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**CATHY WURZER:** And for our top story today, we have some news on Minnesota's role in climate change. Indicators show Minnesota may be able to meet a goal of reducing greenhouse gas pollution by 30% by 2025. A new report from the PCA shows that emissions went down almost that much-- 23%-- between 2005 and 2020.

Now, the state has not met its greenhouse gas reduction targets since the legislature created them in 2007. So what's different this time? Jessica Hellmann is here to help us answer that question. She's the director of the University of Minnesota's Institute on the Environment, and we're pleased that she's on the line.

Hey, Jessica, how are you?

**JESSICA HELLMANN:** I'm well, Cathy. I hope you are, too.

**CATHY WURZER:** I am. Thank you for being here. Say, looking at this report, there is a big drop in emissions after 2018. So I'm wondering, what role did the pandemic play in that decline?

**JESSICA HELLMANN:** Well, it played a fairly significant role. Because as many of us remember and are still experiencing, it changed the ways that our economy functioned and the activities that we did. So my read of the report suggests that the pandemic impacted transportation emissions. But I think there's another story beyond the pandemic, which is that our state has been on a long-term journey, and it's bearing fruit in how we generate electricity.

**CATHY WURZER:** Let's talk a little bit about that in terms of those emissions from power companies. How does that factor in, and how much are we seeing?

**JESSICA HELLMANN:** So the MPCA report-- which we count on the PCA to report to the legislature on a regular basis against the state's goals for greenhouse gas emissions. So their recent report came out, and all of us get to have a peek inside of it. And they show that we've, as you said, made progress since 2018. And electricity generation is down. Our emissions in that sector are down 54% relative to 2005. Which is continued progress even to the last time frame that we reported, which was 2005 to 2018. And now we are looking at the time horizon of 2005 to 2020.

**CATHY WURZER:** So go ahead. I didn't mean to interrupt you.

**JESSICA HELLMANN:** Well, I was going to say-- and why has that happened? That's because we're changing the very way that our electric utilities are generating electricity and moving pretty rapidly to renewable energy, with a much lower greenhouse gas footprint.

**CATHY WURZER:** I also noticed that emissions went up-- residential emissions were up by 14%. Do we know what's behind that increase?

**JESSICA HELLMANN:** Well, I need to dig into that a little bit deeper, but my assumption is that there's a role of the pandemic in that as well. And when we look at what are the various sources of greenhouse gas emissions in our state, it's a complicated picture. Emissions come from different sources for different reasons. And we've made great progress in some areas and have quite a lot of progress still to make in other areas.

And one of the challenges that we have in our region is actually home heating. And in our residential sector, we use a lot of natural gas to heat our homes. We live in a cold climate. There are ways-- lots of new technology coming online-- to switch from natural gas to electricity. And that process is beginning. But we still have a ways to go.

So the uptake might be pandemic related, but I think that the larger narrative is one of actions still that we need to take in the residential sector. Of course, energy efficiency is also important in our residential buildings, too.

**CATHY  
WURZER:**

And of course, looking at this report, agriculture also generates a lot of emissions. It's, what, I think the second largest source of emissions. So why is that sector different?

**JESSICA  
HELLMANN:**

Well, different sources. Different reasons why emissions come from agriculture than, say, from electricity generation. And again, it's a complex picture. So one of the good things about reducing emissions in electricity is now something else becomes our dominant source of emissions, right? When we've tackled one thing, it turns to the next thing. So the next big challenges in our state-- now our largest sources of emissions are transportation and agriculture.

And agriculture contributes greenhouse gas emissions in a variety of different ways-- from the activities itself on the farm and the energy consumption on farm, and also from the production of agricultural crops themselves, livestock production. There are a variety of different greenhouse gas sources on farms. And there are a variety of techniques that exist for increasing the amount of CO2 that we suck out of the air on farms. So farms can also contribute in positive ways. Agriculture can help us address climate change.

And we're learning ways to do better farming that reduces greenhouse gas emissions. But there's still a lot of research potential as well-- a lot we need to figure out about how we can make significant reductions in those greenhouse gas emissions from the ag sector. And ag is very important in our state.

**CATHY  
WURZER:**

Right. So this is a positive report. But I'm wondering, we may be on track to meet our emissions reduction goal for 2025-- again, good news. But last fall, the governor released the new Climate Action Framework, which states that, by 2030, we're supposed to reduce emissions by half. And by 2050, the state is supposed to reach net zero emissions.

So I'm going to assume it's going to be much, much harder to meet these next goals. What do you see?

**JESSICA  
HELLMANN:**

Yeah. So this is the power of goal setting, right? And goals are set by states. Goals are set by countries. We're setting goals around the world. Companies have set individual goals. The University has goals. And the power of the goal is to work backwards and say, where are we going to take action against this goal? And then we're going to track our progress against the goal.

So yes, some of the first steps are relatively easier. Or you deploy available technology that is cost effective as we convert to renewable energy. I mean, extraordinary things have happened in the cost of renewable energy, such that, in our state, if you're going to build new power generation, wind is one of the best options available to you. It's very low cost.

But those technologies will come online in our other sectors as long as we continue to pay attention to them, to do research and development on them, and continue striving toward our goals. And all of us need to participate in that process, from public policy to private action to the decisions that companies make, to even actions we take as consumers. We need to just keep making steady progress toward that goal. It won't happen overnight. And we will continually need new technologies and new approaches to tackle the next set of challenges.

**CATHY WURZER:** A final question here. Anything in the legislature this session-- because I know you follow the legislature-- that speaks to some of these goals?

**JESSICA HELLMANN:** Yeah. So there is a bill that has come out of committee-- I think it has been passed by the House-- toward 100% renewable, or carbon-free, energy generated in the state by 2040. So that's an interesting issue, too. Because that's leaning in even more strongly to our electricity-- to greenhouse gas emission reduction in the electricity sector. So that says we're making progress in this sector. Let's keep going. There are low-cost alternatives available, and looking to set a policy framework that encourages that.

In fact, if you look at some of the progress we have made in this state, you could make an argument that it was public policy who got that process going in the first place. And continuing the progress in electricity is important. But we have to look across all different parts of the legislature that are dealing with agriculture and transportation. These are different sections of committees and of state government. And all have a role to play in helping to create the incentives, the funding availability, and the public policy structure that helps steer our way toward achieving those goals.

It's constant work. Lots of innovation opportunity, lots of opportunity to grow our Minnesota economy as we implement these technologies as well. And there's some new exciting federal opportunities for that that most of us are hoping that our state is able to take advantage of, too.

**CATHY WURZER:** All right. Jessica Hellmann, thank you for the conversation.

**JESSICA HELLMANN:** Thank you, Cathy.

**CATHY WURZER:** Jessica is executive director of the University of Minnesota's Institute on the Environment.