provides 65 percent of our campus energy use. And on the other side of that, we take about 80 percent of its production. So and the rest of it then spills out on to the local grid.

Christopher Butler: How about the biomass plant, how does that figure into the math?

Lowell Rasmussen: Well biomass is really a critical portion of this and I think what we've learned is, as we've tried to define what a sustainable community is, we can't define a sustainable community unless we know where we are and what our resources are. And in Morris, I think we understand now that our resources are wind and biomass. And our carbon master plan really has given us the insight to know that by merging those two platforms, in other words, a hybrid renewable system, we actually can meet our carbon reduction goals because, one, wind is not dispatchable. In other words, we don't control wind. But biomass is by definition, 100 percent dispatchable. It's stored energy. And learning how to make those two platforms essentially integrate with each other, has given us some really significant gains on how we manage carbon. And the biomass plant will provide about 80 percent of our thermal loads for heating and cooling for the campus.

Christopher Butler: And as you said very well, wind and biomass, those are the resources we have in plentitude out here. But do you foresee other potential projects coming into sort of the Morris community?

Lowell Rasmussen: Oh yes I do. I think that we're just at the tip of where we need to be in a sustainable community. I think one of the projects that we would really like to move into if we can find grant funding, is what we call the smart grid, where we put smart meters on our buildings that have data communications and so ultimately each building will know its energy use and each building we will go out and have day ahead pricing. We'll know what the price of power is tomorrow. We'll also know what our weather forecast is for tomorrow. And so we'll be able to essentially create a custom menu if you will, of where we're generating our energy and how much it costs. And so that would, to me, be the best scenario of how we really utilize energy, because it merges intelligent energy use and conservation together.

Christopher Butler: You know, and as you say that, I'm envisioning students living in dorms that are on a, you know, smart grid [ph?] and I'm thinking, you know, it's not even

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the classroom but it's a lived in-- sustainability becomes a lived environment.

Lowell Rasmussen: Oh absolutely. The smart grid would allow us to get to immediate consumer feedback. So in other words, they would know immediately what their carbon footprints are, what their energy use is, what the thermal loads are in their living areas as well as the classroom areas.

Christopher Butler: Okay, thanks.

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