Northland Power Inc. – Investor Day 2023

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PRESENTATION

Mike Crawley
President and Chief Executive Officer

Okay. I want to welcome everybody for coming out today. It is great to see everybody in person again, we're doing a broadcast as well online for those who couldn't make it out. But we've got a really good crowd today. And I just want to acknowledge that I know that Friday is probably not the busiest day Downtown. So, I want to appreciate the fact that a lot of you came down for this. And we picked a pretty cold day to drag you guys all out Downtown.

So, I'm going to give you a bit of an overview corporately what's going on with Northland, what our growth pipeline looks like. Wendy Franks, who's our Chief Strategy Officer, is going to talk about some new initiatives and how we're getting traction on two new growth areas. And then Pauline Alimchandani, our CFO, who you all know well, is going to talk to Northland's financial picture and also take you through our current funding as well. We'll do questions at the end.

So, if you look at Northland's growth trajectory. It really does track according to the energy transition in a lot of ways. So, in just a few years, we've gone from getting a majority of our cash flow from gas-fired generation back in 2015 to today where we get the vast majority of our cash flow from renewables.

Through this period, our market cap has tripled from $3 billion to $9 billion, and our installed capacity over this 8-year period has tripled as well to 3 gigawatts. And as forecast by 2030 based on our growth pipeline to quadruple to 12 gigawatts. Now by that point, all of our cash flow will be from just about from renewables.

To sources, we've expanded our operations from Canada in 2015. We had all of our facilities in Canada back in 2015, just 8 years ago to today, where we operate across 6 countries. Total shareholder returns, total annualized shareholder returns have been 13% since our IPO back in the late 1990s including reinvested dividends. And a key growth driver for any company in the renewable energy sector today, talent, if you look at Northland, we went from 330 people back in 2015 to today where we have almost 1,400 energy sector professionals.

So, one of the big drivers of this growth has been positioning ourselves in the right markets. We are in some of the most attractive markets for offshore wind, both mature markets like Germany, but also emerging offshore wind markets like Poland. With onshore renewals, we have set up development teams in countries with some of the most ambitious renewable energy targets and best commercial regimes, best places to do business in.

And we look forward to carving out position in energy storage. And we'll talk a bit more about that later. Wendy is going to drill down on that. And we're in the ground, on the ground in two really interesting markets for energy storage, New York State and Ontario.

And finally, as we look ahead to where the future growth is going to come from in the renewable energy sector, we see a very interesting thesis forming in Atlantic Canada around green hydrogen export. The other key element of Northland's DNA has always been being at the forefront of emerging technologies. We were an early mover in the natural gas boom in the 1990s, early 2000s which in its day was all about displacing coal-fired and oil-fired generation.

We developed and built wind and solar projects at a utility scale in Ontario and Quebec, just as that sector was getting launched. And Northland was the first North American IPP to move in offshore wind in Europe, carving out a leading position in what is a fast-growing sector today.

And similarly, we are moving forward with our first utility scale battery storage project in Ontario, and we have secured a large floating offshore wind site leased last year in Scotland. And finally, we are starting, as I said, to explore the feasibility of green hydrogen, both export and co-located projects.

Where you can be in the right markets and focus on the right new technologies, but if you don't have a project, all you have is an idea. So, a key success factor for Northland has been originating and securing the right projects. So, we secured among the first wind projects in Quebec after Nordsee. Gemini was the largest -- second largest offshore wind project ever when we came into its development back in 2013. Hai Long and Baltic power were both early mover projects in Taiwan and Poland, respectively.

And today, we're a leading offshore wind site developer in Korea as that market starts to look more and more interesting. And with growing attention to floating offshore wind, we secured last year, the 1.5 GW site that I referred to in Scotland. Wendy is going to drill down on the Oneida battery storage project, but we think we're positioning ourselves well in battery storage going forward.

It will be the largest battery storage project in Canada and among the largest in North America. The foundation of Northland has always been this dynamic between entrepreneurial drive looking at what's next and trying to be there, making sure that we're going to be there and disciplined investment decisions. So, vision leads you, but disciplined investment decisions are what drives attractive and superior shareholder returns.

So, with protect origination and development, we have a very decentralized structure. We have regional development officers around the world in the key markets, boots on the ground who can source and originate good opportunities for the company. But the investment committee and investment decisions are highly centralized.

The Investment Committee is chaired by Pauline, our CFO. It gets inputs from market analysis teams, government relations teams financial and technical teams across the company, and we use a reference rate methodology that seeks to account for market risk, cash flow quality and other risks.

An important decision to deploy capital is having the right talent to properly execute on projects, so you can make the right decision on where you're going to deploy capital, pick the right projects, but you need the talent to execute. Certainly, in favorable times, but definitely in more challenging times as well.

So, we think a key competitive advantage for Northland is our 340-person offshore wind team. It's a talent set that is very much sought after these days, and we view it, as I said, a really big competitive advantage in the market.

Our onshore renewables team has teams on the ground with local market knowledge and scales to create new onshore wind projects and solar projects and find ways to improve the projects that we already have operating as well. And as you can see, we've got growing storage, hydrogen and commercial offtake origination teams as well to make sure that Northland is positioned for where the market is going.

And finally, we've got a project management office and a project finance team, I think Farid is here who heads it up, which pulled together all of the technical and the financial elements of these projects. Optimizing returns also means optimizing and de-risking our facilities. So, we're very proud that our operating teams have kept our operating facilities going at a very high level of availability. A really great example of this is the main bearing replacement campaign at the North Sea One facility in the North Sea.

Our teams identified a degradation on a main component on that project on a couple of turbines through sensors that we have embedded in the turbines 2 years ago. They went out and confirmed physically that there was degradation on those turbines, but worse they came to the conclusion that it probably was the dreaded serial defect that was going to spread across all of the turbines on that wind farm.

So, a plan was formed quickly to derate the turbines that were most affected to make sure that they can continue operating during the high wind months, so to deliver the performance that the company needs. Huawei went out and procured the replacement parts and the vessels needed to go out and do that work.

So over 18 months, every nacelle on that wind project was opened up. The hub was taken off. The blades were taken off the niche was opened up. And that main component that was damaged was removed and replaced with the refabricated main component. And this whole project took about 18 months.

Throughout it, we were able to keep that offshore wind project operating at about 95% availability. And it was done within budget, ahead of schedule, which meant it was done basically by early October of this past year, so it meant that by late October, November when the winds really started picking up, every 1 of those turbines was able to operate at full capacity. I think we're at about 98% capacity through October and November.

So, some other highlights from last year. We secured what is one of the biggest corporate PPAs ever in the world on the Hai Long project. We made huge progress in locking down our supply chain on our three most advanced offshore wind projects. We completed our first solar project in Colombia.

And we got ahead of our capital funding needs, which Pauline will walk you through in more detail later with the successful launch of the ATM or the At-The-Market program as well as with the Hai Long sell-down to Gentari, division of Petronas. High energy prices in Europe also generated some organic funds from our onshore and offshore projects in Europe. And finally, refinancing of some of our operating assets provided additional growth funding, and we also closed on the sale of thermal facilities in Ontario to provide again some additional growth funding as well.

We advanced our growth and development pipeline by forming the 1.6 GW Nordsee cluster in partnership with RWE. We secured 2.3 gigawatts in leases in the Scott Wind lease auction last year, and we gained further offshore wind site exclusivity in Korea.

In Canada, we really brought the focus back to our domestic market by securing a 1.6 GW solar portfolio and development team in Alberta that just happened kind of in the last few weeks. And finally, we are just now advancing on Ontario battery storage project. This past year also saw the launch of our sell-down strategy with our first sell-down at Hai Long to the Petronas subsidiary, Gentari, and we have two other sell-down processes currently in progress.

Matching up our development assets to these big pools of capital that are looking to invest in renewables at the asset level, does a couple of things for us, a few things for us. It enhances our project returns. It accelerates value creation, so it pulls forward some of those cash flows. It helps us manage market risk and market exposure and single asset exposure, enhances corporate liquidity, helps us manage our dev-ex spend as well, and it provides, of course, nondilutive capital funding.

So, looking ahead, the next year, 2 years maybe, in our view, it's all about capturing the tailwinds and there are substantial tailwinds for the sector but also managing some real headwinds that have emerged. So, in terms of in -- you've got the U.S. Inflation Reduction Act with the IRA, providing incredible incentives for the sector in the U.S. and helping spur some investment in the supply chain, which is very important globally.

In Canada, we've got the proposed investment tax credits that were announced last fall that will be confirmed in some form in the budget late March, early April. The EU has put forward three different programs. The Green deal, Repower Europe and the Green Deal industrial plan that just came -- was just announced recently.

And they also have the carbon border adjustment mechanism that actually is driving a lot of renewable energy development outside of Europe to support exporters wanting to get into the European market and secure their position moving forward selling in Europe. Energy secured in Europe and in Northeast Asia is driving a lot of development of renewables and a lot of encouragement through policy for renewables.

Corporate net 0 targets are driving a lot more procurement, a lot more corporate PPAs. Higher power prices, of course, are good for the sector. And finally, you're seeing very specific policies from governments to encourage hydrogen production green hydrogen production and energy storage. But with respect to headwinds, you can't discount what's going on in the market today.

Supply chain constraints put a big priority on us locking down our supply contracts on our big projects, much earlier than we would have done otherwise, certainly have driven up capital costs. Tight labor markets create a bit of a war for talent and drive-up salaries and higher financing costs now need to work their way through eventually to higher offtake prices, but there is a timing issue there.

So there certainly is a dynamic that we're seeing over the last year of increased capital costs, which I'll talk about in a second. But the bottom line is we've got to make sure that we're positioning ourselves to benefit from these tailwinds that we see out there but ensuring that these headwinds are managed and mitigated to the extent possible. So, it's all about smart and disciplined growth.

I like this chart because it gives you a sense of where each 1 of our most advanced offshore wind projects is at. So Nordsee cluster, the first phase of Nordsee cluster is just in procurement right now. So, moving towards turbine selection and other major supply chain selection decisions are coming up.

Baltic Power is beyond that. It's already signed up preferred supplier agreements lock down heads of terms so key terms for those contracts and are now converting those into full contracts. You move over to the right-hand side, Hai Long has just about all of its contracts, all of its capital cost now locked down and is well into the financing process. So, over the last year, offshore wind project costs have gone up as much as 20% to 30%. There are similar cost increases across renewables.

Now building on the prior slide, both Hai Long and Baltic Power are in fairly good shape in terms of locking down project costs, albeit higher levels than initially expected. On Hai Long, the CPPA that we layered on last year on top of the 744 megawatts of the full gigawatt project, so it's layered on top of a utility PPA that we had on that 744-megawatt has helped mitigate some, but certainly not all of those capital cost increases.

Changes has made this fall in the Polish offshore wind CFD. So, the government went out and made some changes in how the CFD or how the PPA for those offshore wind projects was structured, allowed us to redenominate all or the vast majority of that contract into euros from Polish Zloty, and it also moved the indexation date back 1 year earlier to January 2022.

So those two changes, we believe, will allow us to restore the economics on that project back to where they were with our original investment decision to enter that project. if you look at Nordsee Cluster, our procurement process, as I mentioned, is just now getting underway, and we're starting to uncover certainly, as expected, some higher costs on the supply chain. What we're still determining and what's yet to be determined is to what extent that's going to be offset with the corporate PPAs that we originate for that project.

So, our origination team is just now going out into the market. And in the coming months, we'll determine where the energy prices, where the clearing price is out for corporate PPAs. We know it's going to be higher than it was when we originally made the investment decision, given what's going on with energy prices in Europe. We just don't know how much higher until we really get out there.

Our strategy remains generally constant every year, but our course always adjust bit, right? At this juncture for Northland, this means a focus shift from pipeline origination to really drilling down more on project execution, converting the pipeline that we've built up over the last few years into operating projects and cash flow. We've got a renewed focus on Canada as our domestic market starts to really move again on covering some really interesting prospects from coast to coast really.

More development assets sell down are going to be part of our business going forward, more partnerships at the asset level, a growing focus on storage and starting to explore the feasibility of hydrogen projects, our corporate origination team is becoming much more important for Northland. As you see the world moving more towards corporate offtake with fewer sovereign backed PPAs available certainly in more mature markets. And finally, we're starting to tighten our focus, looking at all the markets that we're in and starting to tighten up on the markets that we've discovered to be the most attractive. We're also adjusting how we organize ourselves.

We're shifting from a functional organization design to one that is technology-based with business units. So, we have an offshore wind business unit headed by David Powell, who previously was the Executive Vice President of Development. He's in Europe right now with a part of his team. Our onshore renewables team, which includes solar, onshore wind and storage is headed by Michelle Chislett, who's here today just over there.

She was previously the Head of North American development at Northland. And our efficient natural gas and utilities business unit is headed by Calvin McCormick, who's been with Northland for, I think, about 20 years and was formally previously Vice President of Operations. And we, of course, have a nascent business unit, a hydrogen business unit that is housed under Wendy Franks, who's our Chief Strategy Officer.

So, this structure is all about getting better end-to-end ownership through a project's life cycle from operations, from origination all the way through to operations and making sure that we have the right talent around the table as each business unit makes decisions, whether it's about operations or whether it's about growth investments. And we also have a new Chief Legal Officer and head of sustainability, Yonni Fushman, who's just over there right next to Michelle.

Yonni comes from a large contractor. So, as we move more into project execution, his knowledge and skills are certainly going to be very valuable to the company. So, we've already spoken a fair bit about what the priorities of the offshore wind business unit are, the onshore renewables business unit will be bringing a number of our 2 New York wind projects into operations this year.

And they're also going to be bringing La Lucha, our Spanish -- Mexican rather solar project, 130-megawatt solar project, bringing that into operations. So very pleased that we received an extension on our generation license just a few days ago, and that came out of some high-level meetings that were held last month. So that's certainly very, very encouraging to see that project now move towards testing and commissioning.

The onshore renewables team is also looking at development work in Alberta, Spain, Columbia, Ontario, New York, and Poland, as I mentioned earlier. The efficient natural gas and utilities business unit will be exploring optimization and expansion opportunities at our (inaudible) gas-fired facility in Ontario and is otherwise focused on growing the EBSA distribution business in Colombia. And finally, the hydrogen business unit is focused on feasibility studies on projects and opportunities in Canada and in Colombia. So, looking forward, our most advanced and our capitalized development projects will more than double our operating capacity over the next few years.

Looking further ahead and considering our earlier-stage projects that are now entering development stages, we can see the business growing to 12 gigawatts with some assumptions embedded there on project attrition.

The Northland has -- fixed signaling to me, certainly has a robust pipeline of development projects, but we want to make it clear that it doesn't mean that we'll be building all of these projects. We won't be building all of these projects. A robust development pipeline gives us optionality. It gives us optionality in terms of which projects we decide to invest our capital in.

And it also gives us optionality on sell-down. So, it gives us optionality in terms of how much capital we invest in each project, too. So, we're very proud of our progress that we've made on ESG targets and metrics. On gender diversity, 33% of our Board and half of our executives are female, and we've made a commitment on board diversity beyond gender as well. Since 2019, we've reduced our carbon emissions by 30% on an intensity basis, and we're very pleased to commit today to reaching a science aligned net 0 target for overall emissions scopes 1, 2 and 3 by 2040.

So, we do quick drill down into our development pipeline, our growth pipeline. 20-gigawatt pipeline, well diversified across technologies and markets. Our presence on the ground in those markets is a key success factor going forward. If you look at offshore wind, energy security, decarbonization policies are really driving increased targets for offshore wind and accelerating permitting timelines, particularly in Europe. Targets across the offshore wind markets in which we're present, which we've got listed on this slide range from 12 gigawatts, all the way up to 70 gigawatts.

So, we can go through all of the targets, but the bottom line is there's going to be a lot of offshore wind built in the coming years. The Baltic Power project in Poland has a 15-megawatt Vestas turbine to give you a sense of scale, Gemini had a 4-megawatt turbine when it was built 5, 6, 7 years ago.

We've got a strong local partner on that project, PKN Orlen, the oil and gas major in Poland and a great project development team. And we're very pleased how the Polish government has responded to some of the market disruptions that have happened in the last year by making changes to the CFD and PPA that I outlined earlier. Nordsee Cluster has procurement underway now.

We've got a strong partner with RWE again, in this case, a major German utility. Procurement has commenced and the offtake sounding is really going to give us a sense of where the final project economics are going to end up on that project. Hai Long log costs are now pretty much completely locked down. The finance process is well underway, but it's taking longer than we had originally anticipated. And we're also encountering some challenges due to local market conditions, which I think are well known.

Despite the slower pace on financing, we and our partners have maintained the project schedule and the buffers in that schedule to maintain the risk profile of that project by providing material funding for certain fabrication activities on the project. And as I already noted in the prior slide, Taiwan is looking to build a lot more renewable power, a lot more offshore wind in the years ahead. So late last year, we were awarded a 500-megawatt lease, another lease for an offshore wind project in Taiwan.

The team there is currently working with some of the people in Toronto to assess the viability of that project, whether or not we're going to move forward with it. And we're also continuing forward with our negotiations and discussions with Gentari, the Petronas subsidiary, on a broader partnership that would cover all offshore wind development in Taiwan, not just on the Hai Long project.

South Korea is a very interesting offshore wind market, and we think it's one that's really well suited to Northland. It's a market where you -- with the way the regulations work, you actually earn your site exclusivity through good development work, which is what Northland's good at. Our all-Korean team has secured site exclusivity on 1.3 gigawatts across a total portfolio across three different projects of 3.4 gigawatts. And those projects are all at different stages of development.

And an emerging driver for offshore wind in Korea is ensuring that their exporting industry have access to renewable power so that they can maintain their access to the European market as carbon border adjustment measures are expected to be put in place in the years to come. entrees across Europe, Canada, U.S., the same policies that are accelerating offshore wind are also driving renewed growth in onshore renewables and storage.

Colombia is really one of the last LatAm markets to start deploying and moving forward with solar and wind. Most of their hydro sites have now been developed. Just about all of their hydro sites have now been developed. So, the only option for kind of new renewable generation is wind and solar. So, you're seeing a lot of activity on the ground in terms of development and you're also seeing the utilities there moving to procure renewable power as well.

We've consciously picked onshore markets where we see strong growth prospects. So, a lot of need for new renewable power, good policy supporting that, good favorable investment climate. And finally, markets where we think that we can create some kind of competitive advantage for Northland. Onshore renewables is very competitive. You've got to figure out how you can create a competitive advantage, or you shouldn't be in that market.

So, as I said earlier, we've got a renewed focus on North America, but particularly on Canada, the 1.6 GW Greengate portfolio that we acquired with their development team is a big step forward in Canadian development for us. There's a robust corporate offtake market, as you know, in that province.

In Ontario, we now have a majority position in a 250-megawatt battery storage project and a broader storage pipeline that we're building up. In New York, we've got the two wind projects that will be coming online this year, but there's also a 700-plus megawatt solar development pipeline that we're moving forward bit by bit.

And finally, as I mentioned, we're very pleased that the 130-megawatt La Lucha project now in Mexico is moving forward to commissioning -- testing and commissioning. This gives you a little bit of a breakdown on the Greengate portfolio that we acquired. As you can see it spread out across late-stage, mid-stage, early-stage solar projects and some battery storage elements to the portfolio as well. The big driver there is provincial and federal regulations are driving emitters to purchase carbon offsets by entering into corporate offtake.

So, we think we're well positioned in a market that we think will continue to offer good growth opportunities. In Spain, I mentioned at the beginning of the presentation that we're looking at ways to optimize some of our operating assets that we already -- that we already have in Spain, it's called hybridization. So, we're looking at all of our wind projects that we acquired 2 years ago and adding solar to some of those projects or even all of those projects and optimizing the interconnection that we have on those sites.

So, we think that's probably the first growth opportunity that we would be able to pursue in Spain. We're still assessing the feasibility of it, but it looks promising. In Poland, we're leveraging our position in Baltic power and our presence in that market to now work with developers on onshore wind and solar projects there. Energy security is a big priority in Poland, and it's driving a lot of development for renewables broadly speaking.

Colombia, we got our first solar project, as I mentioned, came online last year, and we also secured a PPA for 130-megawatt solar project last year as well. And this is just another representation of our growth pipeline, breaking it down by technology as it goes up to doubling by 2027 and quadrupling, we believe, as much by 2030. And now I'd like to turn it over to Wendy Franks to talk about storage and hydrogen.

Wendy Alexandra Franks
Chief Strategy Officer and Head of Hydrogen

Thanks, Mike.

Okay. All right. Hi, everyone. The CEO gets his comments on the prompter mine are on paper. So let me just get settled. Can everyone hear me okay? Yes. Okay. Good. Okay. As Mike mentioned, my name is Wendy Franks, under our new corporate structure, I lead our hydrogen business unit, and I also have responsibility for overall corporate strategy. It's my pleasure this morning to be here to talk about our new businesses, Storage and Hydrogen.

Okay. Just a few words upfront, the context for these new businesses. So, when I joined a couple of years ago, the part of my agreement was to incubate and build out these businesses. We envision them as catalysts for the next wave of long-term growth. Both areas are highly synergistic to Northland.

They strengthened both our competitive positioning in the market, and they strengthen our core capabilities as a renewable power developer and operator. So, we allocated a modest amount of resources to these areas relatively early. And as it's turning out, the growth is as we envision that these areas would be growing, the growth has actually come, and it's actually been quite strong. And so, as a result, our thesis here is really playing out and Northland is extremely well positioned.

So, in the storage market, what drives this market. As you can see, it's expected to be a very large market. It's basically driven by the need to stabilize the grid. So, this role was normally paid by natural gas peaker plants, but going forward, that fleet is aging, and there's limited appetite at new natural gas peaker plants, and it's also not economic if you think that the asset life is only going to be 10 years.

So, battery storage, it's a stabilizing force in the grid. And as you add more intermittent renewables, obviously, there's a greater need then to stabilize the grid. So back to the point that it's synergistic with what we do because it reinforces our ability and the system operators' ability to add more renewable cables into the grid.

So, in Ontario, for example, where the batteries can be charged overnight with clean power, renewable power or nuclear or hydro, the stabilizing force then is low carbon. So that's quite a good overall story. Longer term, we see other storage solutions such as pumped storage will also play a role in the grid.

So, Northland's near-term strategy for storage, it's really primarily been focused on our domestic market, right? And I think that's very logical. When you embark in a new business, you want to be in your home market where you can leverage your existing network access to government, access to funding, et cetera.

For example, in Ontario, the system operator has recently announced a series of RFPs for 2,500 megawatts over the next couple of years, sort of order. And the province is expected to need as much as 7 gigawatts over the next decade. For that near-term RFP, the system operator is offering 20- to 22-year contracts, and these government-backed long-term contracts is very attractive for Northland and something that we like to target.

Additionally, we're evaluating, as Mike mentioned, the colocation of batteries at some of our U.S. projects, so namely in New York State. And we're also looking at the role that batteries can play, particularly in very dense urban areas and providing critical grid capacity.

So, the last thing I'll say on storage is that we're very pleased to report that late last year, Northland entered into a partnership agreement on the Oneida project. This is a partnership with NRStor, which is really a leading battery developer in Ontario and the First Nations partner, Six Nations of the Grand River Development Corporation. The project, it's quite large, as Mike mentioned, 250 megawatts, 4 hours of storage, so 1,000 megawatt hours. It's located in Haldeman County, which is on the North Shore of Lake Erie.

It's the largest battery storage project in Canada and one of the largest in North America. Upon closing of the transaction, Northland will be a majority owner we'll take the lead working with our partners, and we have tremendous partners. If anyone knows Matt Jamieson from Six Nations, he's built up an incredible balance sheet for his community.

And that, for (inaudible) is the CEO and for those who know, she's an absolute tutor for us in the industry. So, we'll take the lead on construction, financing and operations but working in close collaboration with these very strong partners. Financial close for the project is expected this year with commercial operations in 2025. Another example of the storage project that we have here in Ontario is the Marmora project, this is a 400-megawatt pump storage project.

So, it's a different technology. And we believe that these different technologies have a role to play in the grid as I mentioned before that the province really needs the capacity. So, my team has incubated this business. And going forward, it's going to translate transition over to Michelle. So over to you, Michelle.

Next one. So, switching gears to hydrogen. As you can see, so hydrogen is expected to be also a very large market and it is rapidly developing. So green hydrogen is a low-carbon form of storable, transportable and dispatchable energy, and that's quite unique. So, it's produced when clean power, wind or solar, is fed into an electrolyzer to dissociate water into hydrogen and oxygen. The market is expected to grow. So, we've got our estimate here, $15 trillion by 2050 globally.

Growth is driven by the need to decarbonize energy for standard use cases like power generation, but also to decarbonize hard-to-abate sectors like industrial processes, chemical processes, and transportation. So, Northland's strategy here is to develop -- is to leverage our wind development capabilities as we develop wind to hydrogen projects initially primarily focused in Canada. So, the Canadian government has been very constructive, the federal and at the provincial level.

Tax credits have been announced as Mike mentioned, and we believe that this is an important part of the thesis that it is the countries that are able to bring forward these tax credits and these other government support mechanisms that are going to play a leading role globally. So, we think Canada is a great place to be in for this market. I think Christy Freeland announced this morning, even as part of, I think, a meeting she's having later today, a discussion around making sure that Canada's competitive with the Inflation Reduction Act.

So, you hear this government support in terms of financial support. But for anyone who's following what's going on in Nova Scotia and Newfoundland, the provincial government has also been very constructive in bringing forward the permitting mechanisms that are needed to actually develop the project. So, we're initially focused on the East Coast of Canada and the logic for that, the reason is very simple.

There's a very strong untapped renewable wind resource there. So, in Newfoundland, for example, it's just very, very high wind speeds with a huge amount of onshore wind and that configuration of having that really best-in-class wind together with the land that you need and close to areas where you can have a port.

That configuration is -- it's actually quite unique and it's not to be underestimated how difficult it is to get all of those components in 1 place together with access to freshwater, together with access to funding along with government support.

So, the idea for these projects on the East Coast is that the wind will be harnessed, the green electrons will be converted into hydrogen. And then the hydrogen is ultimately converted into ammonia. And the reason for that is ammonia, it's much easier to transport it.

So, it liquefies at a lower temperature. Just to give you some numbers about the size of the market, the gray ammonia market today is 180 million tons. This is a very large market. A 1 GW wind farm would produce about 0.5 million tonnes. So, it's a huge market relative to like large projects. The EU has a target to import 50 million tons of green ammonia by 2030. To give you a sense of what that translates into. That translates into about [100 1] gigawatt wind to hydrogen project.

And we're aware in the world, and we track the industry quite closely. We're aware of about a dozen projects that would come online in that time frame. So, this kind of mismatch in supply and demand is exactly the thing that Northland likes to target coupled with our positioning in our domestic market, which we think is, as I said, is going to move quickly.

So, we think that Northland, as I mentioned, is we've got -- these two examples of two growth areas where Northland is extremely well positioned. And with that, I'll turn it over to Pauline.

Pauline Alimchandani
Chief Financial Officer

Okay. Thank you, Wendy, and good morning, afternoon, evening to everyone joining us today from the various parts around the globe, are investors, lenders, advisers, and employees in Northland.

We are proud of the accomplishments that we've achieved over together as a team over the past year emits more challenging global market conditions. As you've already heard from Mike and Wendy, we are gearing ourselves up to continue to deliver on our stated objectives in 2023.

Taking stock on how we've tracked towards accomplishing the objectives we set out at last year's Investor Day, we as a team have accomplished most of what we set out to do with a couple of items still in progress. We've also achieved many new initiatives during the year to support the strength of the balance sheet and the funding of our projects. Specifically, we launched an ATM program to fund projects targeted for financial close and we refinanced over $3 billion of project and corporate financings.

Altogether, these activities helped to increase our undrawn liquidity and cash on hand to over $1 billion by the end of 2022. We have fully integrated the partnerships and transactions function within the Capital Markets team and have two processes currently underway, including the Hai Long sell-down, which Mike discussed.

We are targeting to commence two additional processes this year, increasing our ever-growing dialogue with financial and strategic partners around the globe. It's a very exciting time for us. We also completed our ESG objectives through enhanced reporting and our new 2040 net 0 target was launched today upon an initiative we undertook two years ago. Our efforts this year will focus on securing project financing for our two large offshore wind projects.

As noted in our press release, the high long financing is currently underway and progressing albeit slower and more challenging than expected due to market-specific factors. The Baltic Power project financing was recently launched to the lending market. Consistent with our risk management plan and expected project financing terms, we will also finalize the preferred hedging strategies for both assets this year.

Finally, we expect to complete another EBSA refinancing and closed the tax equity financing for our New York wind projects later this year. 2022 was a very active year for us. We will lay out the objectives for 2023 later on in the presentation, which will highlight another busy year for our team.

With respect to the structure of the finance team, since last year's Investor Day, we have continued to add strong capabilities to the team to support global growth and execution Focusing on the right-hand side through a reorganization by technology business units, we have appointed three CFOs who have a direct reporting line into myself, but will also serve as the finance partners for the respective BU executive.

The key benefits of this BU structure were that we will have strong dedicated leadership over each business unit, over all aspects of finance that are consistent and established upon a uniform set of standards and controls, all of which line into our overall corporate business plan for Northland.

Our offshore wind CFO was previously the CFO of our Gemini wind park in the Netherlands, our onshore CFO was previously our Finance Director for Spain. And our natural gas and utility CFO was previously leading our financial integration group within our corporate reporting team.

Although they are located in Amsterdam, Madrid and Toronto, respectively, they already have a track record of working really well together and with the rest of the finance team, and we have very strong collaboration and alignment in our overall leadership principles. As our hydrogen business unit is built out over time, we will look to build out the CFO function there as well.

On the left-hand side, the corporate groups, which as everyone knows here, we're largely Toronto base a few years ago have also built out into strong teams with a global presence. Additionally, another notable change is that the Capital Markets team has recently been consolidated to include project finance, treasury and corporate finance, partnership and transactions and our Investor Relations teams.

We believe bringing this team together holistically as optimal as we continue to strengthen our overall corporate global position and the relationships that we have with Canadian and international financial institutions along with export credit agencies or ECAs, to support our global growth ambitions and enhance our liquidity and funding through both our capital markets activities and our planned sell-downs.

Our long-term financial objectives and how we are managing our business and balance sheet remain unchanged from the prior years. We continue to pursue cash flow resiliency through sourcing long-term contracts with government or corporate offtake that are bankable under traditional nonrecourse renewable project finance structures while hedging out our variable costs and cash flow streams for the long term.

Maintaining our investment-grade balance sheet is a key objective to support future growth. This is important for both the cash and credit obligations to fund our development projects. We remain disciplined about our capital allocation, balancing the diversity of cash flows between near-term and long-term accretive opportunities. This will be managed both within and across the business units going forward.

We believe we have a prudent and achievable funding plan. Our balance sheet funding plan provides us with the flexibility to access various required pools of capital for the total project costs associated with our capitalized projects. I will get into more details on this later in the presentation.

Additionally, as Mike noted, we have been managing risk by locking down our costs, and we also entered into hedges on or before financial close so that we have full visibility into funding our projects as they enter construction. Our funding philosophy at Northland remains the same.

Our permanent growth funding starts with sourcing nonrecourse project level debt with tenor aligned to the contracted revenue stream. Remaining sources of the capital stack are sensitized and optimized to minimize cost and risk and maintain our investment-grade rating. We manage the right-hand side of our balance sheet conservatively and all this with sufficient financial liquidity and buffers especially with respect to our development assets.

And lastly, we used no to very little corporate debt in our capital stack, which is conservative and manages the risk on our balance sheet holistically. This year, we are looking at our first potential corporate hybrid issuance as part of our funding plan for the year, but it will be kept at a very manageable level. Our funding model continues to support a conservative balance sheet. We have approximately $7.5 billion of consolidated debt on our balance sheet today, which is fully nonrecourse.

Fixed rate, fixed term, project level debt and is excluded from our corporate metrics by the rating agencies. This nonrecourse project level debt has an average term of about 10 years, which is lined up to amortize with our PPA maturities and all interest rate exposure is swapped at an all-in rate of approximately 3.5%. Post-PPA, these renewable assets will accordingly be unlevered.

Perhaps this year, more than others, investors have been focusing in on our hedging strategy and risk mitigation efforts across FX and interest rate exposures and the ultimate repatriation of cash distributions. In Europe, which is about 60% of our cash flow, we have long-term protection.

We have always matched our funding currency to construction costs. All of our project debt in Europe was fully hedged at or before financial close for the full life of the loans. All of our project debt -- sorry, the majority of our cash distributions are also hedged over the long term, which is increasingly being managed and planned for at a corporate level to efficiently fund our new growth within Europe.

In Taiwan, we intend to secure medium-term protection between 5 to 10 years at or before financial close, which is in line with both our risk management strategy and our expected project finance terms. Hai Long would be targeting to raise project finance debt, primarily in new Taiwan dollars, while some construction costs are denominated in other currencies. Any construction costs not met with the funding currency will be hedged by financial close.

With respect to interest rates, we intend to hedge the variable rate exposure over the liquid period, which is approximately 10 years. Finally, our cash distributions will be hedged as far out as possible, currently expected to be about 5 years with a rolling hedge strategy beyond this period. In Colombia, which is about 10% of our cash flow, we have shorter-term currency interest rate hedges in place given market-specific characteristics.

Our key local utility asset EPSA, has revenue that benefits from inflation protection as the rate base is indexed to Colombian CPI. This contractual and regulatory structure has provided strong natural protection against changes in the Colombian peso. We also maintained a rolling hedge program to repay the Colombian peso distributions and we have long-term interest rate protection associated with the absent nonrecourse financing.

The slide everyone waits for every year. To update our funding requirements for our capitalized projects, we are now forecasting a total of $16 billion to $19 billion of capital costs. Our funding plan provides us with the ability to maintain the flexibility across various sources of capital pools to fund these project costs.

Of this total, $13 billion to $15 billion or over 80% relates to Hai Long and Baltic Power, which are progressing towards financial close this year. Upon delivering our capitalized projects, which to be clear, only includes the projects which costs capitalized to our balance sheet today under IFRS criteria, we expect to deliver a solid 7% to 10% EBITDA growth CAGR.

Ultimately, we are targeting to drive growth in free cash flow and adjusted free cash flow per share over the long term. This slide shows our funding plan over the next 5 years to support the capital requirements of our projects. We intend to secure approximately 65% to 70% of the capital required or approximately $11 billion through new long-term nonrecourse amortizing project debt.

We will also target 100% of our project financings to be green where possible. Northland's equity requirements are expected to be approximately 15% of the total capital required or approximately $2.5 billion, of which $1.7 billion has already been announced to date through our ATM and the sell down.

The remainder will be funded through a combination of cash on hand, proceeds from nonrecourse financings of our existing facilities, potential ATM issuances under our existing program and sell-downs of partial interests in our development projects.

Almost all of our projects are already owned in strategic partnerships, either with local or existing partners, who on average, contribute approximately 10% or $2.3 billion of the total capital required. Pre-completion revenues were applicable as another source of funding for project costs where the turbines commenced revenue generation prior to declaring COD on the full project.

This accounts for approximately 5% of the funding plan. And finally, we expect to use corporate balance sheet capacity on a very limited basis to secure approximately $0.5 billion to $1 billion of green corporate debt instruments, including potentially green corporate hybrid debt to optimize our funding, enhancing our returns, keeping within our investment-grade criteria.

We believe that our funding plan is achievable and overall, the principles are in line with how Northland has historically funded all of its growth projects. We have redundant sources of capital to execute on our remaining funding plan at both corporate and asset level. Currently, we have two sell-downs in progress and expect to launch more processes in 2023. Securing green corporate hybrid debt is targeted later for this year.

The funds raised from our ATM program to date have materially derisked our funding plan for Hai Long and Baltic power and we continue to have the financial flexibility with over $1 billion of current available liquidity. This table shows our capitalized costs and funding requirements broken down by project. All of this translates to nearly 3 gigawatts of growth projects and $16 billion to $19 billion of costs or $6 billion to $9 billion at Northland's net interest, which is net of the Hai Long sell-down to be delivered and funded over the next 5 years.

Gross capital investments include cost to advance these projects to financial close. The changes from last year's funding plan relate to about $4.5 billion of higher capital spend. This includes approximately $2.3 billion of capital costs related to new projects being secured and capitalized including our interest 49% interest in the go-to win offshore wind project in Germany with our partner, RWE, the Anita Battery Energy Storage Project in Ontario, which Wendy spoke about, and the increase in the gross capacity at Baltic Power.

The remaining $2.2 billion relates to increased costs for reasons discussed earlier by Mike, which had partial offsets. From an exposure perspective, we are also reducing our net share of costs through partial sell-downs.

Despite the higher costs year-over-year on a portfolio basis, we expect to generate low double-digit returns for our projects, including sell-downs. Once operational, these projects, particularly Hai Long and Baltic Power would be expected to generate material accretion to free cash flow and adjusted free cash flow relative to our 2023 guidance as a basis.

This slide shows a more detailed sources and uses planned for 2023. This shows $2.2 billion of capital deployment towards projects targeted for financial close this year of which $1.7 billion has already been sourced with approximately $500 million remaining. We believe the $500 million is manageable for 2023 and will be funded using possible sell-down proceeds hybrid bonds, cash liquidity on hand, potential ATM issuances and asset refinancings. We believe there is ample redundancy and sources available to us to fund our equity requirements for 2023.

While we are not planning on selling down a partial interest in Baltic Power at this time, we intend to sell down other development products to support our funding plan. The partial sell-down of development assets is a core component of our funding strategy and will become a recurring part of our business going forward.

Sell-downs and the flexibility on how and when we execute will enable us to meet our funding and capital recycling objectives, manage our jurisdictional exposures, crystallize development profit prior to or at financial close enhance our free cash flow and our liquidity position and our project returns amongst other benefits. In addition to the multiple points on the benefits of our sell-down partnering strategy already outlined today.

Ultimately, we aim to unlock value from executing on our development pipeline. The value paid for a project can depend on a number of different factors beyond the stage of a project, including location, scale, quality and the duration of the offtake to name a few. In the early stages, typically a value per megawatt drives the purchase price with milestone payments earned as the project continues to be derisked.

Once the project achieved financial close or COD, a DCF valuation of cash flow drives the purchase price. Based on available market comps, we continue to believe we can enhance our Northland repatriated equity returns by on average 200 to 400 basis points for contracted offshore wind assets at financial close.

There continues to be strong interest from high creditworthy institutions who are comfortable with investing at financial close or earlier. Of course, we are targeting to close our first sell down this year and further execute additional sell-downs to demonstrate value creation in our own projects.

This slide shows the significant value in our development pipeline that is expected to deliver growth in absolute megawatts and EBITDA through 2027 and beyond. Our 5-year capitalized project plan has tripled from historical levels and reflects a solid manageable growth trajectory for the company. Growth and capital allocation continues to be focused on offshore win supplemented by onshore renewables with shorter-term development cycles, which will deliver near-term cash flow growth.

Our 10 GW pipeline of publicly announced projects offer solid opportunities for growth. It is important to note, as Mike reiterated, that Northland will selectively pursue only the projects that meet our strategic objectives and disciplined investment return requirements.

This is a slide we first introduced 2 years ago at our Investor Day that we update annually. Our capitalized projects are expected to deliver solid growth in EBITDA, increasing to a range of $1.7 billion to $1.9 billion by 2027.

These ranges account for the fact that sell-down strategies and targets are not yet finalized and outcomes may vary. Nonetheless, the key message of this slide is that we expect not only to increase our EBITDA, but more importantly, the quality of our cash flow as well.

Furthermore, we will be diversifying our cash flows as new projects come online. In the illustrative 2030 EBITDA on this slide, we reflect a risk-adjusted contribution from the recently announced Alberta portfolio can win in Taiwan, Nordsee Cluster B, our Korea projects, our projects in Japan and Scotland. This, again, is illustrated to show the level of growth potential of the company even only if some of these projects are pursued to completion. This gives us all a good vision and ambition for the company's EBITDA generation by the end of the direct decade.

Moving on to near-term 2023 guidance. This morning, we released our financial guidance for 2023, including adjusted EBITDA, free cash flow and adjusted free cash flow. I will focus on describing the key elements of our guidance herein as our press release has full some details. We released adjusted EBITDA of $1.2 billion to $1.3 billion, adjusted free cash flow of $1.70 to $1.90 per share and free cash flow of $1.30 to $1.50 per share.

Focusing on our 2023 adjusted free cash flow guidance bridge, we expect $0.50 per share of higher operational cash flows, primarily from increased contributions in Spain. As offsets, we had approximately $0.40 per share of cash flows in 2022 that will not reoccur in 2023, including cash flows recognized from higher market prices in Europe over and above our subsidy rates and other items that have been previously disclosed.

As our pipeline of secured projects has grown substantially over the last year, we continue to invest in our people, resources and platform to execute and deliver. In addition, we are investing in new teams such as the hydrogen business unit, as you heard about today, and adding capabilities within our business units and functional teams to continue to execute on our secured projects on a global basis.

These costs amount to approximately $0.20 per share of higher expenses in 2023. Net-net, this all results into adjusted free cash flow midpoint of $1.80 and a range of $1.70 to $1.90 per share before our development expenditures. Our devex this year is expected to be about $0.40 per share to fund the identified projects such as North Sea Three and Delta, Scotland, the Alberta portfolio, and the battery storage project, amongst others.

Our 2023 free cash flow per share guidance range is at a midpoint of $1.40 or a range to $1.30 to $1.50 per share. To conclude today's presentation, I have listed out our objectives for 2023. Our goals are to further diversify our sources of corporate capital to enhance our financing flexibility while maintaining our investment-grade rating.

On board, our new business unit CFOs and new org structure to support execution and capital allocation focused by technology, execute on the nonrecourse project financings and refinancings that I laid out today, continue to strengthen the global positioning with financial institutions along with export credit agencies to support our global growth, enhance our liquidity, continue to diversify and bring the value forward of our development assets through additional sell-downs and finalize our preferred debt and equity hedging strategies for our two large offshore projects.

It will be another busy year for the company, and we look forward to providing you with updates on our quarterly conference calls in 2023. Thank you for attending our Investor Day today. I will now turn it back over to you, Mike, to conclude.

Mike Crawley
President and Chief Executive Officer

Thank you, Pauline. Okay. Well, thanks, everybody, for coming out today on such a cold morning, as I mentioned at the beginning. Northland's operating assets have performed extremely well, as I said, with very high levels of availability over the last year and allowed us to capture some really high energy prices, particularly in Europe. Our offshore, onshore, and solar growth pipelines have grown over the last year.

And we look forward to in the coming years, seeing projects both enter construction, but also some intra-commercial operations over the next year as well. And we've moved now forward with our first energy storage project. We talked about energy storage last year, and now we're moving forward with our first energy storage project and starting to look at the viability of hydrogen projects as well.

So, our sector has got big tailwinds. There's no question about that. And we think we're well positioned in some key growth markets to really take advantage of those tailwinds. At the same time, there are some very clear near-term headwinds. And that we have to deal with.

So, we need to properly manage those headwinds and grow in a disciplined and responsible way. So, we look forward to your questions, and we're going to linger around a bit after lunch, so we can do some one-on-one chat too, but I look forward to your questions now. Go ahead.

QUESTIONS AND ANSWERS

Rupert M. Merer
National Bank Financial, Inc., Research Division

Pauline, you mentioned part of your financing plan two more sell down. Can you give us any more color on what you might look to sell down (inaudible).

Pauline Alimchandani
Chief Financial Officer

Yes, we're looking at filling down only development assets, to be clear, target Europe and Asia.

Rupert M. Merer
National Bank Financial, Inc., Research Division

And with the sell down plans you've laid out the last couple of years what we hope to get from the sell down, how they might help the returns on the project give us any more how did you rate that soon? Can you give us some color maybe on the development uplift or what it might have done for the returns on your investments?

Pauline Alimchandani
Chief Financial Officer

Well, that sell down is not yet closed. So, as we achieved financial close on Hai Long, just like any other project, we will provide our EBITDA, free cash flow metrics on that project. I think right now, it would be too premature to do that. But the sell-down would close officially on or before financial close, which is the target right now.

Mike Crawley
President and Chief Executive Officer

And you can imagine there will be a true-up mechanism to final economics in the project.

Andrew M. Kuske
Crédit Suisse AG, Research Division

I guess the question is, at the heart of it, what do you want to be when you grow up? Is there sort of an extreme of just building assets and owning the assets and the other extreme would be like a full asset management kind of model where you're taking in capital from others maybe earning a fee over a period of time, like you're sort of pushing a little bit towards an asset management with really a promote on the sell-down to Gentry, but where do you see yourselves an evolutionary process?

And then if you do go to the extent of more of an asset management model, can that really accelerate the growth of NPI in the current market construct, which does have a tremendous amount of favorability for a company that has expertise.

Mike Crawley
President and Chief Executive Officer

Yes. I mean, Northland will always be looking to deploy capital in attractive projects, attractive investment opportunities. What's changed over the last couple of years, which we talked a bit about last year and now we're talking more about since we've got our first sell-down already announced, is also bringing in third-party capital and partners into our projects.

So, using that, as I said earlier, to enhance returns to manage market exposure on earlier-stage sell-downs to manage our devex spend as well and manage our risk profile on early-stage development.

So that is going to be a constant going forward. So, I still see -- in terms of where we're going to be when we grow up, we're still going to be deploying capital. But having a large development pipeline gives us optionality, allows us to be selective in terms of which projects we actually deploy our capital into. So, we can be selective picking the more attractive ones. Then you can also look at which -- how much capital we actually deploy into each project and gear up or gear down on sell-downs and partnering in that respect.

It also gives us more flexibility. You looked at the funding plan that Pauline outlined just a couple of minutes ago, and if you look at the kind of different elements of that pie chart that you put out there, we can move up or down on a number of them, including on sell-downs, depending on market conditions. So, it gives us more flexibility. It derisks our funding plan going forward.

Pauline Alimchandani
Chief Financial Officer

The other thing I'd add to that is that locally, I mean, their lenders, ECAs are involved in the purchase because of Northland's equity sponsorship. So, our equity sponsorship will always have to be a fairly significant portion. So, our sell-downs are targeted to be in the range of 25% to 49% of our interest because a lot of the reasons why we get participants in a project is because of Northland. So, for Northland to have an asset management sort of model doesn't really support why Northland is so successful in building out our projects around the globe.

Andrew M. Kuske
Crédit Suisse AG, Research Division

I appreciate that. Maybe just a follow-up, and it goes back to the global context and the ability to wheel capital around different markets. What's happened in the U.S. and offshore is very well understood and very well telegraphed. A few years ago, you decided really not to participate because of what you're seeing on returns. Could you maybe just give a bit of color on the differences in return expectations market to market and your ability to play around that?

Mike Crawley
President and Chief Executive Officer

Yes. In the U.S., it was not just returns. It was risk-adjusted returns, but it's also entry costs, right? So, we've deliberately chosen offshore wind markets where we see lower entry costs around the world.

And we were -- if you compare us to Orsted, Orsted's kind of in every offshore wind market, they kind of have to be in every offshore wind market, I think, to get the growth that they need. In terms of Northland, we're a much smaller company than or said, so we can be a bit more selective in terms of which offshore wind markets we go into. I just want to go back to your earlier questions, say, one more thing is that there is still a constraint. So, nothing happens overnight on how much we can grow.

And the biggest constraint probably is talent, right? So, our advantage is this offshore wind team that we've got and some really good onshore renewable development teams around the world and these growing teams in storage and hydrogen. But we need to retain those people. We also need to gradually grow those teams, but there's a big battle for talent out there.

And the key -- the way we create value, right, is by ideally originating these projects, delivering them on time, on budget and then figuring out ways to optimize them. And that all takes people, it's talented people. So that's the -- that's always going to be the key constraint. But I forgot your -- the second part of your follow-up question.

Andrew M. Kuske
Crédit Suisse AG, Research Division

Returning (inaudible) around the world.

Mike Crawley
President and Chief Executive Officer

Yes. So, I think things are moving, as I kind of present it to you, and there's a few dynamics that are kind of shifting around. But I think you would see generally similar returns in -- across Europe and North America.

So, I think in there's some particular aspects of the Northeast U.S. offshore wind market, so I don't think it's necessarily but it's probably see similar returns for onshore, offshore in Asia. We're expecting to see in some markets, slightly better returns by being an early mover, but there's always specific characteristics on any given project.

Wassem Khalil
Senior Director of Investor Relations & Strategy

Okay. Mike, we're going to take some questions from the webcast. Question from Felix Pruning. How do you see the inflation impact on project probability going forward?

Mike Crawley
President and Chief Executive Officer

Well, it's -- I mean it's been a big change in the last year, right? So, I think in terms of commodity inflation, steel prices and some of those input costs, you're starting to see some of that come down, lithium as well as started to come down a bit as well. So that element, we see easing off. That's obviously all information you guys all have access to as well.

The other piece is just supply chain constraints, right, that are going on. So, our expectation and maybe our hope is that as you see a lot of these incentive schemes for renewables like the IRA in the U.S. like whatever the Canadian government does like what's going on in Europe. That signal long-term support for renewables that the supply chain will start investing in more capacity, and then you'll start seeing some of those constraints ease up and that will start easing up some of the inflation that's being driven simply by just a limited supply.

Wassem Khalil
Senior Director of Investor Relations & Strategy

Okay. A couple of questions that are kind of the same, so I'll just lump them together. What is the strategy towards onshore and offshore wind in the U.S. and Canada and the upcoming offtake auctions.

Mike Crawley
President and Chief Executive Officer

So, we're not doing anything in offshore wind in the U.S. We didn't participate in the California (inaudible) auction, we didn't participate in recent options in New York State.

In Canada, we have been exploring offshore wind off of Nova Scotia, which I think that's probably a longer-term play. And we've been working with regulators and policymakers to put in place a framework for that.

On the West Coast of Canada, we do have some offshore wind development assets, met mass, some early stage permits on an offshore wind site there, but that project is moving ahead. at a fairly slow pace, but things can change.

Sean Steuart
TD Securities Equity Research

Pauline or Mike, a question on the capital cost inflation for Baltic Power, in particular, it looks more significant than what you're showing for Hai Long, which I guess it's a little bit earlier stage, that explains a part of it. But how much of it is the capacity growth you're talking about versus component cost inflation?

Mike Crawley
President and Chief Executive Officer

It's a bit of both. So, I think the project went from what was originally 940, 950 megawatts up to now just about under -- just under 1.2 gigawatts. So that was a good component of the capital cost increase. I don't know the split necessarily between that and just general cost estimate.

Pauline Alimchandani
Chief Financial Officer

Yes, I think that the 20% to 30% relative to last year was I mean, high long Baltic power together.

Sean Steuart
TD Securities Equity Research

Okay. And a question on Greengate. Can you give us a little bit of background on how this came to fruition? Was this a competitive process?

Mike Crawley
President and Chief Executive Officer

You should just ask Michelle, she's just going to tell you about it, but it was a competitive process.

Wassem Khalil
Senior Director of Investor Relations & Strategy

Okay. We'll go back to the webcast questions question in from Anna Renold. Can you clarify what you meant by saying you will leverage your wind business to develop hydrogen. So, I think Wendy?

Wendy Alexandra Franks
Chief Strategy Officer and Head of Hydrogen

Yes, sure. So, most of the hydrogen projects that we're looking at our wind to hydrogen. And for these early-stage projects for the areas that we're looking at, we're envisioning that we would be developing the wind portion of it and that we would have an equity interest over the entire project from tip to tail, right, from generation through to the hydrogen, the ammonia and the terminal, et cetera.

So that means -- and also what drives your cost of green hydrogen, it's about 60% is driven by the cost of your wind. And so, we're able to leverage our development capabilities and expertise than to develop the majority of the cost structure. We generally look to then partner with entities that have knowledge on the fuels side of things so that we can bring together a successful project. So, we're leveraging that wind capabilities to bring forward those projects.

Mark Thomas Jarvi
CIBC Capital Markets, Research Division

A couple of questions around the Nordsee Cluster projects. You talked about the corporate PPA market getting better, but you're obviously doing with some cost inflation. Is the expectation that price costing will come down a little bit relative to what you're seeing in inflation in Baltic Power? And then I guess, they're still on your capitalized list of projects. So just confidence level that those projects ultimately get built out here in the next couple of years?

Mike Crawley
President and Chief Executive Officer

So, there's two phases to the Nordsee cluster, right, the roughly both 750 megawatts or 800 megawatts each. It's the first phase that we're in procurement on right now. So that's where we're getting visibility on starting to get visibility on the capital cost increases. To be determined to what extent that's going to be offset by higher corporate PPAs, corporate PPA prices.

We know that the market has moved up in Europe. That's clear from what we had originally seen with our market sounding when we exercise our step-in rights, we just truthfully don't know to what extent it has moved up, and you won't know until you actually get closer to actually negotiating the price and terms on an offtake. So, I'd say at this point, our view is that the project is -- continues to be viable, but it will be confirmed once we see what the offtake looks like.

Mark Thomas Jarvi
CIBC Capital Markets, Research Division

And then I guess just more of a competitive landscape question. Orsted had their call earlier this week and talked about trying to maybe target higher returns given some of the challenges they've seen in the industry Shell came out with comments saying that they would just green investments.

It had to be sufficiently high return hurdles. Do you think that will come through the industry you're seeing any signs of that? And I guess, ultimately, does it really impact in terms of what you're targeting and the approach you're taking define your project in the offshore wind industry.

Mike Crawley
President and Chief Executive Officer

I mean we've tried to focus on markets where we think we're, a, where the entry cost is lower and also where we can secure higher tariffs by being an early mover. So, for example, in Poland, with the Baltic Power project, we were among the first wave of projects to get CFDs through a noncompetitive process or an allocation. And so, we've tried to be selective in terms of which markets we went into in Germany and to be determined on Nordsee cluster, but we saw -- we've seen a robust market for corporate offtake emerging over the last few years.

So, we took a view that there was going to be good opportunity to get a high tariff and industrial offtake for those two projects that we're developing with RWE. So, I'd say if -- if we're in every market for offshore wind, I think there'd be a pretty broad range of returns that you'd be seeing as some of those markets have gotten quite competitive. I think in some of the markets that we've seen, we've seen some challenges just recently with capital cost escalation.

And certainly, we've talked about Hai Long during our presentation and what's going on in Taiwan with capital cost escalation. But overall, I think we've positioned ourselves in markets that generally offer better returns. And to the extent we can achieve those returns, we do have a big pipeline, and we can pivot to other opportunities in that pipeline as well.

Wassem Khalil
Senior Director of Investor Relations & Strategy

Okay. A couple of questions from Nelson Ng. First, on Spain, looking for some color on free cash flow trend post '23 and then based on the debt repayment profiles and what we know about the regulatory environment, what does it look like over the next couple of years?

Pauline Alimchandani
Chief Financial Officer

Sure. So, in Spain, as we were all aware when we purchased the portfolio in 2021, the reason why we purchased it was for the predictable regulated cash flow stream from the assets and what it sort of added to our business, particularly with delivering sort of near-term cash flow growth but offer offering stability.

With the unprecedented higher pool prices in Spain, it changed the shape of those cash flows. So what was supposed to be very stable cash flows turned out to be really upfronted cash flows in the sense of we repatriated a lot of cash sort of last year expected this year and those will sort of -- or intent to taper off because as you know that you're supposed to end up with the regulated return over the life of the assets.

From a corporate perspective, obviously, we have -- we've done well against our underwritten investment case. Last year, we were proactive in sort of seeing how the cash flow profile was changing, and we refinanced our debt in anticipation of that to match the debt to the new cash flow stream that we have, I would say, overall, since the -- when we press released the original Spain portfolio, I think we had about looking at what say, $25 million roughly of free cash flow that we expected over that 5-year trajectory.

And that, I would say, at least has more than doubled. And if you look at what we were getting in that initial time frame from our initial expectations. So, the cash flows have really upfronted in the Spain portfolio.

Pauline Alimchandani
Chief Financial Officer

Okay. On the Oneida project, Nelson is also looking a question on, do you already have a long-term PPA on the project.

Wendy Alexandra Franks
Chief Strategy Officer and Head of Hydrogen

Yes. So, we have multiple options for a long-term PPA. When we're ready to say more about what -- how that's shaping up, we certainly will. I would just add that with the options that we see in the market, we're expecting roughly speaking, a mix of our cash flow to be about 2/3 contracted, 1/3 merchant.

Naji Baydoun
iA Capital Markets, Research Division

Partnerships has been a recurring theme over the past year and probably going to become more relevant for you going forward. Talked a lot about partnerships on the equity side. Just wanted to get your thoughts on partnerships from a customer and supplier perspective, first with Hai Long corporate PPA, has that experience changed the way you think about partnerships with your clients and with your suppliers especially with the challenges that you mentioned in the markets today.

Mike Crawley
President and Chief Executive Officer
Supply chain and offtake, both? So, on supply chain, we've always been close to our key suppliers. And if anything, over the last year, we've gotten even closer and make sure that we manage those relationships tightly and then we work very closely with them to make sure that they understand what our pipeline of projects is going forward in a tightening market. Suppliers tend to focus on customers with -- both with the larger pipeline of opportunities going forward, but also those that they believe that they can transact with more easily that will be a good partner to use your words.

So that's kind of in terms of procurement where our focus has been, and we've created a distinct procurement group within Northland that is setting up relationships with each one of these suppliers on an ongoing basis, even if we're not in an active procurement process on any given project.

On offtake, definitely, the intent is to now start building up those relationships with offtakers that have demand globally in different markets where we would be present and using that as a pull-on project development as well as just a source of offtake once the project is already developed. So, both of those relationships, but group things of relationships are going to be very important going forward for sure.

David Quezada
Raymond James Ltd., Research Division

Maybe a quick question on your hydrogen strategy in general. Just a question about the -- I know you have a grant to produce hydrogen. I believe it's at Nordsee Two. Just curious how -- if that project goes really well, how does that play into your broader strategy? And what kind of opportunity does that unlock for you?

Wendy Alexandra Franks
Chief Strategy Officer and Head of Hydrogen

Yes. That's a great question. So yes, we do have the grant there. It's to actually co-locate the electrolyzer with the offshore wind turbines, which looks like you know. So, we'll be evaluating that technology. It's fairly complicated, right, which is why we got the grant. So, you also have to figure out desalinization of the water that you can flow through the electrolyzer, and the idea is that you would use them to produce hydrogen as a source of fuel for marine vessels in the area.

So, I mean, obviously, if that goes well, that's something that we would continue to pursue. And the point there is that we're looking at co-locating hydrogen at many of our facilities, especially the ones that would be coming off subsidy which is for some of them is not too far out.

So basically, the -- like the kind of the takeaway from that is that the work that we're doing, both on storage and on hydrogen, it really helps to address in the terminal value question that we have for our assets and what -- it broadens your set of options then that you have for those existing assets, which is always a good thing, right?

So, whereas in the past, we just had the option to recontract or something like that. Now we're looking at what we could do with battery storage or what you could do producing hydrogen.

Wassem Khalil
Senior Director of Investor Relations & Strategy

All right. We've got a question from Brett Castelli. Given the compression in offshore wind returns in recent years, are you seeing more disciplined bidding strategies from competitors?

Mike Crawley
President and Chief Executive Officer

So, we haven't yet had visibility in auction. So, something that we're following closely to see if there's more discipline brought to bids, I mean it's interesting, if you look kind of you dialed back 5 years ago to the market environment or 4 or 5 years ago, you had an environment where interest rates were stable or moving down. We had capital costs generally moving down across most renewable asset classes. But we had prices in auctions going down, in some cases, faster than the capital cost and the interest rates were moving downwards as well.

And you had yet growth going on in terms of kind of targets and procurements globally. But it's nothing what we're starting this -- nothing like what we're starting to see now. So, you fast forward to today, different market environment. And so far, as huge growth targets now for renewables, both in terms of decarbonization objectives but also in terms of energy security in Europe. And like I said, to a certain extent in Northeast Asia.

But if you look at the rest of it, you've got interest rates, obviously, in the last year moving up. Forward curve isn't moving up as much as obviously, the Fed rate or the Bank of Canada rate. But the interest rates are moving up, capital costs are going up materially in the last year. But there's more and more opportunity than there would have been 5 years ago or 4 years ago growth and more demand, I think, for the types of projects that we develop.

So, it really does require a different approach to how you go about growing and how you go about securing projects, securing offtake. Our expectation is that there will be more discipline in terms of competitive processes for offtake. We certainly are always in our view, disciplined in terms of how we participate in those auctions. We're happy to lose if the winner is bidding at unrealizable prices, but we'll have to see how things develop.

Nicholas Boychuk
Cormark Securities Inc., Research Division

Just with the renewed focus on the North American onshore renewable portfolio, I'm curious how much of that decision was the result of the U.S. inflation Reduction Act in Canada's potential response and how much NPI is potentially going to benefit from those and what it might mean for future capital allocation decisions.

Mike Crawley
President and Chief Executive Officer

Well, the U.S. inflation Reduction Act is obviously targeted to helping the sector in the U.S., right, clearly. But the one global benefit of it, I think, is on supply chain and particularly in solar, for example, that it will send a signal, I think, to solar and module manufacturers that they should probably set up fabrication in the U.S.

We've heard of a couple of moves in that respect, given just what the growth trajectory is going to look like in the U.S. So that's good for projects anywhere and particularly good for projects in Canada. What the Canadian government signaled in the fall with their intent to come up with a similar scheme.

And Wendy talked about some of the comments made yesterday, that helps from a pricing standpoint, obviously, keep Canada on an equal footing or at least close to an equal footing so that we still remain an attractive market for suppliers of modules and panels in terms of solar. And it also creates more liquidity. We'll have to see what these incentives actually look like, but it creates more liquidity in the corporate offtake market because it pulls more buyers in because the price that you can sell at should come down, obviously.

Wassem Khalil
Senior Director of Investor Relations & Strategy

Okay. A question from Brent Stadler. Manufacturers of next-gen offshore wind turbines are discussing 60% capacity factors. Can you talk about where you see capacity factors shaking out on the 14 to 15-megawatt turbines being utilized at Hai Long, Baltic and potentially the Cluster, North Sea Cluster.

Mike Crawley
President and Chief Executive Officer

I think we're generally looking at capacity factor. I haven't got the exact numbers, but capacity factors in the 45% to 50% range on those projects.

Benjamin Pham
BMO Capital Markets Equity Research

Maybe a couple of questions on Hai Long, if I may. On the financial close, can you share my context on what is driving the delay? Is it repricing of the debt expectations? I mean what's driving the delay? And then is there a point where financial close gets pushed out at some point? Like what causes friction to your timing and in service of Hai Long.

Mike Crawley
President and Chief Executive Officer

Yes. So, in terms of schedule, we have consciously made a decision to keep with the schedule for the project. So through limited notice to proceed with suppliers, make sure that they begin the fabrication work that needs to be done this year so that the project can move to in-water construction next year, right, so that we keep the schedule that we don't add any additional risk to the project in terms of its in-service deadline under its offtake agreement or do anything that would reduce the buffers that we have already built into what we think is quite a conservative construction schedule.

We want to maintain that. So, we don't want to add risk in terms of project execution. So that's the one thing that we've done. In terms of the financing, I mean, there's two elements that have gone on, one, which was really focused around last August, September, which was well publicized, was the rise in tensions between China and Taiwan and the U.S., really anchored around the Nancy Pelosi visit to Taipei.

We've seen those tensions and a lot of that noise received in the last few months, but it certainly did slow down the pace of the financing, which we had really just launched in August.

And so, it kind of slowed down the launch of that that financing as all the participants wanted to kind of gauge where that was going to settle out, which it has now started to, I think, settle out to something similar to what the situation had been prior to that spike intentions.

Second factor is that there's -- as well publicized as another offshore wind project, there's several offshore wind projects in Taiwan that have moved through construction and into operations is one project that is currently in construction that is having some serious delays and there's some overlap in terms of lenders between our project financing and that project.

So, it's taking a bit more time for us to answer the questions from those lenders, how is your project different from this other project. And as I said, 1 thing that we've done with our project is have a very conservative construction schedule. And the second thing is the other project was a 2020 or 2021 in service.

So, it was on a fast track to get that project into construction. And sometimes, you move too fast, that creates delays. Our project was a 2025, 2026 interconnection. So, we had a lot more time to properly do geotech to do the feed and to get the right team together to execute. But those are the questions that we're answering from the lender, so it takes a bit more time.

Brent Stadler
Desjardins Securities Inc., Research Division

Okay. That's very awesome Mike. And then under Gentari sell-down how would you characterize that in terms of your expectations? Was it -- it looks like it's in the range of 200 to 400 basis points, but was it exceeding your expectations in terms of that sell-down?

Mike Crawley
President and Chief Executive Officer

We were looking for two things in that sell-down process. It was the first one that we've gone through. We were looking for the right partner, so somebody who could actually -- a partner that could add some value to the project and also a partner that could do more in Taiwan if we choose to do more in Taiwan and wanted to work with us. And so, as I said, we're looking at potentially a broader partnership for future offshore wind with Gentari there. So that's number one was a partner that we can work with, there's a good cultural fit and that can add value.

The second thing was certainly on economics and making sure that they, in our view, paid -- contributed and paid up the right value for the project, given where market conditions were at the time and where the project is at, too. So, on both those criteria is a competitive process run by an adviser. We were satisfied that we ended up with the right and the best partner.

Benjamin Pham
BMO Capital Markets Equity Research

And if I may squeeze one on Alberta. I mean that -- the carbon tax has been around for some time in terms of its increasing and whatnot, and the dynamics have maybe shifted a little bit this year. But why now in Alberta is and that's I guess that's part of the question. Part B is, would you have still done Greengate if you didn't see the tax credits in the budget?

Mike Crawley
President and Chief Executive Officer

So, we've been looking at Alberta for a number of years. We've done some early-stage solar development ourselves. We've got a wind project that we're developing that's had a mid-stage in Alberta. So, it's a market that we know fairly well. The Green gate development team, a number of us have known for years. They're probably among the best developers, if not in Alberta, but probably in Canada.

And the attraction was both, as you said, the very liquid corporate offtake market in Alberta, which we think will continue to grow for the reasons that you alluded to. But certainly, what's going on with the tax credits, and we'll see what they are. I think that made the prospect more attractive, but it wasn't a decision to move forward or to start looking at Alberta. We've been looking at it for a while.

Wassem Khalil
Senior Director of Investor Relations & Strategy

All right. We'll go back to the webcast question from Brent Stadler. Again, can you talk about how Hai Long type projects could end up benefiting the offshore wind industry going forward? Will inflation escalators and PPAs become standardized as developers demand bigger risk premiums.

Mike Crawley
President and Chief Executive Officer

Well, I think you're going to see -- I mean there was a question earlier on this. I would expect that you're going to start seeing energy prices, offtake prices go up on PPAs, on corporate offtake. Certainly, grid merchant prices have gone up significantly in most markets over the last year. I would expect, certainly, there'll be a greater consciousness in the negotiation of offtakes and the creation of sovereign auction processes around being more aware of inflation moving forward, for sure.

Wassem Khalil
Senior Director of Investor Relations & Strategy

Okay. We'll continue on. A question from Alexander Cruise. I'd like more color on your strategy in Colombia. As you are an integrated player, is it possible to farm down other assets and focus only on renewables.

Mike Crawley
President and Chief Executive Officer

So, the strategy in Colombia was initially to acquire a utility. It is -- that investment has, again, similar to the Spanish investment has outperformed its original underwritten thesis. It's performed extremely well. It's a great management team. And the thesis was in part to use that as a platform to be able to source renewable power projects as we saw that market was just about to get going in Colombia.

So, we've completed our first solar project last year, brought it into commercial operations. We've got an offtake on another solar project this year. We're looking at other renewable power, wind and solar opportunities at an early stage with different developers in that country. But that's the thesis, is having a platform in Colombia so that we can have the market knowledge to be able to source good projects and understand the regulatory framework there too.

Wassem Khalil
Senior Director of Investor Relations & Strategy

A follow-up question on that. As -- sorry, what are the possible impacts of the recent changes in the Colombian regulatory framework on the regulated business on that?

I mean we still see a lot of opportunity with EPA. EPA had a lot of -- in its tariff structure. It has good inflation protection, which has certainly served that investment well over the last year. And we don't see any -- the recent changes having a significant impact on EPS.

Okay. question from Rajat Syrup. If you can be more selective in projects geography versus, say, Orsted, are your returns better than what they guided to, i.e., the 100 to 300 basis points over WACC. So, I mean we don't necessarily give a spread over WACC like Orsted does. I think there's two things is we don't need to have as much growth as a larger company would, so we can be selective, as I said, in the markets that we enter into.

And truthfully, we're quite sensitive to entry costs. So, we try and screen for that initially as well as where we think the prospective returns are going to be. And secondly, we don't -- as I said in my presentation, we don't have to build everything that we're developing. And so, we can -- a big pipeline allows us to be selective in what we go after.

Wendy Alexandra Franks
Chief Strategy Officer and Head of Hydrogen

The other thing about Orsted is that the balance sheet finance, which wise WACC is relevant for them. For us, we use the project finance, nonrecourse model. So, it's the return over equity for us. It's not quite apples-to-apples, but we are still targeting solid returns on equity from our offshore wind projects, and we're seeing greater interest in our sell-downs.

And as you know, we've been talking about it for a couple of years and finally getting towards demonstrating the value in our financials.

Wassem Khalil
Senior Director of Investor Relations & Strategy

Okay. A question from Ron Nastiko. Can you comment on the routing of underwater cables and the challenges you may be faced with in the near future?

Mike Crawley
President and Chief Executive Officer

So, we do inspections of all of our underwater cables at our offshore wind facilities to keep a close eye on any potential degradation, particularly where the cable joins up with the turbine where I think some other projects have had issues in the past. So, it's something where we use underwater drones to inspect that those on a regular basis.

So, it's -- certainly, in terms of intra rate cables, it's vulnerability that we're well aware of, so we keep close track of it. And in terms of the export cable, that's where the greatest vulnerability is. And similarly, we keep track on any degradation that we see going on to make sure that we remedy it quickly.

Wassem Khalil
Senior Director of Investor Relations & Strategy

Question from Felix Pruning again. What is your perspective on latest trend of negative bidding in European offshore tenders and specifically Germany and the Netherlands?

Mike Crawley
President and Chief Executive Officer

I mean we don't think it's -- we don't think it's a positive development. I think it ends up simply passing on those costs to industry or whoever the offtaker is for those projects, whoever ends up entering into a corporate PPA to buy the electrons from those projects, which then only serves to inflate energy prices further.

So, you may get through a negative price or a bid price on an auction or at least by paying huge sums for lease, the government treasury may get an influx of cash, but then it ends up working its way through to higher energy prices for industry, which I don't think makes sense.

Wassem Khalil
Senior Director of Investor Relations & Strategy

Question from Nelson Ng again. What are some of the reasons you're not looking to sell a stake in Baltic Power?

Mike Crawley
President and Chief Executive Officer

We're not -- I mean, it's a very attractive project in our view. It's a 25-year index CFD in a market that we see further growth in as well. So, I mean, we -- as I said earlier, I mean, that pie chart that Pauline walked through, different elements can move around depending on different market conditions at any given time. But at this point, we look at that project, and we think it's a very attractive project, and we're happy with our 49% stake in it.

Wassem Khalil
Senior Director of Investor Relations & Strategy

Just a couple more here. Justin Strong, can you provide some more detail on Northland's expected role for projects coming from European partnerships?

Mike Crawley
President and Chief Executive Officer

What our role will be with Partnerships?

Wassem Khalil
Senior Director of Investor Relations & Strategy

Yes.

Mike Crawley
President and Chief Executive Officer

Yes. So, I mean, I'll give you -- I mean, we can talk again on Baltic Power, maybe use that as an example. PKN Orlen, oil and gas company in Poland, a very large company in Poland, had secured a lease, had started doing some of the early stage permitting on that project.

They were looking for a partner who could come in and bring the technical expertise needed to figure out how to design the project, to the feed and also oversee the financing and the construction of that project and a partner who they thought that they could collaborate well with, which we think is kind of a differentiator for us maybe versus some of our competitors when in partnering.

So that's basically what they were looking for. They visited our team in Hamburg, which is where most of our offshore wind talent is, spent time with our technical and project development team there. And I think from that, that helped them make the decision to select us over others.

Wassem Khalil
Senior Director of Investor Relations & Strategy

Okay. Duncan McDonald asks approximately how much of your debt is variable versus -- or sorry, variable rate exposure? And how much of this is covered by swaps.

Pauline Alimchandani
Chief Financial Officer

So, we have 0 variable rate exposure today or near 0. Almost all of our debt is fully hedged and that will continue to be the strategy and the risk management approach that we take going forward.

Mike Crawley
President and Chief Executive Officer

Okay Well, thank you very much, everybody, for coming out. And as I said, for the third time, we'll say for such a cold morning. And it's great seeing everybody again and being able to be in the same room. So, we're going to hang around a bit after. So, I hope we can have some one-on-one conversations. I don't know if the sandwich is coming, there you go, some food, too. Okay. Thank you very much.

Pauline Alimchandani
Chief Financial Officer

Thank you for everyone who joined us online as well. Thank you.