

Scott Powell:

Hi, I'm Scott Powell, Director of Corporate Communications here at Manitoba Hydro. I'm with Lorne Midford, our Vice-President of Asset Planning and Delivery. Thanks Lorne for joining us today.

Lorne Midford:

Thanks Scott. It's good to be here.

Scott Powell:

We're going to spend the next few minutes talking with Lorne about some of his team's accomplishments over the past year, and as well as looking into the future and the work they will be doing to help us here in Manitoba leverage our clean energy advantage at the lowest possible cost while ensuring that reliability that all of you, all of our customers have come to expect from us. Also later on, we're going to ask a couple of questions that our customers have submitted ahead of time, ask those to Lorne and get his response to those. So without further ado, we'll get started right away here. I'd like to ask Lorne to describe some of the work his team in Asset Planning and Delivery does here at Manitoba Hydro.

Lorne Midford:

Thanks Scott. Well, the Asset Planning and Delivery team is really responsible for managing all of Manitoba Hydro's assets. So that includes the generating stations, the transmission lines, the distribution lines and our natural gas system as well. It's really through the entire lifecycle, from cradle to grave. That of course means deciding when we maintain assets or when it reaches end of life, when we need to replace or decommission it. We also analyze the need for new investments and assets to meet our customers' needs going forward. As the project management center of expertise within Manitoba Hydro, we oversee all of the engineering and construction for all of our assets, as well as lead the process around developing a long-term integrated resource plan for the organization and for all of Manitobans going forward.

Scott Powell:

In our interview with Jay Grewal, our President and CEO, she spoke extensively about Strategy 2040 and the work Manitoba Hydro was doing to prepare itself for the evolving energy landscape of the future. This includes helping Manitobans, helping all of us leverage our clean energy assets at the lowest possible cost. What role does Asset Planning and Delivery play in helping us achieve that objective?

Lorne Midford:

Yeah, it's a great question. One of the big major changes or disruptors that we've talked about in the past is with respect to the energy industry is decarbonization, is this shift away from fossil fuel carbon intensive sources of energy. Manitoba and Manitoba Hydro is really well-positioned for this change because our investments that we've made over the last century is around clean, renewable Hydroelectricity. I'm not sure if everybody is aware that over 98% of our electricity is generated from clean, renewable hydropower, and that is a huge advantage for us and for all of our customers as well. It's one of the reasons that we have one of the lowest electricity rates in North America as well. Again, it's one of the cleanest and greenest renewable electricity sources on the planet.

So our main focus is on maintaining this advantage going forward and ensuring that Manitobans continue to benefit from that investment. One of the ways we're doing this is we're really working hard

to complete some of the major clean energy projects, such as Keeyask Generating Station. Great progress has been made. In the last year, with Keeyask, even despite all the many challenges, especially with the pandemic and trying to ensure that we continue to make progress on Keeyask during that challenge of restricted conditions going forward, ensuring the safety and wellbeing of all of our contractors and staff at site as well, not to mention all the neighboring communities. I'm very happy to say that last week, the first generating unit entered into service, supplying electricity for all of Manitobans on the electric grid. A huge accomplishment.

Now, there's a remaining six units to bring online over this next year and we're well-positioned to complete that in the timeframe well ahead of schedule as well. Very positive from that respect. It'll provide the clean, renewable energy that we can use as Manitobans going forward. In the meantime, between now and when all Manitobans need that energy, we have the opportunity to now sell that to our neighbors and offset emissions, whether it be south of the border or to Saskatchewan as well. Again, very positive from that respect.

So we've also, as I mentioned selling to Saskatchewan, we also have a number of other clean, renewable energy projects that we've put in service to support Keeyask. One is a new transmission line to Minnesota, and the other is a new transmission project west to Saskatchewan. Again, both of those are the line that when service down to the United States was brought in under budget and ahead of schedule, which was great team approach to that project, and also the Saskatchewan line is going into service as we speak and is anticipated to be ahead of the schedule and also under budget. Going forward, we look at every opportunity to leverage these investments for all of Manitobans going forward so that we retain this clean energy advantage for all Manitobans.

This could be building out infrastructure to serve electric vehicle loads as our customers start using electric vehicles. We can use hydroelectricity, for instance, to produce green hydrogen and use that green hydrogen to offset some of the natural gas use within the province as well. We coined the term renewable natural gas when you inject hydrogen into the fuel line as well. So there's a lot of opportunities still looking forward for Manitoba to take advantage of this clean energy to further offset emissions within the province and outside of the province as well.

Scott Powell:

Thanks Lorne. Earlier you mentioned that Manitoba Hydro's clean energy advantage is one of the reasons that our rates are so low, they're among the lowest in North America. So going forward, how is asset planning and delivery working to keep costs low while making the necessary investments in our system to maintain that reliability for so long?

Lorne Midford:

Yeah, that's a great question, Scott. At its core asset planning and delivery is really all about asset management. What is asset management? It's really doing the right work at the right time for the right reasons. So it's really striking this, optimizing this balance between when we spend dollars to maintain assets, whether it be electric or natural gas, or when we spend because an asset is nearing end of life and we may need to replace or refurbish that asset. So anyone who's had an extensive part on a 10 year old car knows what I'm talking about, I think, from that perspective. For Manitoba Hydro and our customers, the right answer really depends on a lot of factors for us. We weigh things like safety, risk, potential future load growth in different areas, as well as the evolving energy industry that we've been talking about with respect to decarbonization or the emergence of decentralized energy sources on our grid going out into the future.

These are decisions that we don't take lightly because every dollar we spend is a customer's dollar. We want to optimize every single dollar that we spend to get the maximum benefit from our system so we maximize reliability for our customers and we minimize costs for our customers going forward as well. Over the last year, we've put a number of different processes and systems in place to optimize the way we approach asset management practices at Manitoba Hydro to optimize these lifecycle costs. Our goal really is to make sure that we manage our assets as efficiently as possible and we're making, again, those investments, not too far in the future, but we do it at the right time for the right reasons going forward and we optimize that investment. The proof of all of this will be to ensure that our customer's costs are as low as practically possible and reliability is maintained going forward as well that we invest in the right time for the right reasons.

Scott Powell:

Thanks, Lorne, that's a great answer. Now, I've got a couple of questions from our customers. They submitted them ahead of time, and we're going to ask each of our VPs a couple of these questions. First question we received from our customer is given that one of the most significant risks to Manitoba Hydro arising from climate change is drought throughout the Hudson Bay drainage area. What is Manitoba Hydro doing to mitigate that risk?

Lorne Midford:

Scott, I've received this question in the past, and because all of our generation is water-based, it's hydro, 98% plus is hydroelectricity, then the obvious question is how much risk is there to ongoing water supply for our generation sources? It's a great question. I think one thing that everybody should recognize and acknowledge is that when we design our hydroelectric system, we design it knowing historically the low water conditions, the low years where we've had droughts. So we have over the last 100 plus years, been able to develop the probabilistic approach to understand, and ensure that we have the right number of hydroelectric resources to be able to provide enough energy to supply all our customers in a drought.

So we designed the system to be able to achieve that. When we do that under average water conditions or higher, we have excess energy, and during that time, so we take that excess energy and we sell it and we sell it to over the transmission lines, either south of the border or east and west. That excess energy then is used, and the revenue that's generated from that is then used to offset the costs that our customers would pay. So it lowers the overall cost for all of our customers for their energy usage going forward.

I think what's also important is for people to know that we are one of the leading areas within the country with respect to climate change studies and adaptation. We have a core area of expertise around modeling these things going forward as well and we do it collaboratively with different groups, both within the province and nationally as well. From those studies, it shows, interestingly, that with climate change, that we actually see an increase in the amount of precipitation going forward. Now, that increase is typically... It's showing is that it would appear in the spring and the fall so we, again, have an opportunity through... It appears through the climate change. Now, these models are forecast for several decades out into the future. So we need to ensure and continue to look at those going forward. But the initial view of it is that we will have enough water to continue as a key strategy going forward with using our hydroelectric resources and ensure that we continue to have enough energy to serve all of our customers' needs and those as well includes our external customers, our wholesale customers south and east and west of us.

Scott Powell:

Thanks, Lorne. Second question from our customers. What is Manitoba Hydro doing to develop a smarter grid with greater capacity to handle the dynamic changes and inconsistent supply and demand due to electric vehicles and distributed generation sources like solar and wind?

Lorne Midford:

Manitoba Hydro is really monitoring the progress of some of these technologies and the adoption of these technologies by our customers going forward. We're looking at various things. You mentioned electric vehicles, also solar, wind, and what potential impacts these can have on our grid in being able to serve our customers using these kinds of technologies. Our system is built to be flexible and it allows certain fluctuations in load, in demand, in usage by our customers essentially. So we have to take that and learn from that and look to ensure that we make continuous investments going forward so that we can adapt our system to be able to serve our customers' needs as our customers' needs change. I think that's important for us going forward, whether it be new trends, new technologies, we need to be able to invest to anticipate these changes ahead of time so that all of our customers' needs are met and it's seamless to them. So we'll continue to monitor these situations and to make the right investments at the right time and for the right reasons.

Scott Powell:

Great, Lorne. Thanks very much for taking the time to speak with us today.

Lorne Midford:

My pleasure, Scott. Thanks.