Scott Powell: Good evening and welcome to Manitoba Hydro's annual Public Meeting, I'm Scott Powell, director of Corporate Communications for Manitoba Hydro, and I'll be your host and moderator for tonight's events. We have about an hour together, and during that time we'll be sharing an update on Manitoba Hydro, our current situation, what we're doing in the world today. And then we'll be taking some of your questions, some that you've submitted already, and others that you can type in, and we'll be taking them live. Before we get started, I do have a few housekeeping items that I want to cover. First of those, for those of you who are hearing impaired, we've enabled closed captioning on tonight's stream. You can turn it on by clicking on the closed captioning icon as shown on the slide. It should be at the bottom right of your screen. So, feel free to do that if you're hearing impaired.

We're also going to be adding an American Sign Language translation to the recording of tonight's stream, and making that available on our website in the coming weeks. Second, all of your cameras and microphones have been turned off for the event, just to minimize any audio interference with our presentation this evening. If you have a question for our executive team, please ask it using the Q&A module. The window to enter your question should be open at the right of your screen. You can close it and open it by clicking on the question bubble icon. That should be in the upper right corner of your screen. We're going to do our best to answer all of your questions in the hour we have, however, if we don't have time to get through all the questions that have been submitted, please include your name and email address with your question in the Q&A module. No one else will be able to see it, just our behind the scenes team. And we'll reply to you after the meeting in the coming days.

The Q&A module, as I said, is private, so your name and email won't be visible to anybody else, and obviously we don't want that to get out, so feel free to include that and we'll get back to you in the days ahead here. Following the meeting, and in the coming couple of weeks, we are going to publish a What We Heard document to our website, that's going to summarize the questions we've received, along with a recording of tonight's meeting. In the event people who couldn't make tonight's stream, they'll be able to view this as a recording on our website in the coming weeks. And finally, we do have French language translation services available. If you want to ask a question and have it answered in French, simply type your question into the question module in the language of your choice. Frank, our translator will read your question in both official languages and then I'll direct it to a member of the panel.

Frank will then translate the panel member's response for you. Now it's my pleasure to introduce the other Manitoba Hydro representatives at tonight's meeting. First we have Hal Turner, Manitoba Hydro's president, interim president and CEO. Welcome, Hal.

Hal Turner: Thanks Scott.

Scott Powell: We're also being joined by other members of our executive leadership team, including Dave Bowen, our interim vice President of Asset Planning and Delivery. Hello, Dave.

Dave Bowen: Hi, Scott.

Scott Powell: Alastair Fogg, Vice President and Chief Financial Officer. Alex Chiang, our Vice President of Customer Solutions and Experience. Jeff Betker, Vice President of External and Indigenous Relations and Communications, and Quinn Menec, our interim Vice President of Operations. Welcome everybody. We're also joined by Frank, an interpreter who will be helping us again with our French language translation this evening. Frank, thank you for coming and taking the time with us today. Again, all of our executive leadership team are here to answer your questions this evening. We think this is an important way to get to know our customers, and interact with you in a high-tech and efficient manner here on the old video stream, for lack of a better word. Now, without further ado, I'm going to turn the microphone over to Hal Turner, interim President and CEO, who's going to provide you with a short update on Manitoba Hydro, and what we're doing as we meet your needs to provide energy in life in the years ahead. Hal, over to you.

Hal Turner: Thanks, Scott. Good evening everyone. I want to thank you all again for taking the time to join us tonight for a virtual public meeting. I'm very much looking forward to the discussion. Before I continue, as is our practice at Manitoba Hydro, I'd like to do a land and territorial acknowledgement. We join you today from Treaty One Territory and the homeland of the Red River Métis. Manitoba Hydro operates throughout Manitoba on the original territories of the Anishinaabe, Anishininew, Cree, Dakota and Dene Peoples and on the homeland of the Red River Métis. We are committed to respecting and supporting Indigenous peoples in all aspects of our business. Indigenous peoples have a strong cultural and spiritual connection to the land and waters dating back to time immemorial.

We acknowledge the impacts of our projects and operations, and we are committed to working collaboratively to strengthen and improve our relationships with Indigenous communities. We support the advancement of reconciliation with Indigenous peoples in Manitoba, and we will work to contribute to reconciliation efforts in our interactions with Indigenous peoples and communities. I want to just take a few minutes to provide a brief overview of Manitoba Hydro and how we are helping to move Manitoba to a clean energy first... Future, excuse me. But first, I would like to acknowledge the great work done each and every day by Manitoba Hydro employees all across our province, whether it's maintaining our power lines, generating stations, natural gas system, or supporting the province by planning for the energy world of tomorrow, our employees are at the heart of everything we do.

I want them to know they're trusted and valued by me, our leadership team, and most importantly by you, our customers. I'd like to share just one example

of the dedication of our employees in serving Manitobans. Last October, our crews responded to an outage in St. Teresa Point in Wasagamack caused by a pole fire due to wildlife. The damaged pole was in a remote area where there are no roads. Our crews had to barge in heavy machinery and materials from St. Teresa point and build a road through tough terrain just to access the area where they could replace the damaged pole and restore power to the communities. It took detailed planning and teamwork to marshal all of that equipment to the work site. It was incredible, and just one example of the commitment our employees make to serve our customers.

This is our job, a job I know every one of our employees take seriously each and every day. With that said, I would like to talk about the energy transition, and how Manitoba Hydro is working to navigate that transition to ensure we continue to provide you, our customers, with energy for life. Over the last year, we continued to see more evidence that the energy transition, that's the shift from fossil fuels to renewable energy sources like electricity, is underway around the world and right here in Canada and Manitoba. We see it in the new federal Clean Energy regulations, in the growth of EV sales, and in the new federal mandates requiring all light duty vehicles to be sold in Canada by 2035, to be non-emitting.

We see it in the heat pumps and rooftop solar systems getting installed by customers, and in the increasing penetration of wind power and other renewables across North America. In short, how energy is produced, delivered, and consumed, is changing. Here in Manitoba, we are projecting significant growth in electrification using our green renewable electricity, along with changes to how we deliver efficient and affordable natural gas. In fact, we're already experiencing increasing demand for energy because of our clean renewable system and low rates. Every utility around the world either is or will be facing similar challenges as they deal with the energy transition.

The Manitoba Hydro Act is our official mandate that governs our operations, but it's our mission statement that plainly articulates our purpose, to help all Manitobans efficiently navigate the evolving energy landscape, leveraging their clean energy advantage while ensuring safe, clean, reliable energy at the lowest possible cost. That's our goal, and that's what we strive to do every single day. With the energy transition underway, the mission becomes even more critical. Fortunately, here in Manitoba, we are starting from a position of great strength. We have the second-lowest rates in Canada. You can see our current residential rates on the screen in compares to other jurisdictions. And the relative position of electricity rates for business and industrial customers is similar. We also have one of the cleanest, lowest emitting electric systems, not just in Canada, but in North America. That position of strength, in terms of low rates and a clean renewable electricity system, is attracting new businesses to Manitoba. But that can be a double-edged sword.

As new businesses come to set up shop, they demand even more reliable energy. At the same time, our existing electricity and gas assets are aging, so we

need significant reinvestment in our existing system to maintain reliability and grow our ability to distribute more energy to you our customers. And as we see growth on the electric side of the business, we know our existing electricity supply is limited. While we can't change the challenges we face, and they aren't unique to the energy sector, we see them as opportunities to get the right balance between affordability, reliability and greenhouse gas reductions, to build on our clean energy advantage and to meet our needs well into the future. So you might be asking yourselves, "What are we doing about it?" Well, firstly, I can assure you that we are taking our role very seriously. Manitoba Hydro has always and will always continue to put the needs of our customers first, we are working to be more transparent in our planning and decision making.

We're doing that by listening more to you, our customers, as we plan to meet the energy transition head on. We recently completed our first integrated resource plan. While there's always been a long history of planning at Manitoba Hydro, our integrated resource plan took that planning process to a whole new level. We looked at our electricity and natural gas networks as one integrated holistic system, as the energy transition progresses. We spent two years engaging with customers, government and other interested parties to more clearly understand their evolving needs, gain insight to what is important to them, provide transparency and begin to build a broader energy community based on trust and mutually shared goals. So what did we learn? Not surprisingly, we learned that reliability and affordability, excuse me, is what's most important to you, and we will take that knowledge and apply those in other learnings to future integrated resource plans.

The path to achieving a carbon-neutral economy is an all hands on deck approach, one with alignment and collaboration between government, Manitoba Hydro, Efficiency Manitoba, and the Public Utilities Board. We all need to be pulling in the same direction. The integrated resource plan outlines five actions we are taking now to actively manage the energy transition while we develop more detailed plans for the future. First is actively managing our increasing electricity demand through new technologies and enhanced efficiency. This is important as it is the least cost option to meet tomorrow's energy needs. Second is preparing for further rapid growth in electricity demand, including completing more detailed analysis on new near-term potential energy sources. Third is exploring the potential of emerging energy technologies, such as carbon capture or long-term energy storage. While these technologies are not yet advanced enough to be used at the utility scale, they have promise for the future, and therefore we need to start planning for them now.

Fourth is conversations with the energy planning community, our customers, and other interested parties. And fifth is developing options to reduce the carbon intensity of natural gas, including looking into ways we can use renewable natural gas and hydrogen on our existing system. But that's not all we're doing. Other actions we are taking include planning to reinvest in our existing assets, to ensure reliability and accommodate growth, whether that be

upgrading our aging local distribution systems, revitalizing our major transmission lines, or enhancing the efficiency of our existing generating stations. We're also looking at new technology to help customers manage the energy transition and help them be more efficient. This includes reviewing the business case for the potential installation of smart meters, along with new grid management technology known as advanced metering infrastructure. We are developing new online tools that will allow customers to more accurately monitor and control their energy usage.

We're also rebuilding our website to make it easier for our customers to find the information they want and get the services they need from us online. And finally, we're continuing to engage and communicate with our customers through multiple channels, including the web, social media, text, and over the phone as we move forward. As we navigate the ever evolving energy transition, we will continue to update and develop more detailed plans in the months and years ahead. Continuing that work and our conversations with customers and others in the broader energy community will be key to ensure we know what you want and need from us in the energy world of tomorrow. It's important to note that Manitoba Hydro has already added significantly to our assets over the past number of years, bringing new transmission facilities and clean renewable generation online to meet growing demand. These major investments in our renewable energy grid include the Wuskwatim and Keeyask generating stations, Bipole III, the Manitoba Minnesota Transmission Project, and a variety of other smaller projects.

These investments will provide significant value to the province for decades. However, they've left Manitoba Hydro with significant debt. As we always have, we will continue to manage our finances in the long term to ensure we are efficient, to ensure we gradually reduce debt over time, to ensure we treat our employees fairly, and to attract and retain great talent, to ensure we have the staff and skills our customers can count on going forward. That includes rebuilding our labor force to face the large amount of work we must do in the future, and to improve our existing service levels. We're also taking steps to manage the effects of the current drought and its significant impact on our short-term finances as much as possible. On that note, the importance of precipitation to our finances cannot be understated. We came off one of the worst droughts on record in the 21-22 fiscal year. Water inflows from southern portions of the watershed supplying Manitoba Hydro's generating stations that year were well below normal, the lowest in over 40 years at some locations.

The 21-22 drought situation changed dramatically just days into the 22-23 fiscal year, when a series of Colorado lows brought heavy snow and rainfalls to southern Manitoba, Northwestern Ontario and Minnesota. Together with snow melt from an above average winter across the watershed, this created record flows on the Winnipeg, Red and Saskatchewan Rivers, Lake Winnipeg, and ultimately the Nelson River, where our largest generating stations are located. To give you an idea of how much precipitation we received, Lake Winnipeg rose five feet in just four months between March and July of 2022. That's the fastest

rise since records began in the early 1900s. While the 21-22 drought had a significant negative effect on our financial performance, causing a net loss of $248 million that year, the above average precipitation in 22, 23 had an extremely positive impact on our financial position thanks to increased generation and surplus export sales. As a result, we saw a net income of 638 million for the fiscal year, which ended March 31st, 2023.

Now unfortunately, we're in another drought this year, and we are now projecting a net loss of approximately $190 million for the 23-24 fiscal year. These periods of low water flows drive home how dependent Manitoba Hydro's financial outlook is on the weather, and how important it is that we strive to maximize the value of our product to ensure we meet our customers' energy needs. It's also important to point out that despite drought, our service to our customers is never in danger, thanks to how we design and operate our system. This includes our transmission connections to neighboring wholesale markets which allow us to import energy as needed. On August 25th, 2023, the Public Utilities Board approved an average electricity rate increase of 1%, effective September 1st, 2023, and a further 1% increase, effective April 1st, 2024. The Public Utilities Board also confirmed the 3.6% interim rate increase awarded in 2021 to help counter the effects of the 21-22 drought.

Now listen, we know no one wants to pay more in this time of high inflation. However, these rate increases do help us reduce the risk we face from increasing interest rates and fluctuating export market prices, while protecting you from the chance of higher rate increases in the future. They also allow Manitoba Hydro to continue making valuable investments in our system, so you get the services you deserve and expect. The reality is significant investments will be needed to face the energy transition and meet customer demands, both today and tomorrow. And to help minimize those costs, we've been successful in securing federal dollars, where possible, for green energy projects in Manitoba. For example, the announcement on November 9th, 2023 of joint funding of almost $476 million from the province of Manitoba and Government of Canada is helping us to continue to meet our province's energy needs. That funding is going to two projects. We're installing eight new turbines at the 110-year-old Point du Bois generating station to increase the supply of renewable, dependable electricity and enhance transmission capability and reliability in the area.

The funding will also go to a new 230-kilovolt transmission line we're building in the Portage la Prairie area to strengthen Manitoba's clean electricity grid, support economic growth, ensure Manitobans continue to receive affordable and reliable low carbon energy. We're also investing in our people. We've increased our trainee recruitment efforts to ensure we have the right employee compliment, to not only meet the demands of maintaining our system, but to also swiftly respond to outages and emergencies such as a natural gas incident to protect public safety. We know our service levels have declined in recent years, and we intend to fix that.

Another key component of working through the energy transition is to continue our reconciliation efforts within Indigenous communities. Our legacy projects have had an impact on many Indigenous communities in Manitoba, and we've been working hard for decades to try and address those impacts.

In fact, Manitoba Hydro has over 800 different agreements with Indigenous communities across Manitoba, covering things like mitigation programs, compensation arrangements, and community programs designed to address the impacts of our legacy projects. While we aren't perfect, and there's still a lot of work to do, as we go forward into the energy transition, we have made great strides as an organization over the past 25 years. Our newest generating stations, the Wuskwatim and Keeyask generating stations, were developed in partnership with local communities. Providing opportunities for equity partnerships allows lasting economic benefits to flow to those communities, and this is in addition to the significant training employment and business opportunities and benefits that flow to those communities during the construction of those projects.

I'm proud to say, today over 20% of Manitoba Hydro employees are Indigenous, including over 47% of employees in the North. We are committed to enhancing relationships with Indigenous communities and organizations as we move forward in the spirit of reconciliation, from both an economic and cultural perspective. In closing, let me just reiterate that we're here to ensure Manitobans enjoy safe, reliable, and affordable energy to power their daily lives and to help drive economic growth. Our clean energy can help Manitoba and Canada in the battle against climate change, and we also look forward to continuing our reconciliation efforts with Indigenous communities. I'm enormously proud of our employees, and I thank each and every one of them for all the work they do every single day. So thanks again for joining us, and we look forward to your questions.

Scott Powell: Great Hal. Thank you very much.

Hal Turner: Thanks, Scott.

Scott Powell: Now that we finished our presentation, we're going to move to the questions. Again, if you have questions, type them into the Q&A module on the right side of your screen. Just so you know, I'm going to put these on, not because I'm playing space pilot, but because that'll allow me to hear the answers from our vice presidents who are joining us via video stream as well. So we're going to start off, let me get my glasses. We've got a couple of questions related specifically to the drought, and I'm going to combine those into one question. So it's a bit of a two part one here. So this is from one individual. Question is, "Given the current drought, how much of a price increase will Manitoba Hydro be applying for at the Public Utilities Board, especially given the projected loss of $190 million?" And then the second part of that is, "Given the current drought, will Manitoba Hydro be required to import much more electricity than

the historical yearly average?" I'd like to know who would like to take the question. Hal, would that be you?

Hal Turner: I can take it if you like. Sure, I can take that. So thank you. First of all, thank you very much for the questions. So I think part one of the question is what kind of rate increase can customers expect as a result of this drought? And so what I can say is right now, Manitoba Hydro has no intention to go to the Public Utilities Board to seek a rate increase because of this drought. We've got a brand new board, we need to work with that board and help them understand what the appropriate measures are for our financial health, and set those targets.

So it would be premature for us to go to the Public Utilities Board at this point in time. I think the second part of the question was, will Manitoba Hydro be importing more energy than in an average year? And the answer to that is yes. And that's by design. We are very fortunate to have strong interconnections to the southern markets which allow us to import low cost energy in times of drought. So yes, we will, and it's a good thing for Manitobans, because it helps keeps the lights on. Back to you, Scott.

Scott Powell: Thank you, Hal. I apologize, I'm getting a bit of a delay here, so it's a bit hard to talk when I hear myself. A couple of seconds behind here. Somebody has asked, "Please advise as to how many people have signed on to the live event." And I can tell you right now we have 24 attendees, so we have 24 people online today, so thank you for that question. Another good question here, "Does Manitoba Hydro provide incentives for installing air source heat pumps or geothermal systems?" Alex, maybe we can go to you. Alex Chiang, our Vice President of Customer Solutions and Experience. Alex, maybe you could take that question.

Alex Chiang: Yeah, so currently we provide financing programs that can help support customers who are interested in exploring opportunities to improve efficiency within their home, and would direct you to our website for more details in that regard, and certainly expect to be working with their government going forward in terms of any additional programs, as well as with Efficiency Manitoba on any additional programs that the Province may seek to offer in the future. Thank you for the question.

Scott Powell: Thanks, Alex. And thanks to you who submitted the question. We have another one from Anonymous here. "There's more focus from government and corporations on indigenous reconciliation. What is Manitoba Hydro doing to advance indigenous reconciliation?" And maybe for this one I would go to Jeff Betker, our Vice President of External and Indigenous Relations and Communications. Jeff, maybe you could take that one.

Jeff Betker: Yeah, of course. Good evening and thank you for the question. You're right. Governments, both provincially, nationally are always looking at new and innovative ways to advance reconciliation. And I can tell you that us as a

company are also looking to do the same. We came out with an Indigenous commitment statement back in 2023, our first ever, which affirms our commitment to advancing reconciliation with Indigenous communities. And I can also tell you that Manitoba Hydro has seven priorities across the enterprise, one of which is Indigenous reconciliation. We have quite a good history on training business and employment opportunities. We're looking at ways on how we can expand that, and we're also looking at ways upon which we can expand the benefits to Indigenous communities that we work with and have impacted over the years. Thank you again for the question.

Scott Powell: Thanks Jeff. Appreciate that. Another question here. "When does Manitoba Hydro anticipate being ready to align itself with the government's clean energy targets of a net-zero grid by 2035, and to have a roadmap to a carbon-neutral economy by 2050?" I don't know about the overall economy statement, but perhaps we can have someone take that. Who would like to take that question on being ready to align on the net 2035?

Hal Turner: I can take that one, Scott.

Scott Powell: Hal's going to take that question. Over to you, Hal. Thank you.

Hal Turner: So again, thank you for the question. Our understanding is that Manitoba will have a new energy policy later this summer or early in the fall, and then we're going to need a little bit of time to understand what that energy policy is telling us. We are likely going to revise our existing IRP and reengage with that broader energy planning community, as I mentioned, and then take some time to work with that community and understand what they think the energy policy is telling us, what kind of questions we need to answer. And then we're going to need to go and do some modeling and some work to try and understand what steps we'd take, and then reengage with Manitobans. So realistically, it's probably 12 to 18 months before we're at a point where we'll know exactly how we're going to meet that 2035 electricity system goals and the 2050 provincial goals.

Scott Powell: Great. Thanks Hal.

Hal Turner: You bet.

Scott Powell: I've got a couple of questions that have come in, on solar, so I'm going to maybe try and group these a little bit and see if we can't get you an answer. So first question is, "Does solar have a role to play in future electricity generation?" And the second question kind of related to that, "Does Manitoba foresee a future with community solar so that other people can buy into solar if they're not in an area that can have it?" Just on that, who would like to take that question on solar? Would that be somebody from AP and D?

Hal Turner: Sure.

Scott Powell: Yeah. Maybe we can go to you, Dave Bowen.

Dave Bowen: Sure. Thank you for the question. We're in our... Hal had mentioned our integrated resource plan, and solar is just one of many options that we're studying and looking at the attributes for how we could best capture that and support Manitobans in their investment, in our clean energy future. Exactly how we do that, there are some examples of different communities and entities pursuing that right now. There's lots of different opportunities, and we want to continue to support those as we move forward. So thank you again for the question.

Scott Powell: Thanks Dave, and thank you to our question askers out there in stream land. I've got a very good question here, and I think it's something that a lot of people are thinking about as we talk about the energy transition. We talked about the uptake of electric vehicles. This question, from one of our viewers, "When does Manitoba Hydro anticipate being ready to develop options for expanding the electric vehicle charging network in Manitoba, especially in rural areas, for example, areas that are more than 60 kilometers away from communities of 10,000 people?" Alex. Alex Chiang, maybe you could take that one on the electric Vehicle charging network, and what our plans may be there.

Alex Chiang: Yep, sure. So first off, I appreciate the question and want to acknowledge that I am personally an electric vehicle owner. So I do think that helps me ensure I am staying connected with the evolving needs of our customers in that regard. With respect to the build out of electric vehicle charging stations across the province. That would be an example of, again, another example that we'd want to work collaboratively with the government, understand what their vision is with respect to electrification of transportation, more broadly speaking. But I would suggest that those conversations are already happening in terms of... We have customers today that are looking at installing charging stations and that we'd want to align and make sure that, as part of supporting the government's mandate in terms of incentivizing further electric vehicle adoption, that we are ready to have those conversations today, and we're prepared to have them as part of supporting their energy policy. So thank you for the question.

Scott Powell: Thanks Alec for that answer. Alex, sorry. It's an interesting question we've got from a gentleman. I think, Dave Bowen, this will be directed to you. "Is Manitoba Hydro looking into developing nuclear power and phasing out natural gas?" It's a pretty specific question. Dave, maybe you can talk a little bit about that in context of our integrated resource plan.

Dave Bowen: Sure. Thank you for the question. During the development of our integrated resource plan, we studied different scenarios for load growth, and in our highest load growth scenario, our energy capacity was two to three times at what we have now, which is similar to many utilities across North America. In order to meet that, we're looking at all options, and of the options, resource options, nuclear, small modular reactors would be one, as well as natural gas combustion turbines. No decisions have been made on that and we're keeping

those options open. So that's where we're at to date. So again, thank you for the question, and there'll be more to come in future, in our future IRPs.

Scott Powell: Thanks Dave. Appreciate that answer, and that was a great question. Thank you for that. Got a question here. "Are you going to answer the question directly about the need for extra energy within the next five years from Manitoba?" Who would like to take that? Would that be you, Hal, or do you want that-

Hal Turner: Can you repeat the question please, Scott?

Scott Powell: "Are you going to answer the question directly about the need for extra energy within the next five years in Manitoba?" Perhaps this is related to some comments that were made earlier.

Hal Turner: Well, I'll start and then Dave can add anything if he wants. Each and every year Manitoba Hydro does an electric load forecast, where we project how electricity demand will increase over the next 20 years. So we're constantly looking at that. I'm not exactly sure what they mean by... I don't have the number off the top of my head and what that would be. But that's certainly something we can put in the What We Heard as far as what we think electricity growth will be over the next five years. The one thing I would just point out is, it's a projection and so odds are we're going to be wrong. There's lots of variables that impact that, customer behavior, weather, things of that nature, but we can absolutely provide that number in the answer that we post on our website.

Scott Powell: I think the IRP actually has some of that information in it right now, which is available on our website, where it does talk about potentially a need for new resources within the decade. But again, that really does depend on a number of factors in terms of customer uptake of EV's, adoption of electrification and many things. And so it is, while it is a potential, it's certainly not written in stone and will be updated as Hal said through our ongoing load forecasting each and every year. So thank you for the question on that. This is kind of related and I'll ask this question. "There will be a need for more power to charge electric vehicles. Will existing long-term agreements for power sales to other provinces and states hamper the situation of having enough power for electric vehicle charging?"

Hal Turner: So I can take that, Scott.

Scott Powell: Hal will take that.

Hal Turner: The short answer is no. When we entered into these long-term export agreements, we did so knowing that eventually we'd need that power in Manitoba, and we set up the contracts such that they would end before we needed it here. So there shouldn't be any impact in our ability to charge electric vehicles due to these export contracts that we're currently in.

Scott Powell: Fair enough. Thank you. This is a good question here. It's a fairly involved question, so we may have a number of our VPs chime in on different aspects of this to provide an answer, but here it is. "When does Manitoba Hydro anticipate being ready to develop initiatives in conjunction with Efficiency Manitoba, to advance geothermal home energy retrofits and other energy efficiency initiatives that can free up electricity to be devoted to other uses in Manitoba?" It's a pretty detailed question, and obviously we can only answer part of that, as some of this has to do with Efficiency Manitoba, but maybe we can approach that from the perspective of the IRP. I think, Dave Bowen, would you be able to provide at least some of the information for a response for our viewer on this?

Dave Bowen: Sure, Scott, I'll take a crack at it. Manitoba Hydro continues to work with Efficiency Manitoba on these type of programs. I don't have exact dates or timing of when the information will be ready for the programs for the geothermal, et cetera, but I do know that our teams are working hand in hand, and it's a priority for us. I'm not sure if any others could provide any more detailed comments, but that's what I know today. So thank you, Scott.

Scott Powell: No, thanks for that, Dave. And I think we continue to work, it would be fair to say we continue to work with our associates at Efficiency Manitoba as they develop their long-term plans.

Hal Turner: Absolutely, Scott. As I mentioned in my opening comments, that path to carbon net-zero economy, excuse me, is going to require all of the important parties in Manitoba working together, Efficiency Manitoba, Manitoba Hydro, the Public Utilities Board and the government in Manitoba. And I know the people that work in our IRP division work closely with Efficiency Manitoba on a regular basis. They're talking weekly on these kinds of things.

Scott Powell: So potentially more to come in the future on that?

Hal Turner: Absolutely.

Scott Powell: Great, thank you. Interesting question here. I think, Alex, this one might be for you. "Are you going to increase the sell back rate for solar systems and encourage more solar systems in Manitoba to help meet the needs of Manitobans over the next five years?" Alex, maybe we can go to you for that one.

Alex Chiang: Yeah, so I wouldn't say that we have a current plan to increase the amount. I think any changes in that regard would be dependent on, again, decisions that might be made when provincial energy policy is set. So at this stage we do have some customers that are interested in solar, and we have about roughly over a little over a thousand, I think, customers that are currently signed up for the solar program. So again, the program does exist. However, as far as increasing the rate, currently, we think it's striking the right balance between what we're

paying back to customers that are providing us with the energy, and considering the value that it's providing to the rest of our customers.

Scott Powell: Great, thank you, Alex, for that. Got another good question here, and I'm not sure, I think there might be a typo in here, so I apologize if it's... It's from Anonymous. They sometimes send in a number of questions, so if I've got the wording wrong, you can maybe just clarify it. But the question is, "Can you comment on the status of building interview between Canadian or building, it's maybe building interconnections between Canadian provinces?" Maybe it's interconnections rather than interview. I think that's what it is. "Can you comment on the status of building interconnections between Canadian provinces, and the role the federal government can play to support this?" Certainly something we've heard in the news, federal government looking to expand a Pan-Canadian grid, as it were. Who would be interested in taking that one?

Hal Turner: I can take it and then Dave can add anything. So currently there's no plans to build any... We're not studying interconnections between different provinces. It has been looked at, especially as we get more and more renewables on the grid, more wind and solar dispersed across Canada. There are certainly benefits to having greater interconnections. And I know it's something that the Canadian Electricity Advisory Council, who reports to the Federal Minister of Natural Resources, is looking at. So I think that's on the radar of a lot of the entities that are looking at how do we get to net-zero by 2050. But at this point, there are no concrete plans to build inter-provincial transmission.

Scott Powell: Thanks for that, Hal.

Hal Turner: Yeah.

Scott Powell: Yeah, never know. It depends on federal government involvement and where they go in the coming years as well. So thank you for that question. It's a good question. And I apologize if I misinterpreted that. Feel free to submit it again. I think I got it right, but if it needs clarification, just shoot it in here again or if I got it wrong. Interesting question here, gentlemen, "Has the Brandon Generating Station been upgraded in any meaningful way since 2001 to make it more efficient or able to generate more electricity, especially given the 2029 capacity concerns stated by the prior CEO?"

Hal Turner: I can take that, Scott.

Scott Powell: Okay, Hal, will take that.

Hal Turner: So the short answer is, I believe the short answer is no. We haven't made any efficiency improvements to the Brandon Generating Station.

Scott Powell: Currently, for those of you who don't know, Brandon has two combustion turbines.

Hal Turner: Correct.

Scott Powell: Natural gas to provide voltage support, and additional generation in times of drought or transmission emergencies. The last coal unit there was phased out 2019, I believe.

Hal Turner: 2019 or 2018, I think.

Scott Powell: 2019 or 20. So that's our remaining thermal plant on our system. So thank you for that question. Here's a new question from Anonymous. Thank you, Anonymous. "There's been lots of discussion about additional wind resources. Is Manitoba Hydro looking at wind and when can we expect to see this, if we are." Dave, maybe we can go to you from the perspective of the IRP because I know wind was spoken, talked about in the IRP quite a bit.

Dave Bowen: Sure. Thanks, Scott. And thank you for the question. In our integrated resource plan, I mentioned that we studied all options. Wind is one of the cheapest energy options, and so we have two products, energy and capacity. Capacity will be something that, hey, when we have our winter peak, and you heard about the situation in Alberta, where there wasn't enough energy for a fixed amount of time, that would be a capacity piece. So we are looking at wind, like I said, we haven't made any commitments, but it is a leading energy resource in terms of what we could build in the future here. And we're actively looking at how can we make those decisions to move forward such that we could continue to meet the energy needs of Manitobans. Thank you, Scott.

Scott Powell: Thanks, Dave, and thanks to you for asking the question. Just going along here. Here's an interesting one that has come in and I think it's, I don't even know the answer to this, so hopefully one of our leaders does. "Does Manitoba Hydro have an emergency grid alert communications protocol in place to deal with a situation similar to Alberta's problem with January 13th, 2024?" And I believe that was the emergency call for a reduction in power.

Hal Turner: Yeah.

Scott Powell: So who would like to take that?

Hal Turner: I'm thinking if any of us know the answer that it would be Quinn and operations, because that's where the system control center is.

Scott Powell: Excellent. Quinn Menec, you able to maybe answer this question for us?

Quinn Menec: Yes, good evening. Thanks for the question. Yeah, Manitoba Hydro has well established systems and processes in terms of emergency response. So we do

have emergency operation centers when emergencies do occur, and we typically would leverage provincial emergency type communications in order to conduct such public appeals and really address through our media and social media on those communication channels. So there are protocols in place, ultimately, hopefully in Manitoba Hydro and Manitoba, our systems designs a little differently that we wouldn't need to do such an appeal. But again, we do have those systems and processes in place should an emergency like that occur in Manitoba. Thank you.

Scott Powell: Thanks for that, Quinn. And as director of communications, I can also state we do have very robust crisis communication plans in place, here at Manitoba, to advise customers in various different emergencies that may arise, that would utilize many of those channels Quinn spoke about, whether it be through social media, appealing to mainstream media and through some of our customer service systems, sending out direct texts and using other channels to get any messaging across in a variety of emergency situations. So thank you for that question. Let's go back here.

I got an interesting question just come in here. Another one from Anonymous. Thanks for that Anonymous. "We have a predominantly hydroelectric system that relies on water inflows. However, we're seeing more and more droughts. What if we have more droughts, even as electricity demand grows? Do we run a risk of not being able to meet demand? Are we at risk of brownouts like we saw in Alberta a few months ago?" I think, Hal, you kind of addressed this a little bit in your opening remarks about how our system is designed and how we operate it. Maybe you can expand on that.

Hal Turner: Absolutely. So we plan our system for the worst drought that's ever occurred on record. So that would be, I believe 1940-41 was the worst drought ever recorded in Manitoba. So we are operating the system, assuming that drought's going to happen in the next year. So it's possible, I guess, if we had two droughts in a row that were as bad or worse than the drought we had in 1940-41, we may struggle to meet the needs of Manitobans. That's an extremely low probability. I would suggest that it's never happened, and I can't never say never, but I think it's an extremely low problem. And I would suggest for the most part, Manitobans don't need to worry about us being able to meet their energy needs, even in drought.

Scott Powell: And I would add, maybe we could talk about the value of interconnections to our neighboring utilities. Those interconnections allow us to export surplus energy when we have average or above average water flows. But they also play an important role in periods of drought.

Hal Turner: Periods of drought, weather events, cold snaps. So those interconnections to the north, to the south, excuse me, are extremely important when it comes to reliability of our system. And that's a big part of the reason why Manitobans have such a reliable grid.

Scott Powell: Great, thank you for that. Question here. I think we can answer part of it, but, "How do you intend to meet the 2030 deadlines for carbon emissions and then in 2038?" 2038, might be 2035, I think is actually the year, "meet the ultimate goals." I should point out that we already have possibly the lowest emitting system in Canada, if not one of the lowest emitting systems in North America already.

Hal Turner: Absolutely. And if not one of the lowest emitting systems in the entire world. So if they're referring to Canada's clean energy regulations, I think while they're not finalized, we meet them now and I see no issues with us being able to meet them in 2035. If they're talking about broader provincial targets, I don't have that information in front of me, so I couldn't speak to that.

Scott Powell: Well, that's fair enough. Thank you. Dave, I think we have one for you here. "Are you working on another integrated resource plan, and if so, when can we expect to see that?"

Dave Bowen: Thanks, Scott. Another great question. We're in the preparatory phases. I am not aware that we've made any public commitments as to when that will be, but we are preparing for this, and it's part of our course. We're executing our near term actions and we know that we need to do this work. So thank you again for the question.

Scott Powell: Great. Thanks, Dave. Here's a question, I'm not sure we have this information in front of us unless somebody's got a far better memory than me. So we may take this one, as we would say, under advisement and get back to you directly, but "What is the historical yearly average of the amount of electricity that Manitoba hydro imports?" That's a difficult one. And I would say that that varies wildly depending on, or I guess the average.

Hal Turner: Yeah, on average, on an average year, we're a net exporter, but that doesn't mean we don't import. So we often will import electricity at night, overnight, when electricity prices are really low, and then we can shut off our hydraulic turbines and fill up the forebays behind our generating stations, and then run that water through the units during the day and sell it back to the export markets at a higher price. So we're importing and exporting all the time. But yeah, off the top of my head, I wouldn't know how much we import in an average year. But as I said, in an average year, we are net exporter. We export much more than we import.

Scott Powell: We're primarily a net exporter except in times of drought-

Hal Turner: Correct.

Scott Powell: ... I would assume. So that's something we will work to get an answer for you on that and put that in our, What We Heard document. But as Hal says, we're primarily a net exporter of electricity even though we may import daily. It's a

good question here from Anonymous. Thanks again, Anonymous, for that question. "What role do you see indigenous communities playing in future generation projects?" And Jeff Betker, maybe you could answer that, and then we can maybe talk a little bit about that in the context of our IRP as well. But Jeff, let's start with you.

Jeff Betker: Good question, and thanks for the question. And as Hal mentioned, in our presentation, Wuskwatim and Keeyask were built in partnership with one First Nation on Wuskwatim and four First Nations on Keeyask. I see wide varieties of options available upon which Indigenous communities can, and I hope will play a role in our future generation projects. And whether that's related to some type of equity arrangements, like we've done in past generation, whether it's other types of training, business and employment opportunities. So I know that the IRP had modeled different scenarios, and absolutely in the work that was done Indigenous participation was factored in. So I expect that there will be Indigenous participation in future projects. And I know the question was about generation projects, but I think the IRP looked at many, many different scenarios, not just new generation. So whether we're talking about wind or other types, I absolutely am optimistic, and I hope that we have a bright future doing projects in partnership with Indigenous communities. Thank you.

Scott Powell: Thanks for that, Jeff. Much appreciated. Question here, and this is a good one. And Hal, this one's really for you and maybe a little bit for Dave as well, possibly even Quinn. "You mentioned, Hal, that reinvestments in the current system will be required. What needs to be fixed first?"

Hal Turner: Oh, that's a great question. We don't have the luxury of just fixing one thing and fixing something first. So we are constantly reinvesting in our natural gas generation, transmission, distribution systems. So there is no... I don't know what the one thing is. I can tell you we have hundreds or thousands of projects on the go, and we are replacing or refurbishing probably tens of thousands of assets a year.

Scott Powell: One of the things I remember from a campaign a number of years ago, we have over a million poles-

Hal Turner: Correct.

Scott Powell: ... and many of those were installed postwar during rural electrification and the increasing electrification even of the city. Just poles alone, we've got a number that need to be replaced every year. Yeah.

Hal Turner: We started developing the lower Nelson River in the early 1970s. The HVDC system was installed in the 1970s. So yeah, it's tough to say where are we... First of all, we're always reinvesting in our system. And yeah, I can't tell you which one we're doing first. I can tell you we're investing in all of our systems at all times.

Scott Powell: And maybe, Dave, we can flip to you for this. One of the things we're always doing is actually monitoring all of our different assets for their condition and planning for their eventual replacement or maintenance. Maybe you could speak a little bit about that whole asset planning and maintenance component, and how that works.

Dave Bowen: Sure. Thanks, Scott. Like Hal said, we have multiple assets. If you just think, if you're in Winnipeg or if you're in the rural areas, wherever you live in the province, just when you're driving to your home with your friends, you'll see our infrastructure everywhere, whether it be overhead poles or stations or whatnot. And so with the asset management, because we have almost $25 billion of assets, we're constantly looking at how do we systematically improve our management of that. And it's one thing that's been a focus over the last number of years to continue to improve that on our whole system, generation, distribution, transmission, and our natural gas. So it's a work in progress, and we're continuing to advance that, and continue to focus on how do we get best value for Manitobans, and of course, support the assets, and as Hal noted, to support the people that actually do this great work each day to deliver energy energy for life. Thank you.

Scott Powell: Thanks, Dave. Got a interesting question. "Hal, in your update, you mentioned smart meters. What are they exactly, and how do customers get them?" It's actually a very interesting topic.

Hal Turner: Yeah, that's a great question.

Scott Powell: Maybe you can talk a little bit about that.

Hal Turner: Okay, so yeah.

Scott Powell: What is a smart meter?

Hal Turner: I will. I will. Sorry, the engineer in me, I'm trying to fight the inner engineer in me. So a smart meter, basically it can read itself. So it basically communicates back to Manitoba Hydro and can tell us, at some interval, maybe it's every five seconds or every 10 seconds, how much energy you're using at any given period in time. And then that information can be used in a number of different ways. So for example, that could tell us proactively, "Hey, your power's out." So if we stop getting a signal from that meter, we know your power's out. And we don't need to wait for you to call us and tell us your power's out.

So that means we can serve you better. It can tell us if there's problems with voltage drop. We can see maybe there's higher load in certain areas in the province, and we know we need to expand the system in that area. So that's what a smart meter is and what it can do. As far as how do you get one? Well, as I mentioned in the update, we're looking at smart meters, and I think I'm reasonably confident to say that smart meters are going to come to Manitoba.

What I'm not confident about is when, and so I don't believe today you have the option to ask for one, but I do believe that in the future, we're all going to have smart meters.

Scott Powell: Well, that's good. And one of the interesting thing with smart meters, obviously too, is the information that, as they're recording this, that can be used by those of you out there, our customers, to help manage their energy consumption-

Hal Turner: Absolutely.

Scott Powell: ... and lower their bills.

Hal Turner: A hundred percent.

Scott Powell: And one of the other benefits obviously is that no more estimated readings.

Hal Turner: Correct.

Scott Powell: And you don't have to trudge out in the snow and go stand and look at your meter and then give us a call, because we'll know exactly what it is every month. So there's a number of benefits, I think.

Hal Turner: Yep.

Scott Powell: That's a great question. Thank you for that. Smart meters. Let's go here. Sorry, I'm scrolling along here. It's a good question. It's something that we've actually dealt with in the communications and PR department. So it's a good question here. "I live in a rural area and I've always been very happy with my hydro employee response to my residence outages." We do aim to please, sir. Thank you for that. We'll pass that on. "However, I wonder if hydro is a bit behind in keeping hydro lines clear of trees. Is that a budget situation? Can you comment on my observation?" Vegetation management is obviously a very important part of maintaining reliability. Quinn, maybe we can direct that to you in operations and talk a little bit about what we do in terms of vegetation management. Are we a bit behind? Are we looking to enhance that? And can you comment on that?

Quinn Menec: Certainly. Thanks for that question. Yeah, we have a number of vegetation management programs, whether it's on the distribution transmission system, and even on the generation side, to ensure ultimately that our infrastructure doesn't interact with the vegetation and create hazards. So are we a bit behind? We are in certain aspects. It's a considerable effort to get out there and keep up on the growth of vegetation across the system. The ongoing visibility and risks posed with vegetation have increased. Lately, we've seen some incidences, not just in Canada, but in North America, where we want to ensure that vegetation management, while we identify it as a significant risk, that we do allocate the

right budgets towards it. So we have increased the budgets on vegetation management and it's definitely on our radar to ensure that we keep up on that.

Scott Powell: Thanks for that, Quinn.

Quinn Menec: Thanks.

Scott Powell: So many of the areas in the city, certainly in the area I live in, those power lines were put in and those trees were about three feet tall at the time and they've grown into them. So certainly as neighborhoods age, you see those trees reaching up, and we do do our best to minimize those contacts. Let's see what we've got here. So thank you for that question. This is a good question and I think it's one that's quite timely and topical. "If climate change continues to cause record-breaking weather," oops, it just blinked off my screen here. Hang on, sorry. "If climate change continues to cause record-breaking weather and increases the frequency of storms, how will Manitoba Hydro adapt to the changing climate and protect our system, and through that protect reliability?" Dave, maybe you can speak a little bit about that in terms of asset planning and development.

Dave Bowen: Sure. Thank you for the question. So if we talk about our existing infrastructure and the effects of climate change, well there's more storms. They happen in different ways that damage our infrastructure, like we had the storm in 2019 where we lost a number of towers and had significant outages. So we are studying the impacts of climate change in a variety of ways. Some of those ways are just, "Hey, what are the design loads for the various infrastructure that our transmission towers lines will see?" How do we adapt to that? How do we prepare to respond when those damages happen more frequently? So there's a whole bunch of different ways in terms of how we're responding to our infrastructure. We're also studying climate change in terms of, we talked about the drought, et cetera, but those are just a few examples. Thank you.

Scott Powell: Thanks, Dave. I've got a question here, and again, I apologize. If I'm getting this question wrong, zip it in again and clarify for me. But the question is, "Are there plans to increase transparency on supply and demand through tools like electricity maps, which utilities and other provinces already contribute to?"

Hal Turner: So I believe we have a map that shows the available distribution capacity at various areas in the province. I believe that exists. And I believe we modeled that off of... After other utilities, I think an Alberta utility. So we tried to... I believe that information is available, Scott. We may need to confirm that when we post the answer on our website, but I believe there is some information, at least at the distribution system level, on how much is the supply available at different spots in the province.

Scott Powell: So obviously that plays a role in what our plans in terms of capacity, population growth.

Hal Turner: Yeah, absolutely. And the intent of that tool is maybe you're a person who's looking to open a new business or start a new business, and it gives you an idea of some places that could more quickly accommodate your energy needs.

Scott Powell: That's great. Well we'll confirm that, make sure that's available. We'll confirm that in What We Heard document. So thanks for your question on that. Thank you very much. I see we're coming awful close to our time here. Where are we at? Oh, we're actually at time. I'm just going to see if we've got any more questions that have come in here. And this is a good one. And again, this is back to wind, and wind power is obviously a very topical subject and we live in a sure seems like a windy province a lot of the time. So this question, "Given that the average wind in Manitoba is 7m/s," I guess that's meters per second, miles per hour. I don't know. "Which is above average. Why do we only have two wind farms, and are there any more projected on the horizon?" And I guess this really would go to our IRP, and Dave Bowen, maybe you can comment on that. I know we've spoken about wind and wind farms and potential earlier, but maybe we can look at that from a different perspective. I mean, are we really working-

Dave Bowen: Sure.

Scott Powell: Yeah.

Dave Bowen: Thank you for the question. So again, our integrated resource plan, wind was the cheapest energy resource, and so it's something we're looking at. We haven't made decisions yet, but I think there's strong indication that we could expect to see more wind farms in the province in the future. Thank you.

Scott Powell: So it's certainly something we're looking at in the IRP and is part of our plans as we look going forward. How that looks, yet to be determined.

Hal Turner: Maybe I could just add one thing, Scott. While wind... Wind is a great resource, and the cost of wind has come way down, but one of the characteristics of wind is it's intermittent, which means it only makes electricity when the wind is blowing. And that's one of the advantages of our hydroelectric system. It's something that we call dispatchable, which means we can turn it on and off when it's needed. So while I fully believe wind is going to be part of the energy mix in the future, and a greater part of the energy mix in the future, we need to pair with wind with some kind of dispatchable resource. As we saw in Alberta last month or the month before, they had a cold snap and the wind just wasn't blowing, and it wasn't much help to them at that point in time. So wind is going to be a bigger part of our future, but wind on its own is not enough to keep the system reliable.

Scott Powell: So it really does have to pair with hydro resource or other resource-

Hal Turner: Some kind of dispatchable resource so that in times when the wind's not blowing, or in times of a wind drought, or an extreme cold snap, you've got

something else to provide some backup to ensure that the lights stay on and the gas is flowing.

Scott Powell: Just for folks who may not understand, when you say dispatchable, what do you mean by that, Hal?

Hal Turner: The lights in your house are dispatchable. You can turn the switch, you can turn on or off when you need them. We can't decide, as much as I'd like, we can't decide when the wind blows or control when the wind blows. Right? But we can control when we let the water through the hydro stations we have now. So dispatchable means you can turn it on and off as needed. You have some control.

Scott Powell: Great. If you come up with a way to control that wind, let us know and you'll be a gajillionaire. I'm sure.

Hal Turner: I'll own an island in the Caribbean.

Scott Powell: That's right. Anyways, folks, we've come to the end of our time together. We've run over a few minutes, but we were happy to do that. I'd like to thank everybody. I've got an official script to follow. It's been a good discussion, and we have gone over time. We want to thank everybody for participating in our session today. Thank you for your participation. I think we add up to 33 or 34 attendees here at one time. We will be posting the What We Heard document, summary of questions we received in our responses to our website in the coming days. And as we mentioned earlier, we'll also post a recording of this meeting with American Sign Language Interpretation translation, along with English and Friench transcripts to our website so that everybody has an opportunity to hear what we've had to say and what we heard from you, our customers today.

Again, I want to thank our executive leadership team for their participation in our meeting today. But most importantly, I'd like to thank you, our customers and other interested parties who've taken the time. I know the Jets are playing tonight. I'd like to thank you for taking your time this evening to come and join us and ask some really good questions, and hopefully we were able to give you the answers that you were looking for. So thank you again. I wish you all a good night and we'll see you all next year. Thank you.