FINAL TRANSCRIPT

TransAlta Corporation

Fourth Quarter and Full Year 2020

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PRESENTATION

Operator

Ladies and gentlemen, thank you for standing by and welcome to TransAlta Corporation fourth quarter and full year 2020. At this time, all participants are in a listen-only mode.

After the speakers' presentations, there will be a question-and-answer session. To ask a question during this time, simply press *, then the number 1 on your telephone keypad.

If you require any further assistance at all, please press *, 0.

Please be advised that today's conference is being recorded.

I would now like to hand the conference over to your speaker today, Chiara Valentini, Managing Director, Investor Relations. Please go ahead.

Chiara Valentini — Managing Director, Investor Relations, TransAlta Corporation

Thank you, Michelle. Good morning, everyone, and welcome to TransAlta's fourth quarter and year-end 2020 conference call.

With me today are Dawn Farrell, President and Chief Executive Officer; Todd Stack, Executive Vice President, Finance, and Chief Financial Officer; John Kousinioris, Chief Operating Officer; and Kerry O'Reilly Wilks, Executive Vice President, Legal, Commercial, and External Affairs.

Today's call is webcast, and I invite those listening on the phone lines to view the supporting slides that posted on our website. A replay of the call will be available later today, and the transcript will be posted to our website shortly thereafter.

All information provided during this conference call is subject to the forward-looking statement qualifications set out here on Slide 2, further detailed as well in our MD&A, and incorporated for the purposes of today's call.

All amounts referenced during the call are in Canadian currency, unless otherwise stated.

The non-IFRS terminology, including comparable EBITDA, funds from operations, and free cash flow, are reconciled in the MD&A for your reference.

On today's call, Dawn and Todd will provide an overview of the quarter's results, along with expectations for 2021. After these prepared remarks, we will open the call for questions.

With that, let me turn the call over to Dawn.

Dawn Farrell — President and Chief Executive Officer, TransAlta Corporation

Thanks, Chiara, and good morning, everyone, and thanks for joining our call today.

This will be my last official conference call with all of you, so let me use my time to brag about the great successes of the team in 2020, and then I'll turn the reins over to Todd and John, who are more than ready to take the Company ahead starting in April.

So let me start by saying that 2020 was quite a remarkable year for TransAlta. Whether it was how we handled the COVID-19 pandemic, or how we positioned the Company for 2021 and beyond, the team was absolutely focused on execution, finished 2020 with strong financial and operational performance, and we significantly advanced the strategies of TransAlta. But the year was marked by the resilience of our people, the performance of our diversified portfolio of investments, and progress on our E-ESG goals, which are economic, environment, social, and governance.

Growing our investments in TransAlta Renewables and continuing with our investments in the transition to natural gas here in Alberta have strengthened our overall E-ESG framework. Our strategic renewables investments, our ownership of our hydro assets here in the Alberta market, and our positioning in competitive gas-fired generation have set us up well for any of the portfolios of ESG and E-ESG shareholders.

We set out in 2020 to continue to execute on our clean energy investment plan, and that's what we did. So first, we promised to advance our strategy of converting to gas here in the Alberta thermal fleet, and there were several accomplishments:

We achieved a major milestone when Sundance Unit 6 conversion to gas was completed and was fully commissioned to the grid in early 2021. We cut our CO2 emissions in half at that unit, and we're ready to start K2 in March and K3 in the fall.

The announcement of a rising carbon prices to $170 a tonne by 2030 here in Canada made the decision to close the Highvale Mine, effective December 31, 2021, the end of this year, the right one. This decision advanced our goal of being off thermal coal in Canada by four years, originally 2025, but now by the end of 2021. All our Alberta thermal facilities will now run only on natural gas starting January 1, 2022.

During the fourth quarter of 2020, we also executed an equipment supply agreement for the Sundance Unit 5 repowering 730-megawatt project; is estimated to cost between $800 million and $825 million and is scheduled to be online late in 2023.

Finally, we retired our first coal unit at Centralia on December 31, 2020. We're now operating only one unit at Centralia until the end of its life in 2025, which is supported by a strong PPA with our customer Puget.

Now secondly, on the renewables side of our clean energy investment plan, we completed our investment in a 49 percent interest in the Skookumchuck wind facility in Washington, and this added net capacity of 67 megawatts.

We advanced construction on our 207-megawatt wind rise facility here in Alberta, despite the COVID pressures. We're about 80 percent complete as of the end of 2020.

We completed our first battery storage project at Summerview with some good financial and operational performance already in 2021.

We advanced discussions on our US wind projects and have a number of serious discussions with customers here in Alberta on additional renewables investments.

And finally, we worked with BHP in Australia to bring lower intensity and power solutions to their operations, so they can grow their business on a less carbon-intensive basis. Our newly extended contract to 2038 provides us with unique opportunity in western Australia to grow our on-site generation and renewable business.

Now thirdly, on our E-ESG track record, we advanced the ball considerably there as well. Greenhouse gas emissions for 2020, we're down another 4.2 million tonnes, representing another 20 percent reduction in greenhouse gas emissions, year over year. We are now down over 60 percent in greenhouse gas emissions compared to 2005 levels.

Our goal is to be under 12 million tonnes by the end of 2022, down almost 70 percent from 2005. Our performance is exceeding targets set under the Paris Agreement. To date, TransAlta has delivered 25 million tonnes of greenhouse gas reductions globally, and approximately 90 million tonnes of greenhouse gas reductions in Canada since 2005. Greenhouse gas reductions in Canada represent close to 10 percent of Canada's goal of a 220 million-tonne reduction for Canadians by 2030.

We approved an equity, diversity, and inclusion pledge, which was recommended by our employees and approved and committed to by our Board of Directors.

And a really special accomplishment, we achieved a score of A-minus from CDP, which put us in a leadership category for sustainability. We are among a very exclusive and elite group of companies with this designation. The average CDP score for our peers is a B, and the average score for reporting companies in North America is a D.

We did all this while improving the financial condition of the Company. In 2020, free cash flow was $358 million and $1.30 per share, an excellent result considering that our thermal business was down over $100 million due to the downturn here in Alberta and the impacts of COVID-19 on the Alberta economy.

We ended the year with over $2 billion of liquidity, and with that $700 million of cash in the bank. And many congratulations to our finance and treasury team who did an outstanding piece of work on their project financing for South Hedland in western Australia.

At the end of the year, we announced a 303-megawatt asset dropdown to RNW, and we declared a 6 percent increase for our dividend holders, for TransAlta shareholders, based on our continued confidence in our strategy and its financial strength.

And then finally, we achieved our net recourse debt target after a multiyear effort of deleveraging.

I'd like to end my comments today by talking about our people. In 2020, our people safely ran our fleet and advanced our strategy and our financial performance. Whether they were at their remote home offices, or at the plants, or in our corporate offices, they kept their spirits high and our COVID-19 cases low.

Our Sundance Unit 6 outage had at one time over 700 people on-site with no spread. Absolutely remarkable. More importantly, our people achieved first-quartile performance on our organizational health KPI, a five-year journey from fourth quartile to first quartile, as measured by our people. In a year where a worldwide pandemic was trying to create nothing but havoc and upset, we improved the way people work with one another to execute our strategy.

With all the great work in 2020 by our employees, it is clear that TransAlta is a leader in clean electricity and a sought-after investment by those who are interested in companies that deliver on E-ESG objectives. And of course, as I leave after 35 years, I know it will be the people that I miss the most.

Finally, on February 4th this year, we announced my retirement from TransAlta and the appointment of John Kousinioris as our new CEO. The board and I have worked together over the past several years to oversee a serious succession process that led to the unanimous appointment of John as our new CEO. John is the best choice for taking TransAlta into the future, and I supported his appointment wholeheartedly.

John and I have worked together for over eight years. He is a fine leader who will deftly navigate the ship over the next decade. He and Todd are excellent partners who've already announced a top team who are ready to take the Company into what will be a very exciting time as clean electricity becomes even more central to many of our energy needs.

Congratulations to both John and Todd. What an exciting time ahead for both of you, for the team, and for the industry.

So, folks, from me, that's a wrap.

And, Todd, I'll turn it over to you so that you can take everyone through the numbers.

Todd Stack — Executive Vice President, Finance and Chief Financial Officer, TransAlta Corporation

Thanks, Dawn, and good morning, everyone. This morning, I wanted to cover three key areas. First, I want to close off on our 2020 financial performance. Second, I'm going to discuss our 2021 outlook and some of the key factors driving year-over-year EBITDA growth. And third, I want to highlight on the strong financial foundation that we have in place for 2021.

So looking at our financial performance on Slide 7. Overall, I'm very pleased with how the portfolio performed throughout the year. And 2020 again demonstrated that a broad diversity of regions, contracts, and technologies can deliver stable and predictable cash flow.

In the year, we generated $927 million of EBITDA and free cash flow of $358 million. Both EBITDA and free cash flow performance were in line with 2019 results and within our original guidance range. I'll just touch on a few of the key drivers of 2020 performance.

In the year, our Wind and Solar segment benefitted from higher production from strong wind resource across all regions, and we also realized the benefits of three new assets in 2020. Big Level and Antrim were brought online in late 2019 and are delivering cash flows as expected. Late in 2020, we also added the Skookumchuck Wind Project, which will provide a full year contribution to EBITDA in 2021.

Although power prices in the Pacific Northwest were weak throughout 2020, strong operational performance, combined with our hedging practices, resulted in our Centralia segment significantly exceeding 2019 financial performance. The Energy Marketing segment once again exceeded our expectations for a second year in a row, generating $114 million of cash flow.

The investments we've made in this business over the past 20 years has positioned us well to capture opportunities and volatility across all power markets in North America. Their ability to deliver on customer solutions and capitalize on real-time opportunities is a major asset to the Company.

All of these great results help offset the impact of weaker electricity demand here in Alberta. Production and free cash flow from Alberta thermal was down in 2020, due to lower market and industrial demand and the planned gas conversion at Sundance Unit 6, which was executed in Q4.

Although the Alberta thermal fleet delivered strong realized prices consistent with last year, we had gross margin pressures as we transitioned to shut down the mine and recognize the cost of new and previously mined coal. All in all, we had a very strong performance from the business for 2020 under a very difficult economic backdrop.

Before I move on to our 2021 outlook, I wanted to provide some commentary on power prices and on our Hydro business.

Turning to Slide 8. As I've discussed in prior calls, electricity demand in 2020 was significantly lower than expected, and power prices for the year ultimately settled at an average price of $47 per megawatt hour, which was significantly below our expectations at the beginning of the year of $58.

Looking ahead to 2021, we continue to see constructive factors for Alberta prices as compared to 2020. We expect power prices to be offered, dispatched, and optimized in a more commercial manner in Alberta, with power prices more in line with longer-term historical averages with the expiry of the remaining PPAs at certain thermal facilities and the transfer of dispatch control away from the balancing pool and to the asset owners. Power prices are also expected to be influenced by higher carbon compliance costs and expected demand recovery relative to the economy-wide closures from COVID-19 during most of 2020.

As we came into 2021, we saw the forward curve strengthen from about $56 a megawatt hour into the mid $60 range. This is consistent with our view that the average energy price of $55 to $65 per megawatt hour is required to support the full cost of capacity in the market.

Looking at the first two months of the year, January prices settled at $73, and prices in February settled above $100. These high prices were primarily driven by high demand during periods of extreme cold and minimal wind production. During this period, TransAlta and other market participants responded by bringing on additional capacity to meet the higher demand. For the balance of the year, the forward curve is currently at $62 per megawatt hour.

Looking at our Hydro business on Slide 9, we've illustrated the EBITDA for 2020 that would have been earned before making the PPA obligation payment. This slide helps to illustrate our expectations on the Hydro segment cash flows in the post-PPA period.

In 2020, the Hydro business realized revenues from energy and ancillary sales of $153 million based on a spot pool price of $47. In addition, we realized capacity payment revenues of $60 million.

In 2021, we expect this combined revenue to be similar, as our expectation is that pool price in 2021 will more fully include the cost of capacity in the spot energy price. Our 2021 outlook is based on an average pool price of $58 to $68 per megawatt hour which, at the midpoint, is 30 percent higher than 2020.

In 2021, the Alberta Hydro assets will also earn emission performance credits under TIER. However, the value of these credits cannot be realized until they are certified in 2022. This creates a one-year lag in recognition of the EBITDA value. EBITDA value from credits is expected to be between $20 million and $25 million, based on the current carbon tax level of $40 and could escalate with further future changes to carbon prices.

Earlier this morning, we announced our outlook for 2021. We're estimating comparable EBITDA to be between $960 million and $1.08 billion, representing about a 10 percent increase at the midpoint of the range versus our 2020 results. But the Company believes comparable EBITDA will strengthen due to a number of factors.

First, we expect power to be offered, dispatched, and optimized in a more commercial manner in Alberta, with the expiry of the remaining PPAs with prices approximating longer-term averages. Second, the expiry of the PPAs at our Alberta hydro facilities will step up comparable EBITDA, driven by the removal of the previous PPA obligation payments. Third, we'll see a full year contribution from our Skookumchuck wind facility and Ada Cogen facility, which were added part-year in 2020. And finally, the Windrise project will be completed and reach commercial operation during the second half of 2021.

The Company expects sustaining capital to be in the more elevated range of $175 million to $210 million, an increase to 2020 levels. This is driven primarily by the considerable number of planned outages in 2021, particularly the three outages in the Alberta thermal fleet that are scheduled to be completed, along with their conversions to gas and other turnaround maintenance.

The Company presently has Sheerness 1 on outage, the Keephills 2 outage is planned for mid-March, and the Keephills 3 outage is planned for mid-September. Both of the K2 and K3 outages are estimated to take just under two months to be completed. We're also doing some work at Centralia to set the plant up for its run to the end of life in 2025.

Our EBITDA expectation allows us to set free cash flow guidance in the $340 million to $440 million range representing, at the midpoint, a 9 percent increase over 2020 results. The wider range is driven by expected volatility around our Alberta merchant production, the residual uncertainty around Alberta power prices, and the potential uncertainty around outage durations and costs. And of course, we are focused on returning value to our shareholders through our dividend, as well as opportunistically pursuing share buybacks over the year.

Before I close, I wanted to highlight the current financial strength of the Company. We added significantly to our liquidity in Q4 and closed the year with $2.1 billion, including $700 million of cash. In October, we closed the second tranche of the Brookfield Investment for $400 million, and also closed the

AU$800 million financing from the South Hedland Power Station. This sets us up extremely well to fund our gas transitions, deliver on our renewables growth plan, and return capital to shareholders.

In addition to strengthening liquidity, our balance sheet is also in great shape. Over the past few years, we've been focused on reducing our senior corporate debt levels to $1.2 billion in preparation for a fully merchant market in Alberta. In November, we repaid our maturing $400 million bond and have now achieved our debt-reduction objective. Our successful funding activities, combined with consistently strong free cash flow performance, leaves us in a very strong financial position as we enter 2021.

With that, I'll turn the call over to John.

John Kousinioris — Chief Operating Officer, TransAlta Corporation

Thanks, Todd, and good morning, everyone.

I'm very excited for the opportunity to lead TransAlta into the next phase of our growth and clean electricity transition. I'd like to thank Dawn for her focus, leadership, and stewardship over the last decade, and her vision to put us on the path of renewables and lower=intensity thermal generation, while strengthening the financial capacity of our company. She has spent 30 years shaping and directing TransAlta's path, and we were extremely fortunate to have had her as a leader, mentor, colleague, and friend. And I wish her all the best as she soon embarks on the next chapter of her journey.

Our strategic priorities for 2021 will build further on the path which we began to lay out in 2019. We will successfully complete our conversion-to-gas strategy in 2021, with three boiler conversions to round out the two conversions completed last year. We also plan to advance our Sundance 5 repowering during the year, which we currently expect to be fully operational by late 2023.

We will continue to actively participate in policy development, with a focus on economic, environment, social, and governance issues, and with a particular emphasis on ensuring that the needs of our customers are met and that consumers have access to clean, low-cost, and reliable power, all of which remains top of mind. We are at an interesting and exciting time in the evolution of our industry and want to ensure that our voice is heard.

With the expiry of the PPAs in Alberta and the evolution of our generating fleet in the province, we are now highly focused on optimizing our Alberta business and have set up a separate team with objectives to ensure that this market is served, both at a wholesale and a commercial and industrial customer level. We remain focused on serving industrial and commercial customers with our unique offerings and the breadth of our portfolio to deliver clean power solutions for their operations and production processes.

There are three elements of this part of our strategy:

First, expanding our renewables business with the goal of advancing two new wind farms this year, one in Alberta, and another one out of our US wind development portfolio.

Secondly, expanding our on-site Generation business with the goal of securing new cogeneration or hybrid power opportunities for the 2022–2023 time frame in Canada and Australia.

And three, providing power supply and environmental attribute solutions to industrial and commercial customers in each of our jurisdictions.

We will also continue to maintain a robust COVID-19 response while maintaining a strong financial position.

I'd now like to provide you with an overview of what we're currently pursuing in terms of growth opportunities. We have 700 megawatts of advanced-stage wind projects in our growth pipeline, which have the potential to be commercial in the 2022 to 2024 time frame. We also have over 2 gigawatts of earlier-stage opportunities in various geographies and with various technologies. So our development team is being kept busy in Canada, Australia, and the United States.

We're working with various customers on how to leverage our expertise, existing generation, and development projects to create customized power solutions to meet their sustainability objectives in a cost-effective manner.

On this slide, you can see that we're at the forefront of carbon transition in Canada, and that the execution of our strategy is having a real positive impact on our communities and the environment.

As was noted earlier by Dawn, in 2020, we reduced an additional 4.2 million tonnes of annual GHG emissions, a 20 percent reduction compared to 2019. Since 2005, we have reduced our GHG emissions by more than 24 million tonnes annually, or more than 60 percent, well ahead of Paris Agreement levels. And we expect there will be a further step change in reduction in emissions with the closure of our Centralia 2 facility at the end of 2025.

I'm also pleased to note today that we've adopted the goal of reaching carbon neutrality by 2050. We are well into our emissions reduction journey as a company, and we feel our clean electricity strategy is well aligned with a longer-term carbon-neutral goal. Carbon neutrality means that we will offset carbon dioxide released into the atmosphere from our activities, fully, from avoided emissions or the removal of emissions from the atmosphere from natural or technological sinks.

Setting this goal provides a meaningful internal signal to our team as we shape our growth strategy, but also provides for flexibility as we develop our business over the coming decades. Adopting this goal also sends a signal to our external stakeholders, including government, regarding our intention to contribute to broader national and global efforts to meet national emissions-reduction goals for 2050. And we believe that we have many pathways to get there, given our ongoing emissions reductions, technological advancements, and the expected life cycles of our existing greenhouse gas-emitting facilities.

To close off our presentation, I want to highlight what I think makes TransAlta a highly attractive investment and a great value opportunity.

First, our cash flows are resilient and supported by a high-quality and highly diversified portfolio. We are diversified in both fuel types and geographies. Our business is driven by our highly contracted Wind portfolio, our unique, reliable, and perpetual Hydro portfolio, and our highly efficient and competitive thermal and soon-to-be largely gas portfolio, complemented by our world-class energy marketing capabilities.

Second, as Dawn pointed out, we're a clean power leader with an E-ESG focus with tangible greenhouse gas emissions reductions, a focus on removing systemic barriers through our equity, diversity, and inclusion commitments, and a commitment to good governance.

Third, we have a strong and diversified set of growth opportunities, including a pipeline of advanced-stage projects with a talented development team focused on realizing its value.

And finally, our company has a strong financial foundation. Our balance sheet is in great shape and has ample liquidity to pursue growth. We've maintained capital discipline in our growth investments, and we have a track record of generating reliable and strong free cash flow. We believe the Company is at an exciting time in its development, and that we're well positioned for the future as a leader in low-cost, reliable, and clean electricity production.

We're planning to have an investor day on June 7th, where we'll introduce our new management team and our plans for 2021 and beyond. We look forward to seeing you then.

And with that, I'll turn the call back to Chiara.

Chiara Valentini

Thank you, John, Todd, and Dawn.

Michelle, would you please open the call up for questions from the analysts and from media?

Q&A

Operator

Certainly. At this time, if anybody would like to ask a question, please press *, 1 on your telephone keypad. Again, that would be *, 1 on your telephone keypad.

Your first question comes from Rob Hope from Scotiabank. Your line is open.

Rob Hope — Scotiabank

Hello, everyone. And to start off, I guess, congratulations and all the best in the next phases for Dawn and Brett.

Dawn Farrell

Thanks.

Rob Hope

And first question. If we can go back to Slide 9 on the Hydro EBITDA generated in 2020 and the puts and takes as we look into 2021, I don't know if you're prepared to give an indicative range, but it seems like we could take that to 11 percent and then adjust up 30 percent—or adjust up based on the increased power prices that we're seeing so far in 2021. And then when we're taking a look at the carbon offsets, is there a chance that they could get certified in 2021? Will you utilize them in another area of the business? Or is that kind of just more of a 2022 issue? And I guess, finally, are there any offsets included in that two 11 percent right there?

John Kousinioris

Yeah. There's a lot of questions in there, Rob. So why don't I start, and if I miss anything, I'm sure Todd'll jump in. So—

Todd Stack

Yep.

John Kousinioris

—look, we're not prepared at this time to give a lot more granularity on how the Hydro will actually perform. I don't think there's just a simple rule of thumb that you can kind of allocate to what it'll be. It depends on volatility in the marketplace in the moment and what we're seeing day over day, week over week in terms of what the performance is and the competitive response is. So it's really intended to sort of be an indicative representation of what people can expect there.

With respect to the offsets, I don't think that the slide that Todd showed you had any value for offsets. I also think it's extremely unlikely that we'll see value for those offsets get pulled into 2021. I think the way the certification works, we're really into a lagging year kind of cycle with respect to those offsets.

And in terms of the value of the offsets, look, we continually look internally in terms of what we need for our own generation, what makes sense in terms of monetizing them in the market in the moment, and we take a longer-term view in terms of where we think our own needs will be versus carbon obligation. So it's really a mixed bag, although for sure we end up using a good chunk of the offsets that we get for our own generation internally.

Rob Hope

All right. Yeah.

Todd Stack

And, Robert, the only thing I would add is that we did include some disclosure in our financials on inventory levels for—

John Kousinioris

Yeah.

Todd Stack

—global energy credits. So I could get Chiara to point to that. It's back in the inventory note in our financial statements. And we did anticipate a rising carbon price, and we were proactive in prior years to acquire and inventory a pretty significant renewable energy credit inventory portfolio.

John Kousinioris

At the time when the—

Todd Stack

Yeah.

John Kousinioris

—when the cost—

Todd Stack

So—

John Kousinioris

—that was lower than it is.

Todd Stack

Correct. And so to John's point, we don't see a need to go out and source additional reqs from outside of our Hydro assets and outside of our Wind assets.

Rob Hope

Okay. A follow-up question. Taking a look at the sustaining capital in 2021, it looks a little bit higher than we in the market were expecting, but acknowledging that you do have a lot of conversions there. If we try to normalize it, what does 2022 look like? Could we see planned major maintenance significantly down versus where we are in 2021?

John Kousinioris

Yeah. So I would expect that for 2022, on a normalized basis, Rob, that you'd see a pretty significant reduction in sustaining capital expenditures. And I'll just give you a sense of that. I think when you look at sort of the numbers that we're outlining for 2021, rough range of numbers, I think of like $90 million to $100 million of that being largely on coal to gas and a lot of that is over the conversions that we're doing now.

And that will fall to a fraction of that on a normalized basis as we go forward, and then there'll be various puts and takes among our gas fleet, our Hydro facilities, and wind. Wind is highly predictable, relatively modest capital expenditures. With Hydro, we have maintenance work. It comes in periods and we have some dam safety work that we have but, overall, a significant reduction year over year.

Rob Hope

Thank you.

Operator

And your next question will come from Ben Pham from BMO. Your line is open.

Ben Pham — BMO

Hi. Thanks. Good morning. I wanted to follow up on the Hydro assets, the two Wind. I'm more curious as you look at the potential carbon price increase and the pricing trends in Alberta power in more the middle part of this decade, does that change any sort of math economics when you looked at

Brookfield investments in terms of the ability to buy back the converts or change ownership somewhat? Has anything changed there that's notable to share?

John Kousinioris

Yeah. The way that that transaction works in terms of the potential sort of conversion of Brookfield's kind of financing of the Company into an interest in the Company has a bit of a longer-term sort of range in the way that the calculation is done, Ben. So it might have an impact if we see continued higher pricing and credits. And that would have the effect, essentially, of reducing the amount that Brookfield would be converting to in terms of its interest into the hydro fleet from a directional perspective. But we'll see. It's still a ways away.

Ben Pham

Do you think, though—because I think you've maybe locked down the buyback option based on what you're seeing. But do you think versus your initial analysis that the post '25 outlook is now a bit more better? That it could accrue more? Are you just giving a carbon tax direction potentially?

John Kousinioris

Yeah. It's hard to say. Look, I would say that directionally if you look at some of the forecasting, there is a general sense that prices over time would increase. Certainly, we're seeing carbon price expected to increase over time. The trick will be in seeing what the impact will be on new generation that comes into the province and the amount of credits that are there as people in the province continue to decarbonize. So at least I can tell you from a working assumption internally, we tend to think of that as being static to slightly positive for us in terms of what's a lower amount of potential interest going over to Brookfield on conversion.

Ben Pham

Okay. It makes a lot of sense, and it's good to see the carbon reduction targets to be applied here and the thing about the 2050 and also 2030 in Alberta with this big capital stock turnover. I mean, do you envision TA the next couple of decades to be mostly renewables against that reduction target? Or do you think 2030 you got to basically build new gas in the province?

John Kousinioris

Yeah. Look, we continue to think as a company that gas will play a pretty critical role in sort of backstopping generation in the province. I mean, we saw—and I'm not even going to get into what happened in Texas, but I'm just going to look at what just happened in Alberta, our experience over the course of the last three or four weeks really a month ago.

When we get a cold snap in this province, the wind isn't blowing. Certainly, we don't have much in the way of solar generation here, and the province is highly dependent on there being natural gas generation. It'll be interesting to see how the technology evolves in the coming decade in the sense of CCS and what people can do to sort of reduce those CO2 emissions.

But we do see, at least in our company, a role right now for natural gas generation for the foreseeable future, and we see it not just in Canada or, really, in Alberta, but in the United States and Australia.

In terms of our company, we continue to look at natural gas opportunities, but we look at them in the context of our overall E-ESG goals, our commitments on carbon reduction, and think that there'll be a glide path over time to there being a reduction, the wild card being what we can do with technology to reduce emissions or capture those emissions.

Ben Pham

Okay. That’s great. And, Dawn, also wanted to wish you the best in retirement. It’s been great getting to know you. And, John, also looking forward to getting to know you more too in the future. Congratulations. Thank you.

John Kousinioris

Thank you very much. Really appreciate that.

Operator

And your next question will come from Mark Jarvi from CIBC Capital Markets. Your line is open.

Mark Jarvi — CIBC Capital Markets

Thanks. Good morning, everyone. I wonder if we could go back to the Hydro assets in Alberta? And I think in prior years, there was some commentary around potentially seeing an uplift in ancillary revenues and maybe some scarcity pricing. As you’ve seen the market evolve in the first couple months—I appreciate it’s still early days—but just any thoughts in terms of ancillary and how you’re seeing those prices come in, relative to the market prices, and that thesis around maybe some upward pressure on ancillary revenues?

John Kousinioris

Yeah. I mean so far, I think what we’re seeing on the ancillary services side is pretty much, Mark, what we were expecting. We are seeing the ancillary prices kind of track, broadly speaking, the prices that we’ve seen in the market. It’s been an interesting sort of year in the province. There’s been a couple of instances where the intertie, for example, has caused some issues in the province, I think on three separate occasions now.

So it’s answering just the importance of ancillary services and the importance of having that backup and making sure that the frequency is managed properly in the province. So I think it’s as expected.

I think, Todd, the relationships that we see are broadly what they have been in the past, and I think the market is healthy. I think we're seeing probably a bit more in the way of AS sales than we probably saw in the back half of last year in terms of volume as well.

Mark Jarvi

Right.

Todd Stack

Yeah. And, Mark, just as a reminder, we've kind of indicated the historical relationship is that ancillary revenue price is roughly half what the energy price realized is—

John Kousinioris

Half to 60 percent, yeah.

Todd Stack

Yeah. But similarly, the volumes that we can offer into the market out of the Hydro business is effectively double the volume that we have on the energy sales, so—

Mark Jarvi

Right.

Todd Stack

—those are kind of the relationships that we've seen still.

Mark Jarvi

Right. If you look this year on the full year number of 2020, it was over 45 percent of the market price, which was a bit lower. And that was just because there wasn't much volatility. Whereas you think you'll see that snap–or not a snapback but an upward lift back towards more 50 percent of market pricing?

Todd Stack

That's not a bad–at least that's kind of the rule of thumb I have, Mark–

John Kousinioris

Yeah.

Todd Stack

–so that's not a bad way to look at it. So last year, I agree with you. It was sort of a pricing issue. And remember, we had not just low pricing, some pretty mild weather, right, as we ended up the year in the fourth quarter here. It was a pretty sort of benign kind of start to the winter, and volumes were down a little bit year over year on the AS side. I think we've seen more what I would call normal kind of activity, at least in the start of this year.

Mark Jarvi

Got it. And in the Energy Marketing, sort of the guide that you gave for 2021, implies a pretty healthy number, especially relative to the past couple years. I guess, is there anything in that 2021 number—like has there been anything in the first couple months of the year, in terms of volatility in other markets, that allowed you to guide to a higher number? And I guess just the question then would be, is that a number you think you can see follow through in 10 years beyond 2021?

Todd Stack

Yeah. Yeah. Mark, what I'd say is that the strong performance over the last couple of years and the ways in which they make their margins—meaning largely real-time opportunistic, taking advantage of markets, flowing power to customers, dealing with customers to supply in eastern markets as well as western markets in the US—that was part of the foundation that gave us confidence to start raising the expected range for them. It didn't feel right putting in the lower range, knowing that we're coming off of two very, very strong years here.

We continue to see market volatility. That is what the marketing guys need to help broker those deals and move the power around and realize the profits. So I think it's just been a healthy energy market in the East and West markets in the US that gave us confidence to raise that outlook.

John Kousinioris

Yeah. And some of that is just sort of—Mark, if I could just chime in–some of that is just sort of backed by some of the long-term trends that we're seeing. For example, you know, in California in the desert southwest and even in pockets of the eastern United States where we have seen, with some of the weather events, just increasing volatility as the generation mix is changing over time. So we're factoring that into our thinking.

Mark Jarvi

Got it. And then in the TransAlta Renewables press release, there was a comment about some of the growth at TransAlta, and you flagged that in your presentation this morning. But there's also a mention of M&A opportunities. Can you provide a bit more colour in terms of what that could mean? Whether or not that'd be directly into TransAlta Renewables? Or sort of mediated by TransAlta itself?

Todd Stack

Yeah. Yeah. I would say the development group still sits inside TransAlta Corporation. The history has been, even on M&A activities, is to acquire it through TransAlta Corp and then make sure that it's fully re-risked and then drop it into TransAlta Renewables. But there's no reason why, in certain transactions, we can't directly acquire into TransAlta Renewables. But effectively, it is the TransAlta development team that's looking at opportunities and then deciding where it makes sense, given the stage it's at, and then given where Renewables and Corp are at.

Mark Jarvi

And any sort of colour around what targets? Are these sort of renewables in North America? Is there stuff in Australia that you're seeing? Any other kind of background around what you'd consider for an M&A opportunity right now?

John Kousinioris

I mean, look. We have an internal process in the Company that we go through, and we look at opportunities. And I can tell you, Mark, that we're looking at opportunities, like in all three jurisdictions that we're in, in Canada, the US, and Australia, in terms of potential opportunities, frankly, for both companies, not just for RNW, and. But I think it's probably fair to say, Todd, it's been more US and Australia that we've been looking at in our investment committee. It's a natural part of what we do year in, year out.

Todd Stack

Yeah. I would say the opportunity set in the US is larger–

Mark Jarvi

Yeah.

Todd Stack

–but it is surprising how even opportunities in Canada tend to show up once in a while.

Mark Jarvi

Okay. That's helpful.

And happy retirement, Dawn, and congrats, John, on the appointment.

Dawn Farrell

Yeah.

John Kousinioris

Thank you.

Dawn Farrell

Thank you.

Operator

And your next question will come from Patrick Kenny from National Bank. Your line is open.

Patrick Kenny — National Bank

Yeah. Good morning, everybody. Just on repowering Sun 5 and, I guess, dovetailing in with your net zero pledge. Can you just remind us if you're planning to implement the flexibility to burn hydrogen as well? And I guess, if not, what technical challenges you might need to overcome to convert to hydrogen over time?

John Kousinioris

Yeah. Patrick, so right now, the work that we're doing on the repowering just contemplates that we'll just be burning natural gas, frankly, at the facility. I know I've spoken with our engineers there and the team that is heading it out. We do the potential—there's more work to be done–to burn hydrogen with it. It can be as high as—I think it's around 30 percent of the total fuel.

But there's more work to do. And candidly, the same team has even considered the possibility of burning hydrogen even in our Coal to Gas units, to be honest, at a lower percentage threshold. But we have more work to do. And frankly, we don't have the supply right now, anyway, to be able to do it, so there's more to come on that.

Dawn Farrell

Yeah. And, Patrick, just a couple things to think about as people are talking about that. Remember, hydrogen gets made with electricity, either surplus renewables electricity that still has capital that has to be invested in, in order to make the surplus, number one; and number two, where it's made with nuclear or it's made by taking the carbon molecules out of natural gas. All three of those have hydrogen prices in that $10 to $13 range.

And hydrogen itself and its production, especially the blue hydrogen, creates greenhouse gases, so you have to actually take–you have to use CCS to get rid of the greenhouse gases there. So you have to always compare the burning of hydrogen against carbon capture and storage—

John Kousinioris

Chemicals.

Dawn Farrell

—or other carbon-neutral opportunities.

So as TransAlta goes forward on its carbon-neutral goal and potentially builds a lot of renewables, that's probably a better place for it to invest its money. Now, it'll all depend on carbon pricing and other things like that, but as we do work—as John takes over the work from me, working with provincial and federal government on good policy, the number-one thing for Alberta to do is to put its money in the lowest cost kind of options for—

John Kousinioris

For the best outcomes, yeah.

Dawn Farrell

—for the best outcomes. And hydrogen may be part of that, but something where you use electricity to make your fuel to make electricity seems not potentially the highest value. And I'm pretty sure John will have some sort of technology session when he has his investor day—

John Kousinioris

Yep.

Dawn Farrell

—in June.

Patrick Kenny

Okay. Great. Thanks for that. That's very helpful.

And then just on the Marketing gross margin guidance there, 90 to 110, could you just confirm for us that, net of OM&A, that comes out to be, call it 60 to 80 to the EBITDA guidance range?

And then looking further out, I was just curious about the opportunities to maybe participate in the development of the market for carbon more on a global basis, I guess as pricing policies become more clear, so both in regions where you operate but also regions where you might not have a physical presence today, although there might be an opportunity to play a role as a market maker?

Todd Stack

So first, on the Energy Marketing guidance, I think your math is very much correct. It's in that $25 million to $30 million of OM&A costs that come off of the gross margin amount. So we don't see any real difference from what you would see in the results for 2020 on the OM&A side. So 60 to 80 is about the right number.

John Kousinioris

And maybe just on the carbon side of the equation, Patrick, all I can say is that we're very much focused on kind of carbon policy and kind of managing our—I'll call it environmental attributes—primarily just in the jurisdictions in which we're operating. There's a lot of themes issues in terms of sort of global carbon pricing. It'll be interesting to see where sort of government dialogue moves that over the course of the coming years, as at least a number of the trading blocks try to maybe get alignment.

But our focus tends to be much more focused on the regions in which we have a big portfolio and making sure that we look at it holistically in terms of the economics of our generation and the environmental attributes that our fleet provides as well.

Patrick Kenny

Got it. Thanks, John. And last one, if I could. Just with the $1.2 billion senior debt target now being met, perhaps just an update on what the target debt-to-EBITDA ratio looks like over time on a consolidated basis?

And, John, curious to get your thoughts on just developing a path back towards investment-grade credit rating, just in order to support the robust pipeline of growth opportunities that you have.

John Kousinioris

Yep.

Todd Stack

Yep. Yeah. Maybe I'll start, and then John can add in. So we've kind of signaled that on a consolidated basis, we're looking at a long-term metric of, call it 3, 3.5 on debt to EBITDA, and that's the one metric that I focus on probably more than others.

I think we are currently just around the 4 mark on that particular metric. And really, what we see over the next couple of years is that as we finish up the Sun 5 project, our metric will probably in around that range for the next two years, until the Sun 5 project is completed and brought online. And then we'll see a solid improvement after that.

John Kousinioris

Yeah. And, Patrick, happy to just kind of give some perspectives on our credit rating. I'd say that we're pretty comfortable with where we are from a credit rating perspective right now. I don't think that our treasury team—and Todd can chime in here—sees any sort of challenges or issues in terms of us financing what we need to do, to get things done from a growth perspective.

A lot of times, we tend to think of project financing in terms of our growth, and that's really more reflective of the quality of the offtaker and the cash flows that we have there. We are spending time, though, as a focus, considering what other ways could we finance things? Are there other alternative pools of capital that we could source to kind of accelerate our growth? And that's certainly a focus for the team in 2021 and beyond.

Todd, I don't know if you want to add anything to that? But I think that's really where we are.

Todd Stack

Thanks, John.

Patrick Kenny

Okay. Great. Thank you very much.

John Kousinioris

Thanks.

Operator

And your next question will come from John Mould from TD Securities. Your line is open.

John Mould — TD Securities

Good morning, everybody. Maybe just starting with US growth in the context of what we saw in Texas. Any lessons there in terms of how you're going to think about contracting assets in the US development portfolio? How you might consider M&A transactions? Or an appetite to go farther on winterization on US assets than you might have had otherwise?

John Kousinioris

Yeah. John, I'll be honest. We're still trying to—we were talking about it just before the call. I was actually doing a bunch of reading on what was going on or what happened in Texas. And I think it's going to take some time to actually break that down and really understand what happened from a causal perspective.

I think when it comes to the opportunity set that we have there, and when we think of the 500 megawatts that we have in Oklahoma, kind of at an advanced stage, we do look at kind of the standard deviations of the environment in which they're running in, to make sure that when we look at pricing out the technology that we'll be using, it's appropriate and fit for purpose.

But overall, from a trend perspective, what we really are focused on is what the Biden administration is looking to do from a renewables perspective. And that includes putting pressure, I think, on large economic players to disclose where they're at from an environmental footprint perspective. And I think all that bodes well directionally for there being increased appetite, frankly, for people to try to decarbonize and come up with just better ways of reducing their carbon footprint.

So I think it's positive. And look, we're focused on contracting those assets. Those wouldn't be merchant assets, from our perspective, so they'd be backstopped by PPAs. So that sort of exposure to some of those kinds of issues that you would have seen more in the wholesale market, if I can put it that, we'd be insulated from.

John Mould

Okay. Great. And then maybe just moving to your Alberta wind developments. You talked about how the offtake environment, the opportunity for offtakes is evolving. Are you getting any added comfort in potentially proceeding with some of those projects on a merchant basis, especially in the context of a rising carbon price? Or would you need to secure a buyer for at least part of their output before deciding to move ahead?

John Kousinioris

Yeah. I can tell you that we're very much focused on contracting those assets. We're not, as a company, inclined to be building merchant wind generation in the province. And really, all of the discussions that we have with a number of the companies here, which are very much on a path to being focused on their carbon footprint, I think is creating an opportunity set for us. So merchant's not really where we're at right now on that.

John Mould

Okay. Great. And then maybe just one last one on Sun 6. Just in terms of heat rate, ramping, is that all going as expected? Have there been any surprises one way or another since the conversion that was completed, that might be relevant to K2 and K3?

John Kousinioris

Yeah. So no surprises in terms of the output of the plant post conversion. In fact, I think that when you look at the performance testing that we did, we were actually a bit ahead from a heat rate and just from an overall performance perspective. So not a ton of lessons learned on that as we go into K2 and K3, just given the different nature of the setups of the two of them. But we feel pretty good about it. We got what we expected to get, maybe a little bit better.

John Mould

Okay. Great. I'll leave it there.

Best wishes, Dawn and Brett, for your last month and two months at the Company and in your retirements from TransAlta. And congrats, John.

John Kousinioris

Thanks very much.

Dawn Farrell

Thanks.

Operator

Again, if anybody would like to ask a question, please press *, 1 on your telephone keypad.

Your next question comes from Maurice Choy, RBC Capital Markets. Your line is open.

Maurice Choy — RBC Capital Markets

Thank you and good morning. My first question is on carbon taxes. With the prospect of higher carbon prices in Alberta, especially if, indeed, the $170 per tonne is introduced by 2030, do you think that more may need to be done in relation to the units where you have a boiler conversion scheduled?

John Kousinioris

Yeah. Look, it's a great question, Maurice. So I can tell you that when we were looking at—so it's a multipronged answer, so if you'll just be patient for a second, I'll try to give you just some thoughts.

So when we looked at all of the economics of doing the Coal to Gas Conversions, we always tested the economics of those facilities with various expectations of a rising carbon price as we went through. We never sort of contemplated there would be a static price that we would have from a carbon perspective. So I think we're pretty comfortable with at least the foreseeable future as we go in. And so that would be one.

The second thing that I would say is that we're fortunate to have kind of the diversity of fleet that we have in Alberta. So when you think of our wind generation here in the province and our hydro generation in the province, it creates a healthy bank of credits. Plus, as Todd mentioned earlier on the call, we banked a healthy group of credits that we can actually use to defray some of those costs that are associated with a rising carbon price going forward.

The third thing I'd say is, look, we're very much focused in the discussions and the dialogue that we have with government on just enforcing the notion that the capital that we put in, all of the commitments that we made, were under a particular regime with an expectation that the units would run for a transitional period—and I'm talking about our Coal to Gas units—from now into the mid- to late 2030s. And that's something that we just think was a bargain, effectively, that was struck for the capital that we put in. We continue to focus on that as being a key part of where we're at.

And, look, Dawn talked a little bit about technology and what you can potentially do, whether it's CCS or something else that we can do from a carbon emissions perspective. We'll continue to look at that. It is pricey right now, but I don't want to prejudge or preclude us doing something in the future, including potentially with the assistance of government, in the event that things become tighter in terms of the exposure there.

I don't know, Dawn, Todd, if you have anything else on that—

Dawn Farrell

Yeah. I would just add one thing. One of the things we looked at really closely when we thought about a portfolio which included the Coal to Gas simple cycle and the buying cycle was expected volatility. And as more people invest in more green, the green is intermittent, and it creates more low-price hours.

And of course, in order to run a grid at minus 30, we hit a peak this year, which probably nobody expected because the universities just went back online, office buildings are half empty. But we still hit a peak over last year. You need the thermal to turn on.

And what's really unique about our portfolio position is our Coal to Gas investments are able to run at full load. And they provide the peaking capability and sort of some of the pricing for that. If you look in the fine details of the regulations on gas in Alberta and Canada, new peakers cannot dispatch to 100 percent. I think they're limited to 30 percent.

John Kousinioris

They are limited. Yeah.

Dawn Farrell

So these are really competitive assets for what will likely be a much more volatile market going forward.

Maurice Choy

Right. And I guess just as a follow-up to that. If indeed you have a more volatile market, if indeed carbon prices are escalating to $100, if not beyond $100, how do you—and I look at Slide 14 and your pipeline, the Alberta opportunities and plus some new technologies—have not changed. Do you see a prospect that you might introduce more new technologies in the space? As well as perhaps an update to project Pioneer onto here?

John Kousinioris

Yeah. What I would say is, look. Let me try to answer the question in two ways. So when we look at the opportunity set in Alberta right now, one of the things that we would consider is K1 and a repowering of K1 for the mid to the latter part of the decade, depending on the needs that the province has.

I mean, one of the interesting things is there's going to be some pretty considerable turnover in just the amount of generation that exists in the province, like pretty dramatically. So that is something that we've got, that we continue to look at, and we'll look at that in the context of the technology of the day. So that's one thing.

Secondly, a lot of the growth opportunity that we see in the province tends to be around cogen, sort of contracted, on-site, generation cogen. So that would be kind of the other limb—sort of if you had a two-armed approach to looking at it, that would be the other place that we would be looking at doing that.

And then the final thing that I think is important for us is our Brazeau Pumped Storage. As carbon prices increase, that just makes a lot more sense, and there's more renewables that come in. It is the perfect battery for what the province needs to go forward.

And maybe just one more thing. It's interesting; everybody talks about a $170 carbon price. And I can—just at least my own thinking around it—there are, and we expect will be a lot of credits in the marketplace with the onset of renewables. The pricing of that will likely be at prices likely below what you're seeing the price of carbon. In fact, I think that's been experienced in pretty much every jurisdiction if you look in the world.

And secondly, just some of the math that we do would show that if you start getting to a carbon price that is much higher than about $100 a tonne—and this number probably will decrease over time—technology kicks in and actually becomes economic far before you get to $170 sort of carbon price, in terms of coming in and dealing with emissions from that perspective.

So for me, the game is not at the $170 level. It's kind of what you do in the path, kind of to the midpoint, effectively, if you see what I'm saying there.

Maurice Choy

Yeah. That totally makes sense. And that's it for me.

And, Dawn, obviously, I wish you the very best in your retirement. And, John and Todd, congrats on your new appointment.

John Kousinioris

Thank you very much.

Dawn Farrell

Thanks.

Todd Stack

Thank you.

Operator

And your next question will come from Naji Baydoun from iA Capital Markets. Your line is open.

Naji Baydoun — iA Capital Markets

Hi. Good morning. I guess, just following up on that last comment, can you just maybe talk about what initiatives you see coming down the pipeline for this year? Is, for example, Garden Plain the only sort of advanced project that you would declare FID on? And maybe just a bit more details on when we can expect a final decision on K1?

John Kousinioris

Yeah. So in terms of the wind farms, we've got two in Alberta. And candidly, we're also looking at expansions of existing wind farms. But we've got Garden Plain and Tempest, which are the two most advanced-stage new wind farms that we have. So we are definitely focused on trying to progress at least one of those this year. And then we've got three wind farms in Oklahoma, which we're also really focused on trying to get one of those landed this year.

When we think of K1, honestly, my view on this time frame for making a decision on that is more 2022. I think I'd like to get the Coal to Gas Conversions done. I'd like to get us well on the way of having our Sundance 5 repowering done. And then we'll see how the market develops and what the needs are, and then we'll make a decision in the fullness of time. But it's not, at least from our perspective—I think, Todd—it's not a 2021 decision.

Todd Stack

No. I agree.

Naji Baydoun

Okay. Yeah. That makes a lot of sense for K1.

I guess just another follow-up on an earlier comment. You mentioned that looking at alternative pools of capital to maybe accelerate growth and, I guess, the obvious one is the RNW shares have performed very well last year. Can you just give us your latest thoughts on maybe potentially reducing TransAlta's stake in RNW? Selling down that stake and reinvesting in other opportunities, be it organic or M&A-based?

John Kousinioris

Yeah. Our view right now—so we're very, very comfortable with the ownership level that we have with TransAlta Renewables. It's, at least from my own perspective, a pillar of the Company. I tend to think of three pillars of the Company. I think of our hydro fleet, I tend to think of our gas fleet as being one, and the third one is TransAlta Renewables. So no discussion or thoughts on reducing our position in RNW at this point.

Naji Baydoun

Okay. That's great. Thank you and congrats, Dawn for the retirement, and to both John and Todd on your respective appointments.

John Kousinioris

Thank you.

Todd Stack

Thank you.

Operator

Your next question comes from Chris Varcoe from Calgary Herald. Your line is open.

Chris Varcoe — Calgary Herald

Hi. This is a question for Dawn, and I'm sorry if you've already answered this. But I just wanted to talk to you about the goal for net zero at 2050. Is this an aspirational goal for the Company? Or from where you're sitting right now, do you actually have a pathway to net zero? And if so, how?

John Kousinioris

Chris, it's John. I'm happy to at least begin answering that, and then maybe Dawn can chime in.

So, look. Like all of these kinds of goals, it is an aspirational goal for the Company in terms of getting to carbon neutrality by 2050. But what I would say about that is I look at where we have gone from an emissions profile perspective. We were over 40 megatonnes of CO_2 emissions not that long ago, frankly. And we're now into the low teens and very much can see a pathway, by kind of 2026, where we would be sub-10. So it's a pretty dramatic reduction from the Company.

We have a real sense of our Coal to Gas units coming to the end of their lives in kind of going to the mid-2030s, the latter part of the 2030s. And we just look at the life expectancy of a bunch of the other gas-generating fleet that we have.

So we do see a pretty clear sort of trajectory in terms of our existing fleet, where we would get very close to a place where we would be approximating carbon neutrality. And when we look at the environmental attributes that come from our wind and our hydro facilities, we're pretty confident that we talk about it as an aspirational goal, but we don't need—how can I put it—out of the box sort of technical solutions that are just a twinkle in someone's eye to be able to get there. I think we see pathways to getting it.

Dawn Farrell

Yeah. I would say, Chris, as you know, I've worked on carbon policy since 1987, so it's been a long journey. And I was really proud of the work that John and the team did, Kerry and the board did in setting that carbon neutrality goal for 2050. Remember net zero is the Canadian goal—

John Kousinioris

Yeah.

Dawn Farrell

—and kind of a global goal.

John Kousinioris

Yeah.

Dawn Farrell

And net zero means all carbon that's being put in the air has to be taken out. You got to either sink it or pull it out of the air.

What John and the team have done is set TransAlta up for carbon neutrality. And what that does it says that we'll use our investment dollars at TransAlta going forward to significantly help others green their portfolios because remember, we serve; we're the enabler to customers. And they need us to supply them with safe, reliable, green, and frankly—and everybody's heard this from me—a low-cost electricity because effectively our kids and your kids and our grandkids they can't afford $1,000 electricity bills. They need to have low-cost electricity.

So by focusing TransAlta's investment dollars on carbon neutrality, we can really make a huge difference to the province here. We can make a huge difference to customers. And then, of course, that contributes overall to the Canadian goal. And you see the Canadian government investing in tree planting. I mean, that's the other side of the net zero, but if we invest in technology and wind, solar, natural gas peaking, the stuff that really makes electricity low cost and reliable, I think it's a really important journey for TransAlta that the team is going to lead here. So I think they've done a great job of thinking this through.

Chris Varcoe

Just to follow up, and this is for either one of you, what do you need to see from both the federal and provincial governments right now in order for companies like yours to be able to reach that and attain those goals?

Dawn Farrell

Well, let me start with that. I think the—if you look at Canada reducing its carbon emissions by about 200 megatonnes over the next 10 years—because we really, truly, as a Canadian economy have not reduced any emissions since 2005—

John Kousinioris

Yeah. Since about 2005.

Dawn Farrell

—so all of TransAlta's heavy lifting has been taken up by other emissions. So if you look at that, just simply multiply that by 1,000, it's about $200 billion to $220 billion. That's a lot of cash. It's about $20 billion a year that needs to be invested and it has to be invested in true carbon-reducing technologies.

I've been working with the provincial government here who's been really looking heavily at what the costs look like for carbon capture and storage. And I'm very, very hopeful that there'll be some sort of agreement here, even as early as the current federal budget, that will start to put some money into Alberta so that we can start to make those carbon capture and storage investments in our economy and really green—both the oil stands and continue to green the power sector here in Alberta.

Now the power sector in Alberta has done all the heavy lifting but, again, it's always a journey. So I would say, Chris, the thing to really watch for, especially for Alberta, is can we attract some funding federally into the province for carbon capture and storage, carbon capture utilization and storage? For advancing hydrogen we need three hubs here in Alberta, transportation hubs, to really promote the use of hydrogen and the movement of hydrogen and the movement of carbon as well.

So there's quite a transformation that can take place in Alberta over the next 10 years and, frankly, we're 9 years now, not 10. Actually, we're in—

John Kousinioris

2021.

Dawn Farrell

—2021. So glad to give you more on that at a future time. But I think that's an important piece of work that John will be doing as he takes over the reins here.

Chris Varcoe

Thank you.

Operator

And your next question will come from Matt Lithgow from Carbon Pulse. Your line is open.

Matt Lithgow — Carbon Pulse

Good morning. Thank you for doing this. I had a bit more of a, I guess, granular question regarding your offset usage strategy for the 2020 TIER compliance here. Now I guess with the carbon price under TIER being $40 for this year, $50 next year, potentially $15 increments up from there, I was wondering if that trajectory has shifted your approach to turning in credits for the upcoming 2020 deadline in June? Taking note of, for instance, Capital Power and their earnings in February saying that they're going to just pay the carbon price at $30 for their Genesee 3 unit in order to bank credits into future years.

I'm just wondering if maybe you could speak to whether or not you're doing anything similar to that as you try to kind of bank for later years? Or if your strategy hasn't changed much in that regard?

John Kousinioris

Yeah, Matt. It's interesting, I've got a smile on my face only because the question that you're asking really is what are the key topics that we're focusing on for the last two-hour meeting that we have of the day? So your timing is perfect.

Look, we're right now feeling like we see long credits in terms of what we need. We're very much focused on reducing what the dollars are that we need to pay from a carbon price perspective in-year. So that's something that—it's something that ends up driving kind of our approach to doing things.

And we have in our team—we've got a team that actually trades these credits and is focused on optimizing them—they've got their own views on what the pricing are going to be kind of in the near term, the medium term, and the longer term. And a bunch of that, to be honest, is pretty sensitive sort of information from a competitive perspective. So I can't really give you sort of the level of granularity that you need. It's a bit of a science and an art that we have internally in the Company.

And for us, it's really taking a bunch of judgments in terms of what we think our needs are going to be, where we think carbon pricing is, and where we think the value of the credits will be to kind of do that algorithm to figure out what makes sense for the Company. So it's something we look at, honestly, monthly in terms of determining it. So it's not an easy thing to answer.

Matt Lithgow

Yeah. No worries at all. Just, I guess, a second follow-up, but still related to carbon pricing. You mentioned in the report released today the federal government launch of their output-based pricing system review for 2022. And in that review, Ottawa says that they're going to look into an annual tightening of the output-based standards starting in 2023. So currently, TIER has a good-as-best-gas electricity benchmark at $370; it's fixed at that rate. But in order to obtain equivalency with the federal regime, perhaps Alberta will have to follow similar to what the federal government does in future years.

So I guess maybe my question here is that, should Ottawa decide to institute a declining electricity benchmark, I guess, how would that affect your future procurement or generation plans for gas or renewables? Or your utilization strategy for offsets or EPCs under TIER?

John Kousinioris

Yeah. I mean, look, I think there's a lot of—look, I'll make a couple of comments on it. There's a lot of discussion, I think, from our perspective that needs to go on in terms of the performance standard. We were actively involved with government at a time when we made the decisions to invest the way we're investing in all the coal to gas fleet that we are and the conversions to really accelerate carbon reductions in exchange for kind of a regime that made economic sense for us to actually do it. So we'll be actively participating in the review of the performance standard and making our thoughts known in terms of what we think makes sense going forward. So that's one.

Two, with the coal to gas conversions that we're doing, the carbon price that we're exposed to is significantly reduced in terms of the output of CO_2 that we have because we're effectively halving the emissions that we have. And although they're above the performance standard of 0.37, they're not—one, they're significantly below. And when those plants are running it inappropriately, they're not on top of the 0.37, but they're not a lot over the 0.37 in terms of where they actually are.

And for sure, as we look forward in terms of other investments that we need to make, we'll be looking at the impact of carbon pricing on those kinds of investments. I mean, in most of the kind of transactions that we're focused on, we're very much focused on contracted generation.

Typically, under those regimes, carbon pricing is a flow-through to the customer. And our concern is really around that just competitiveness of industry and making sure that power is low cost and fit for purpose as we go forward. So it's a multifaceted sort of answer to your question, but it's an honest one in terms of kind of laying it out.

Dawn Farrell

Yeah. And I think I'll just close with this. Remember the federal rules are much—the standard or the intensity standard is much higher than what Alberta—

John Kousinioris

Correct.

Dawn Farrell

—put in place. And so Alberta's already way more stringent.

John Kousinioris

Than the federal government.

Dawn Farrell

So I think there'll be quite a discussion because the feds set a higher level for the other provinces.

Matt Lithgow

Good. Thank you very much.

Operator

At this time, I have no further questions. Thank you. I turn the call back over for closing remarks.

Chiara Valentini

Great. Thank you. Thank you, everyone. That concludes our call for today. If you have any further questions, please don't hesitate to reach out to the Investor Relations team here at TransAlta.

Thank you, and have a great day.

Operator

Thank you, everyone. This will conclude today's conference call. You may now disconnect.