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PRESENTATION

Christopher Kenneth Jarratt - *Algonquin Power & Utilities Corp. - Vice Chairman*

Great. Is this on? Yes, great. Thanks and welcome, everybody. I'd like to welcome you to what I think is our Ninth Annual Toronto Investor Day. My name is Chris Jarratt, and I am Vice Chair of Algonquin Power & Utilities Corp.

Just incidentally, this picture on the right here is the last turbine we flew at Amherst Island. It was just in the summer, we put the last turbine up, and David Bronicheski wanted me to mention that the white wispy stuff is actually clouds, not smoke.

Just going to introduce our first panel. As usual, David Bronicheski is joining me on the stage with -- he's our Chief Financial Officer; and Ian Robertson, our Chief Executive Officer.

Section 1, as usual, is just going to be an overview of our business and we will get started in that.

The agenda for the day is meant to give you an overview of the business. But probably more importantly, it's meant to give you a description of how and why we do our business. And one of the main objectives we have in that is to give you exposure and visibility to the broader management



team. So the format has been designed to have multiple members of our management team present each section, and then we're going to have a short Q&A at the end of each section.

We're going to have a break partway through the morning. And I hope you're going to have a chance to meet the broader management team, and you can actually tell us because we're the only ones here with nametags. And our plan is to have you finished and done and out of here by noon so you can get on with your day.

Just a couple of housekeeping matters. We're going to have some questions in addition to the Q&A sessions. We're going to have them through slido.com. And if you enter the event code 2018AQNT0, you can put the question in, and I think David's going to manage those questions and make sure they get answered at the end of each session.

We've talked about this every time we do -- every time we have this Investor Day but how safety is absolute -- paramount to us. And one of the ways we do this -- the only way to actually have a decent safety program is to have front and center in everybody's mind on every day. And one of the small ways we do this, [on a small many] ways, is we have a safety moment. And all it is, is it's just meant to have a short conversation about safety at the beginning of every meeting.

And for this year, I want to -- no, I'm not going to call in David. I'm going to do it myself, and we have a short video on cybersecurity, which is probably a safety matter for each one of us and our families.

(presentation)

Christopher Kenneth Jarratt - Algonquin Power & Utilities Corp. - Vice Chairman

Great. Just while we're on safety, as I mentioned that the safety is paramount to us and the safety journey for us is never over. And I just wanted to provide you a little bit of an update on our progress over 2018. And the short answer is, we achieved leading safety metrics in 2018 when we compare it to the industry standards as well as our peers. But probably more importantly for us is what the trend shows. And what it shows is all of the safety metrics, the key safety metrics that we track, all showed a significant improvement in all categories.

One of the things I am personally most proud of, of our organization is our employees. And we're a team which is comprised of committed, experienced and talented individuals. And you're going to hear from Ian a little bit later about the importance of recruiting new talent in the market today and as we grow our business.

In 2018, we've expanded our management team significantly, and I'd just like to introduce some of the new faces who have joined us. The first one is Mary Ellen Paravalos. Mary Ellen is at the back there, and Mary Ellen has joined us as the Chief Compliance Officer and Risk Officer. And Mary Ellen's an engineer by training with 25-plus years of experience and comes to us from Eversource.

The next individual is Johnny Johnston. And I saw Johnny here somewhere, but Johnny is at the back there. And Johnny has not yet joined us, but he will in the New Year. He's going to be joining us in a new role of Chief Operating Officer, and he has 20-plus years of experience with National Grid.

Michael Dilworth is also in attendance today, and Michael is going to be joining us as the SVP of our Solar Development Group. He has 20-plus years of experience and most recently was the CFO of OYA Solar.

Brenda Marshall, who is also in attendance, is going to be joining us in the SVP role in Wind Development. And Brenda has a wealth of knowledge in the energy sector and has previously worked with ATCO and TransAlta.

You're also going to meet some new faces in the presentations coming up, and I'll let them introduce themselves as we go.



Also in attendance, we have -- I think we have 3 of our board members in attendance. Ken Moore, the Chair of the Board, is at the back; Dilek Samil is the Chair of the Compensation Committee; and Chris Ball is the Chair of the Audit Committee. So please, I hope you get a chance to meet them throughout the day.

Historically, we've always mentioned our milestone anniversary on this date. And last year, I think it was our 30th anniversary of being a company. Well, this year is the year of the dividend. And 2018 represents the 10th consecutive year of dividend growth. And you can see from the chart, there's a couple of things. One is we had a 10% CAGR growth over that period. But more importantly, from just the growth of a dividend, is the fact that the dividend is supported and underpinned by growth in earnings and improved coverage ratios.

And this next slide kind of shows what I referenced. Firstly, you can see that while the dividends have grown by over 10%, the earnings have grown by a much higher rate. And what this has resulted in is a vastly improved payout ratio, which is now in line with the broader utility sector.

Just want to talk a few minutes about some milestones and achievements that we had in 2018. And in addition to the record financial results and improved safety metrics, we did show significant improvement in some of the softer issues such as governance, risk management and sustainability. And for example, in the Board Games that came out last week, we increased our rank to 38 in the country. And I don't know what the total number is, but we're approaching the top decile in that. So that's -- if you look at our progress over the last 7, 8 years, it's been pretty significant.

We also recently received an award from the Governance Professionals of Canada for best practices in enterprise risk management.

In addition to that, we have demonstrated growth by bringing on 325 megawatts of new renewable generation in 2018, and we expanded our utility footprint again. We've [surfaced] numerous growth initiatives, and we're going to be talking about that a lot in the next couple of hours, including this international development platform, which is starting to hit its stride.

And lastly, we're on track to end 2018 with a stronger balance sheet and improved credit metrics.

The good news is that this performance has resulted in favorable results for our shareholders, and these graphs show how this total shareholder return has stacked up against the TSX Composite Index, the Canadian Utility Index and the U.S. Utility Index. And I think this performance has been leading -- industry-leading and has been sustained for over a decade.

And I don't actually have a better slide than this, so I'm going to pass it over to Ian now.

Ian Edward Robertson - *Algonquin Power & Utilities Corp. - CEO & Director*

Thanks, Chris. It's -- as Chris said, welcome, everyone. My name is Ian Robertson, Chief Executive Officer of Algonquin Power & Utilities Corp. It is nice to welcome everyone to the Ninth Investor Day and seeing familiar faces. And clearly, you must be here for the story because there is no free lunch this time.

And so anyway, I wanted to talk about 3 things today: one is just give you kind of an overview of some key messages; second of all, perhaps visit our international investment initiative, which is something we talked about last year and obviously as we've continued on; and thirdly, continue the dialogue that actually started here at the St. Andrew's Club with respect to the role that sustainability is playing in charting our course forward.

So in terms of the messages of the day, these are some thoughts that I guess I'd ask to ruminate in your head as you're listening to the rest of the presenters. The first is how we believe that operational excellence is actually reducing risk and enhancing returns. And you're going to hear a story from Peter Eichler on how we can -- our ability to influence in the jurisdictions in which we operate and add additional regulatory mechanisms is reducing the volatility of earnings in our regulated utilities. And as an example, we've been able to achieve decoupling, basically decoupling our returns from weather phenomena in Missouri and New Hampshire. And what that does is that brings 85% of our revenues within the Liberty Utilities Group to be practically decoupled from weather phenomenon and, therefore, reducing risk.



The second story you're going to hear from Joanne Atalay is about how managing our operation and maintenance costs in our nonregulated renewable energy business is of increasing importance. And I think you can imagine that if you can save \$1 per megawatt hour on operating your collection of wind farms and solar facilities, it makes a much bigger impact when you're earning \$30 for the sale of that megawatt hour versus earning \$100 5 or 6 years ago. And so there is -- I think there's a big win to be had.

And then lastly, our discussion of operational excellence wouldn't be complete without a conversation about our press release regarding New Brunswick Gas. It wouldn't be an Algonquin Investor Day if we didn't give you a press release to start your morning off. And we're going to get Jen to give us a few details on that.

The second thing -- the second message of the day is about the falling costs of renewables, and they continue to come down. Wind generation is the lowest-cost form of new generation. If you need a new kilowatt hour of generation, you can't do it any cheaper than building a wind farm. I mean, I get it, it has to be in a windy area. But the center of the entire continent probably falls into that category. And with the production tax credits that are still in effect in the U.S., that kilowatt hour of wind is what I call hypercompetitive. You can build a brand-new wind farm and operate it for less than the cost of just putting coal into an existing coal burner. And a good example of that is the story you'll hear today, about us building 600 megawatts of wind in the Midwest of the U.S., displacing coal generation, at the same time saving our customers \$300 million over the life of those assets.

And so -- and then the other comment I want to make in terms of the falling cost of renewable energy is there is life after 2020. 2020 is the year in which these production tax credits start to roll off, if you will, over the coming 5 years. They're going to decrease it 20% a year. And technological advances being brought forth by the manufacturers of wind turbines are reducing the levelized cost of energy from wind generation such that it will make up for the loss of those production tax credits, certainly through 2021 and 2022. And you're going to hear a story about our projects that we have premised for these 80% and 60% PTCs from Jeff.

The third story is -- actually, it's a continuation of a story that you've heard from us before, and it's continued growth in our regulated utility business. What, 2 years ago, was a \$3.6 billion pipeline of regulated investments went to \$4.4 billion last year, and it's \$5.3 billion this year. And if you do the math, that's a 20% CAGR over each of the years. And you'll hear how, from Gerald, where that capital's going to be going.

And one of the questions that might be running through your mind as you hear the story is, oh, my gosh, all that capital going into the regulated businesses and given kind of the sensitivity of regulators today in terms of raising cost for customers, that 13% -- 12% or 13% CAGR in rate base is actually only going to translate to a 3% annual increase in customer rate, so it kind of feels inflationary. And the reason being is the majority of that capital is being committed to initiatives that actually reduce customer costs, like this wind project I talked about in the Midwest. And then I guess the other thing, of that 3 point -- that \$5.3 billion, only \$400 million of it is in new utilities and obviously, the most recently announced New Brunswick Gas and the completion of a couple of initiatives that were previously announced.

So the last -- I guess this is a thematic comment that I'd like to kind of leave you with as we think about the entire day, and it's really about how this organization's entrepreneurial spirit is really responsible for its ability to derive industry-leading growth. And I'll obviously be continuing on our common theme of giving a 5-year forecast for earnings, but I can tell you it's more than 10%. And so -- and that's despite \$7.5 billion of growth, taking this organization from \$9 billion to \$16 billion over the coming 5 years.

And so the question is, what makes this organization special? What allows us to do it? And I think it's our ability to kind of mix entrepreneurialism, ingenuity, courage and an unrelenting drive. We mix those together in what's an otherwise pretty conservative business. And so -- and you think about some of the things that we've been able and even talked about on this stage, execution on our save the orphans campaign where we rolled up a collection of kind of small utilities but to form an almost 1 million customer utility at a very modest premium to rate base; or our ability to bring tax equity to bear in the regulated utility business. I think we were the first to do it and immensely proud of the organization being able to pioneer that, which gave our customers the benefit of low cost renewables subsidized by tax equity. Our think big, start small, scale fast initiative that you're going to hear thematically through -- from Mike Griffin through our renewable natural gas initiative.



And so I'm immensely proud of what this organization has been able to accomplish. I think it's accomplished things that other organizations certainly haven't accomplished, maybe they haven't even contemplated. But I would say this organization has done them and done them successfully. And so maybe that's a theme I guess I'd like to leave you with.

So a year ago, I stood here and talked to you about our international investment initiative and the strategy we are pursuing to look outside of the borders of Canada and the U.S. It's probably a little insulting to call it North America because I'm sure the Mexicans would find that. But -- so we came to you -- before we made that announcement, this would be the picture you will have seen, a company that was really through 2 business groups into the domestic utility business, in a domestic renewable business.

And about a year ago, we announced the formation, our strategy was to form this -- a group we call AAGES, which is to pursue developments of renewable assets or renewable energy, water, transmission, electricity on a global scale. And so -- and additionally, we acquired an interest in a company called Atlantica. For those of you who aren't familiar, Atlantica Yield is an organization that owns 22 or 23 assets, [it feels] just like ours, long-term contracted wind, transmission lines, solar, desalination, exactly the same assets and we're happy to own, they just happen to have an international footprint behind them.

But at the same time, we realized that Atlantica brought something else to us, and it was the ability for us to use asset-level financing or project financing, which up to now we hadn't really been able to use. And for those of you who are familiar with our story, we have an on-balance sheet structure. But Atlantica allowed us to bring asset-level financing to the pursuit, not only of international assets but of domestic assets as well. And so you're going to hear a story from Jeff Norman about the drop down of our wind farm that we're building in Illinois down into Atlantica. And the reason we're doing it is because we get to optimize the value through the use of asset-level financing.

And then lastly, if you want to dream a little and think about the art of the possible, is the potential for Atlantica to participate in the regulated utility business. And when you think about it, here's a perfect example of synergy from my perspective, is that candidly, before we got involved with Atlantica, I would posit that they probably wouldn't have pursued a regulated utility investment, domestic or internationally, because kind of a lack of operational expertise. Obviously, it takes a lot to run a utility and gain the support of regulators. And we probably wouldn't have invested in an international utility through Liberty Utilities because it would have felt geographically off-strategy.

But together, we bring the geographic comfort that Atlantica has from an international perspective, the operational excellence that Liberty Utilities has. And so perhaps international utilities are going to be on the dance card soon.

So there's a quick update. Ryan's going to give a little bit more thoughts on the international front when he gets up.

So now the kind of the third thing I want to talk about. And as I said, it's a continuation of a story that I started a year ago with you in terms of sustainability and the role it plays going forward. And originally, what I was going to do was just tell you the story. But I thought it might be more illustrative to play a quick video for you that we're using both internally and externally to communicate our vision and mission for sustainability.

(presentation)

Ian Edward Robertson - *Algonquin Power & Utilities Corp. - CEO & Director*

So the organization didn't hire me as the Chief Environmental Officer. So the question that is on your mind is, does commitment to sustainability actually lead to commercial success? And so I'd start by saying, let's pause it as a working hypothesis right now that there isn't a trade-off between achieving commercial success and a sustainable business proposition. And if that's true, the path to doing well actually leads through and might even be paved by doing right.

So we can probably all agree that in order to be commercially successful, a business needs 3 things: it needs loyal and satisfied customers; customers whose needs are being met by a talented, engaged workforce; and employees who work for a company which is funded by supportive, patient and committed investors. And I contend that none of these groups will be attracted to an organization that doesn't embrace sustainability as a core component of its business.

And so if sustainability can bring increased customer loyalty and it can bring a more talented and committed employee team and lower-risk proposition for investors, then I contend that doing well and doing right are not mutually exclusive. In fact, they're positively correlated. So I'd like to spend just a couple of minutes talking about each 3 of those elements of commercial success.

So the first one is customers. Most people actually believe that their purchasing decisions are rational ones, that they're evaluating a product in making that decision. But I actually contend that the reality is most consumers and most customers make their purchasing decisions based on an emotional connection. And even if they're not aware of it, they want their purchasing decisions to be aligned to make a positive contribution with their beliefs.

A recent study undertaken by Unilever said that 1/3 of customers are now choosing to buy from brands that they believe are doing social or environmental good. And of the remaining 2/3, I can't believe actually that the reverse is true, that someone would choose to be actively disloyal to organizations that embrace sustainability.

Now the question you're asking is, how relevant is the conversation about customers to a regulated utility? Well, the short answer from our perspective is that technology's disruptors, changing customer preferences are bringing about a new world for the utility business, a world in which utilities need to compete for their customers, where interlopers are trying to disintermediate the relationship we have with our customers and one in which customer -- utility customers will actually have a choice. And so being clear about our sustainability stance seems to be the path to creating loyalty with a group of individuals who, in the not-too-distant future, will have the ability to choose who their supplier is. And that's why it's important in the regulated utility business.

Which brings us to our talented team. The war for talent is real. And clearly, there are disruptive forces that are changing the competitive landscape in the regulated utility business. We have an aging workforce. I know that video start -- inappropriately made my hair look gray, and I know it's clearly not the case. That -- but winning companies need to attract the best and the brightest going forward. And study shows that individuals actually want to work for companies that adopt sustainability at the core.

First of all, a commitment to sustainability is a source of pride for individuals and it certainly -- actions that are supportive of a sustainability proposition lift up a company's reputation, and it makes people feel proud to work for an organization which has adopted sustainability.

Second of all, a commitment to sustainability on an organizational basis probably applies to a candidate that a company that cares in the greater good about society probably cares about their employees as well.

And lastly and perhaps most importantly, a connection to sustainability allows an organization to tie its values to those of its workforce. And given that Generation X-ers and Millennials and even the Generation Z-ers or Zedders, are going to be replacing a graying workforce, it's notable to consider that 80% of younger candidates actually consider a company's social and environmental commitments when they're deciding where to work. And 3/4 of them actually say that they would take a pay cut to work for an organization that's committed to the earth. And I think that's an HR opportunity that we need to explore. I'm just kidding.

That's a -- but in summary, I think it's pretty easy to believe that there are candidates who would choose not to work for a company that wasn't clear about its commitments to sustainability. And it's pretty hard to believe that there are individuals who would choose to work for -- that who would only choose to work for a company which is -- makes a commitment. So ergo, an organization that has a stated commitment to sustainability will have a deeper pool of talent from which to choose.

And then lastly, for success, an organization needs committed and supportive investors. Nobody can expect investors to take a lower return in order to get a socially responsible investment. But the good news is they actually don't have to. Over the past 25 years, the ESG Index, which is the Environmental, Social and Governance Index, has outperformed the broader S&P by 10%. And while the returns might seem to be better, and they probably are, I think the really more important consideration is in terms of lower risk.

I demonstrated social environmental commitment can reduce risk by bringing alignment across an organization on the basis of what gets measured, gets managed. We're seeing -- well, I guess the general thought is 25% of institutional investors are considering ESG metrics in their investment

decisions. And I can concur that when we are going to investor meetings, we often find, in addition to the portfolio manager, an ESG expert asking us questions. And so -- but I wonder if organizations that aren't clear about their sustainability stance are being prejudiced in their consideration.

So lastly, how are we turning this into action from our perspective? Well, the United Nations identified 17 what they call Strategic (sic) [Sustainable] Development Goals, SDGs, which are aligned with sustainable growth. Our sustainability policy, which is posted on our website, specifically aligns with 7 of those. And these are goals where we think our business and our approach to business can make a meaningful difference.

And so in our case, you can imagine our commitment to renewable energy will contribute to climate change and the environment. Our commitment to management of water resources in a responsive way, our commitment to the health and safety of our employees and the public, our local responsive operating philosophy will support our host communities. And lastly, and maybe perhaps as most importantly, our commitment to diversity inclusion will create equal opportunities for everyone within our organization. We're a proud member of something called the 30% Club, an organization of companies who have made a public commitment to have 30% of their board, we've already achieved that, and its senior management team, represented by talented women.

But just doing the right thing is not enough. As I said in the video, you have to measure against it, you have to perform against it, you have to communicate. The essence of ESG reporting is a way for us to allow to communicate to our stakeholders things like our use of environmentally responsible fuels, our management of valuable resources, the implementation of fair and safe labor practices and perhaps, importantly, given our now international perspective, our opposition to bribery and corruption in everything we do.

So with that, in summary, I hope I've provided kind of some evidence that loyal customers, engaged employees, supportive investors are the recipe for outsized commercial success. And I think that's the recipe that Algonquin has been baking in its kitchen for more than a decade. And so I hope it resonates with you. It certainly resonates with us.

So with that, I'm going to turn things over to David.

David Bronicheski - Algonquin Power & Utilities Corp. - CFO

All right. Thanks, Ian. Good morning, everybody. It's a pleasure to be here, and it's a pleasure to see familiar faces in the crowd and new faces in the crowd. And we're really excited to be here today as we outline our plans for the next 5 years.

And if there's one thing I think people who have been following Algonquin for quite some time have come to know and love about us is our commitment to growth and our ability to grow the business and do that accretively.

And what a growth plan we have for this year. \$7.5 billion of investment over the next 5 years. And a couple of things I'd like to highlight about this carefully curated program that our development teams have pulled together.

First of all, all of these investments meet all of our criteria, accretive to EPS, accretive to FFO, accretive and supportive to our risk profile and accretive and supportive to our credit metrics in the company. The other thing I'd like to point out is kind of the mix between our regulated business and the nonregulated business.

You'll see here that in the regulated business, \$5.3 billion is being invested over the next 5 years. That's fully 70% of the capital program that you see before you. So that means today, when we have a business mix of about 70% regulated utility, 5 years from now, our business mix is not going to be shifting dramatically.

We're taking advantage of the production tax credits in the United States. You can see that here, represented by these bubbles on the renewable side and even on the regulated side of the business as we do our greening of the fleet. There's a high degree of visibility and certainty associated with the regulated utility investments, and that's a key point that we'd like to emphasize as well. It's all in our control for the most part, up top, a few regulatory approvals to get through, and you'll hear a little bit about that this morning. But largely, an organic program of capital there. And the other thing, finally, I'd like to highlight is on the international side, \$0.5 billion of commitment over the next 5 years.



And so each of our teams this morning will give you a lot more detail on all of the different components of this capital program. So you don't get to build this much capital without finding a way to pay for it. And as Chief Financial Officer, I am preoccupied for the most part with how do we continue to come up with the capital that we need to grow in the business. And this has been something that Algonquin has been doing from day 1. From the early days when it got started in the '80s, it had private equity and project finance. Finally, it got to the point they needed access to the public capital markets and we IPO-ed in 1997. And then with a little bit of project debt, continued to grow the business. We then needed additional tools in our financing toolbox. We introduced convertible debentures early on.

Then as we really started growing our utility business, we started first at utility-level bonds, and then we then introduced a very efficient senior unsecured utility bond platform, and it's been a tremendous benefit for all of our utilities. We've got about 40 of them in our mix today. And some of the medium to smaller ones have now access to a really low form of capital on that program that they would not otherwise have available to them.

We were the first IPP in Canada to have a senior unsecured bond platform to finance our renewables business up here in Canada. We then introduced a DRIP program. More recently, we had preferred shares in our mix. We were the first to bring U.S. tax equity and introduced that to the Canadian market back in 2012. And I remember going through a long education process with the investor community and analysts as we rolled that into our mix.

People know 2 years ago, we got a New York Stock Exchange listing, and that was a deliberate effort to continue to diversify our sources of capital. And where you actually saw it play out is just this last October, as we entered what was effectively our debt IPO in the United States with our first public debt offering of subordinated notes that we now have in the mix, and that's an important piece.

Now as we look forward to 2019 and beyond, we're considering other diversification sources for our capital, perhaps an at the money program is in the future. Monetizing our own tax equity could be another and as well as the U.S. marketed equity offering. All potential opportunities for us going forward.

So what does this all translate into? Well, it's allowed us to create a really strong, solid, BBB flat investment-grade balance sheet. You can see here, you think of our mix as roughly 50-50 debt-to-equity. It's kind of how we think of it. That's not exactly the credit metric we follow because we pay careful attention to the credit metrics that the rating agencies follow. But generally speaking, it lands you at about 50-50 debt-to-equity.

What we're now focused on, and you saw it in October, is an expansion of our subordinated notes preferred share, that sort of mid-level security in our capital stack. It's been relatively underutilized, mostly because preferred shares here in Canada have not been all that efficient for us because of something technically called as Part VI. I Tax, which in essence requires you to prepay your corporate taxes before you have to. And so for us, it's not that efficient. So the subordinated notes that we've offered in the U.S. this October, much more efficient for us. And so there's over \$1 billion of capacity that's available to us in that sliver of our capital stacks and still achieve the credit metrics. As I said, 2 very efficient, solid, senior unsecured and bond platforms for power and utilities business. And we are highly committed to maintaining our BBB flat credit rating.

So as we look out now over the next 5 years, how does this \$7.5 billion capital program play out? Well, as you can see, about 70% of that program is going to be in the regulated utility part of the business.

Over here on sources, I often like to point out that our sources of capital generally falls into 1/3, 1/3, 1/3. Free cash flow is about 1/3 of our sources of capital going forward. That's because we have a relatively low payout ratio, and that allows us to retain cash in the business for reinvestment. I've talked about the debt side of the balance sheet. On the equity side, yes, there is going to be some equity, but it's not all going to be public issuances of common equity. We do have a DRIP program, certainly. Tax equity is a major part of that equity slice, and you'll be hearing more about that this morning. But yes, you can't build out \$7.5 billion of capital and not have to come to the market for some equity, and we're not at all apologetic for it. I think a little bit of equity to maintain a strong investment-grade balance sheet when we're doing all of this on a very accretive basis is certainly worth it.

Now before I turn things back over to Ian, just a couple of things on tax equity and our tax position. First of all, tax equity remains a major source of financing for us, as you saw on the previous slide. It's been great to be able to partner with some top-tier companies in the U.S. as they, in essence,

monetize on our behalf the tax attributes of these renewables projects. And what you see in our income statement is something called HLBV income, hypothetical liquidation at book value is what it stands for. It's a fancy term for basically the accounting way that we recognize the value transfer that's taking place from tax equity to us over the life of these -- the first 10 years of the project. Now this year, with tax reform coming in, there is a little bit of an acceleration of that HLBV income. You saw it today. But HLBV income will be with us for quite some time, and it's really just tax reform has reshaped slightly our HLBV income going forward.

As far as our overall tax position, I think it's no secret, we certainly, being a Canadian company with 90% or more of our business in the United States, certainly takes advantage of basically the standard cross-border tax planning strategies that exist on companies that do operate on both sides of the border. And what that does is that has given us an international advantage. Our effective tax rate, as you can see here, has generally been in the -- will be in the 8% to 10% range for 2019 and 2020.

But we're a very profitable company. And what that means is cash taxes are coming into the picture, into the horizon. And for us, that horizon is in this 2021 and 2022 period. But that actually presents an opportunity for us because that means that with our access to capital, we actually can self-monetize these production tax credits, in other words, be our own tax equity. And what that effectively does is that allows us to lower even more, our effective tax rate, in the period 2021 going forward. As we self-monetize the PTCs, the production tax credit is a direct credit against our U.S. taxes, otherwise payable, and it allows us to lower our tax position going forward after that.

So with that, I'll turn things back over to Ian. Ian?

Ian Edward Robertson - *Algonquin Power & Utilities Corp. - CEO & Director*

David, thank you. So I just wanted to wrap up before we get going with the first section on kind of some thoughts on the impact of all this growth. And as David said, it's kind of built into our DNA, maybe my DNA, is the belief that we can create value through growth going forward.

And so 3 comments. First is the total CapEx pipeline is \$7.5 billion. And maybe I should have mentioned right from the beginning, we started reporting our results in U.S. dollars last year. So every reference to dollars, other than when Jen is speaking of New Brunswick Gas, is in U.S. dollars. But this compares to \$6.6 billion last year. And just keep in mind that that's \$1 billion -- we're already \$1 billion into that \$6.6 billion. So we've really been able to, as we look forward and added that next year to the 5-year forecast, identify attractive opportunities.

That results in about a 12% CAGR in our assets over that 5-year time frame. And -- but keep in mind that in 2017, we increased our asset base by about 40% with the acquisition of Empire. So still being able to drive 12% CAGR from the number that was 40% -- starting from a number that was 40% bigger than the year before, I think, speaks to, as I said, the entrepreneurial spirit that this organization is known for.

The second comment I'd like to make is about \$4.8 billion of the \$5.3 billion you're going to hear Gerald speak of is actually committed to our existing utilities. And so if you were handicapping that in your models for this organization, I would actually posit it requires a relatively low handicap because it's investment in our existing utilities.

And then lastly, and this is a point that David made, is that if you like this organization now, in terms of its business mix, 70% in the regulated utilities mix, then you're going to continue to love it for the next 5 years because 5 years from now, after we spent \$7.5 billion, this organization is still a 70%-or-so regulated utility business. And so it is basically going to remain unchanged.

And so where does this asset investment program take the organization from a returns perspective? Well, firstly, let's look at EBITDA. So a couple of highlights. If you do the math, you'll see that for 2018, we're kind of in the \$770 million-or-so of EBITDA, not that -- that shouldn't be surprising given the results we've reported so far year-to-date. Obviously, it's dependent on weather and wind and solar and that sort of things. But the EBITDA CAGR between -- for the next 5 years through to 2023 is mid-teens. And again, I'll repeat, that's after a significant increase with the acquisition of Empire.



And so -- but we understand that growth in EBITDA without growth in EPS is candidly growth for growth sakes. And so we're pleased that again, our EPS growth -- and there's a thousand assumptions as how you can -- I'm sure you can all imagine that goes into a prediction like this remains in the double-digit category.

And then lastly, I'll point out there is no free lunch in the EPS growth equation in terms of increasing leverage. And as David said, we remain committed to maintaining our BBB flat credit metrics. We believe that that's kind of our optimal cost of capital, the Modigliani-Miller kind of curve for cost of capital. That's the positioning from our perspective.

And lastly, before I wrap up, I did want to give some thoughts on the dividend. And we are maintaining that 10% commitment to the dividend we made last year through 2021. But beyond that, I actually expect the dividend to be set by the board in the context of our EPS payout ratio. With 70% of our earnings in the regulated utility space, that feels like the right metric for us to consider. And metrics, which as Chris had pointed out on his slide right at the beginning, are actually falling nicely.

And so -- but what I think I can confirm is that to the extent that management delivers industry-leading EPS growth, that the board will have maximum flexibility to be thoughtful and deliberate in terms of establishing a go-forward dividend policy that optimizes and maximizes shareholder value. And I think that's a thought that you might want to keep in mind for the last couple of years of our forecast going forward.

So with that, we're going to open it up. If there are thoughts, comments, questions at this time, happy to entertain them for a few minutes before we get the next guys to the stage.

QUESTIONS AND ANSWERS

Christopher Kenneth Jarratt - *Algonquin Power & Utilities Corp. - Vice Chairman*

We're happy to take questions 2 ways. We love live questions, so we don't want to discourage that. But for other people that perhaps feel more comfortable asking through Slido, we are taking that, and obviously, Slido works perfectly for people that are viewing this livestream. Rob, go ahead.

Robert Hope - *Scotiabank Global Banking and Markets, Research Division - Analyst*

Sure. Just in terms of the dividend, just want to revisit what you're just talking about there. You recommitted the outlook beyond -- sorry, Rob Hope, Scotia. Just want to talk on the dividend. So you're reconfirming the 10% outlook beyond -- over the next couple of years and then giving yourself some additional flexibility. Just want to get a sense of what your thoughts are on the near term, whether or not you did weigh a lower payout ratio to retain additional cash flow in the interim and whether or not you think you're getting paid for the 10% dividend outlook.

Ian Edward Robertson - *Algonquin Power & Utilities Corp. - CEO & Director*

Well, I mean, I think in -- the short right now is, even over the next few years, given our growth in our EPS, we actually are continuing to improve our EPS payout ratio, notwithstanding the 10% growth. I think we -- we don't believe that even if you could, that paying -- having a higher than 10% growth than the dividend makes any sense at all, that would just be wasted money. We have made a commitment to the investment community, and I certainly don't want to retrade that because then people will infer that there are issues arising in terms of our earnings, and that is so not the case, as you can see from our earnings profile. And so I think the -- I think maintaining the commitment we made is -- probably makes sense. Thereafter, I think the board needs to look at what's the appropriate payout ratio, how do we meet against our peers, who are our peers, are they the Canadians, are they the Americans? So I think, 3 years from now, the board will look at that, but I think, what the -- I think, as a management team, our challenge is to make sure that we deliver earnings that are at least 10%. That way the board could have maximum flexibility whatever they choose to do: if they want to maintain payout ratio, that's their ability; if they want to lower the payout ratio in favor of reducing growth in the dividend. But I think right now, we're doing what we need to do. I think if you look at the correlation of enterprise value to dividend growth is

almost 0. The correlation to earnings growth is actually positively correlated. And so from our perspective, we really want to focus on the thing that is the big driver of enterprise value, and that's growing earnings going forward. I don't know if that's a response to your question about dividend, but...

Robert Hope - *Scotiabank Global Banking and Markets, Research Division - Analyst*

No, that's great. And just as a follow-up, just on the sources and uses of capital, a number of your peers are pursuing asset sales rather than common equity. Just want to get a sense of your thinking about potentially dropping down assets or monetizing assets as a source of funding.

Ian Edward Robertson - *Algonquin Power & Utilities Corp. - CEO & Director*

So you're saying we should sell New Brunswick Gas? We just bought it. I'm kidding. I'm kidding. I'm kidding. I think when you look at a spectrum of the value proposition, at one end of the spectrum, you're a buyer of everything. Somewhere in between, you might be a holder. And at the other end of the spectrum, you're a seller. Things can move you to the spectrum of seller, things beyond your control. I think we've all seen lots of examples of organizations have found themselves, perhaps not willingly, in the mode of selling. I'm so pleased that today we don't have to make that Sophie's Choice. We're not forced to do it. And if a good investment opportunity comes our way, we can continue to realize. And if it frankly is -- if it's accretive to our growth trajectory going forward and our credit metrics aren't under pressure, gosh, I think, as a shareholder group, you'd be -- the shareholder group would be encouraging us to continue to look at those. I think, so in short answer right now, I don't think there's anything on our, "Oh my gosh. We should or need to sell this." We are not married to any asset. We are not in love with any of our assets. They are -- everything is for sale always. And we look at -- my goodness, you saw the multiples that AltaGas was able to achieve in the sale of their Northwest Hydro facility and you ask yourself, maybe there should be something that goes into that? So nothing today, but we are not committed to holding everything forever. So I don't know if that's an answer to the asset -- to the capital recycling question.

David Bronicheski - *Algonquin Power & Utilities Corp. - CFO*

And just one thing that I would add to that, and I forgot to mention it. I mean, from time to time, we've stretched our balance sheet to finish an acquisition, like we did with Empire, but we never broke our balance sheet. And we've deliberately, over the last 2 years, set apart on a delevering strategy from that point in time. And so we find ourselves today basically with a very strong balance sheet and so we're really not having to reach into our chest of assets, at least at this point in time, to recycle them. And I think, as you can see, it's a relatively modest amount of capital to fulfill what's otherwise a \$7.5 billion capital program.

Ian Edward Robertson - *Algonquin Power & Utilities Corp. - CEO & Director*

Other thoughts, Sean?

Sean Stuart - *TD Securities Equity Research - Research Analyst*

Sean Stuart from TD. Ian, when we look at the \$7.5 billion 5-year spending plan, pretty similar to what you had last year, I could go through all the projects, but can you give us an idea of churn in that overall opportunity set? How many opportunities have dropped off over the last year, or last couple of years? Has that accelerated versus where we were a couple of years ago?

Ian Edward Robertson - *Algonquin Power & Utilities Corp. - CEO & Director*

Candidly, Sean, I can't actually think of what's fallen off the list. Generally, we try not to put things on the list that don't fall into the "way more probable than not" category because then I would have to stand here and talk about projects that didn't go ahead. Clearly, there had been a number of additions to the list since last year. You're going to hear a story about an additional 200-megawatt wind farm, which is a 1/3 of \$1 billion right



there from Jeff. Clearly, you're going -- that we're going to speak more fully about our Customer First Program, which is about \$400 million. Grid modernization, which is something that's kind of picked up steam in our regulated utility business, is about -- a little over \$0.5 billion. And so I don't think this is a story about churn, about, "Oh, gosh, that Blue Hills project didn't go ahead. But good news is we found that other project." Generally, if we've talked about it, so far, I mean, knock wood, we're kind of batting a thousand on the things that we put up in front of the community in terms of the things that we're going to do and I sure hope that it continues on. But, sort of keep that question in the back of your mind because I think as we go through the day you'll go, "Oh, okay, I see, where did that extra kind of \$1 billion come from in terms of from last year?" And it's actually, the good news it's like 3 things and I just hit them for you right there, Sean. Mark, did you have a question?

Mark Thomas Jarvi - *CIBC Capital Markets, Research Division - Director of Institutional Equity Research*

Yes. Mark Jarvi from CIBC. So as we think about the opportunities that you've identified over the last year in the utility franchise and obviously in the context of U.S. tax reform, maybe you can walk us through how much that's been a driver of opportunities and initial discussions with regulators in terms of the ability to drive higher rate base given the offset with taxes.

Ian Edward Robertson - *Algonquin Power & Utilities Corp. - CEO & Director*

Well, so a whole bunch of thoughts go through my head when you asked the question. Tax reform, interestingly, well it's supposed to be a neutral for business -- in fact, it's supposed to be a positive for business, maybe even a neutral for the utilities, actually was not a neutral for utilities because of the compression of your cash because a lot of utilities, because of bonus depreciation, weren't paying cash taxes, but they were collecting it from customers. And when the tax rate went down, they stopped collecting it. So that put pressure on a lot of utilities' credit metrics and I actually think that's led to a number of dispositions in the utility space. Clearly, as we think about the pressure that Hydro One was under -- that's obviously not a disposition, but the question about Avista and Emera's balance sheet, there's a lot of people who tax reform was not a very good thing from their perspective and then -- I think, so it's led to dispositions. In terms of the ability, from a regulator's perspective, clearly there is a high sensitivity to not driving up customer rates, but I think it has occasion and opportunity to deploy capital in areas that you can -- and this will sound bad, but soak up that rate headroom, but giving customers value for that, in terms of grid modernization, resiliency and reliability, but without occasioning increases in rates. And in some respects, again, as I said -- in response to Sean's question, \$600 million going into our regulated utility business and not driving up customer rates is really part of the answer to your story there in terms of tax reform. I think tax reform probably -- and David put it up there, has had more profound implications on the nonregulated side of the business because of the impacts of HLBV, but a constructive impact on our earnings because of a lower tax rate. Again, I don't know if that's responsive to what you were looking for, Mark.

Mark Thomas Jarvi - *CIBC Capital Markets, Research Division - Director of Institutional Equity Research*

No, that's the color I was looking for. And then maybe just going back on your Slide 29 and you showed sort of the asset mix and sort of a bigger weighting towards power, still clearly, a dominant force from the utility franchise, I'm just wondering what do you guys think about evolving the business and opportunities in international with growth, in terms of that -- sort of that mix in terms of earnings stability, that regulated cash flow in terms of where you guys see this position over the next 5 years?

Ian Edward Robertson - *Algonquin Power & Utilities Corp. - CEO & Director*

Well, left to our own devices, right now, that \$7.5 billion is divided such that we won't change our business mix. So as I said, if you love us now, there's nothing you're not going to like in 5 years from now. I think the question that you're getting at is, okay, at \$16 billion, is there a thesis with this organization -- that maybe this organization might be thinking about bifurcating itself, one that's more of a pure play in the utility space and one that's more in the renewable space. At this 10 seconds, it would feel wrong to create an orphan in the marketplace. And I don't want to say that AltaGas as spinning out of its asset created an orphan, but it doesn't feel like there's a -- I wouldn't want to repeat that business proposition and be explaining to the investment community why we'd created a small entity that doesn't have economies of scale and mass behind it from a capital perspective. So I would argue not now. At \$16 billion, maybe yes. I can see the advantage to creating 2 vehicles that might have their own access to capitals and the ways to optimize their value. But right now, we think the business mix is actually pretty constructive. As you know,



Standard & Poor's loves regulated utilities, and I think that's a huge contributor to us having a BBB flat credit rating when most other organizations in our space don't enjoy that, certainly in the renewable energy space.

Christopher Kenneth Jarratt - *Algonquin Power & Utilities Corp. - Vice Chairman*

This is also a good jumping off point for one question that has come in for Slido here, and it is talking somewhat related to both the business mix, which is a comment coming in saying that they're -- they sense that maybe we're being overly conservative on our international expectations, in that kind of given everything that's going on with AY and ABG that perhaps -- like that opportunity set maybe [isn't] much larger than kind of what we're unveiling here at \$500 million.

Ian Edward Robertson - *Algonquin Power & Utilities Corp. - CEO & Director*

Well, if the observation is the world is bigger than Canada and the U.S., I'll agree. The world is bigger than Canada and the U.S. and I think we are just unraveling that story for our organization right now. And so the short answer is, yes, we -- obviously, we wouldn't have been enthused with it if we thought it was limited to the \$1.4 billion that we talked about.

PRESENTATION

Ian Edward Robertson - *Algonquin Power & Utilities Corp. - CEO & Director*

I think just in the interest of time, we did promise to get you out before noon. Maybe if you could hold some questions, we're going to continue this on, but I'd like to maybe welcome the next panel to the stage, Peter Eichler, Jennifer Tindale and Joanne Atalay, to speak about operational excellence. Peter?

Peter Eichler

Today, we're going to spend a couple of minutes talking to you about operational excellence and how it drives value in our businesses. All right.

So first, from a regulated utilities perspective, I'm going to tell you about how our local approach helps create 2 outcomes. First, from a customer perspective, it helps us keep our rates competitive. And from a shareholder perspective, it helps us reduce regulatory lag and enhance our returns. Then I'm going to ask Jennifer to come up here, and she's going to tell you some more information about the exciting announcement of Enbridge Gas New Brunswick from this morning. And we'll have Joanne tell us a little bit more about how focus on reducing costs and deploying our assets efficiently creates benefits for our Renewable Generation business.

So first, I want to spend a few minutes about telling you about how we believe that our approach to managing our utilities creates better outcomes. And the way that we do this is by focusing on what we call our 3-pillars approach. Pillar #1 is regulatory mechanisms. And you heard Ian mention the importance of things like revenue decoupling. We also put emphasis on accelerated infrastructure mechanisms and the ability to include CapEx in a posttest year basis from our rate cases.

Pillar #2, I'll tell you about how we actively manage our CapEx and take advantage of the geographic diversity within our portfolio and how we've been working better with some of our contractor partners to reduce regulatory lag.

And pillar #3, economic development, really is the source of revenue for us that helps create headroom in rates and creates opportunities for incremental investment.

So all told, these 3 pillars have the impact of reducing our regulatory lag for our shareholders while keeping rates competitive for our customers.



Before I jump into the 3 pillars, I want to maybe spend a minute or 2 on ROEs and give you a little bit of context on some of the trends that we've seen. The 2 questions that we always tend to get is, where are ROEs and where do we see them going? So if you think about the ROE trend the last couple of years, it's been pretty much kind of in that 9% to 10% range, maybe slightly decreasing over that period of time, but really kind of range-bound, and that makes sense when you think about it in relation to long-term U.S. 10-year treasury trends. Typically, if you look back the last 20 years or so, it's been like 600 to 800 basis point spread, and that's a trend that we've seen.

From a Liberty Utilities perspective, our weighted average ROE is right there at 9.6%.

To the question of where are ROE's going, is one where we can look at the way in which regulators typically tend to look at establishing these ROEs. And if you think about the utilization of capital asset pricing models and discounted cash flow models and you take into consideration the risk factors within there and that 600 to 800-basis point spread I just talked about, from our perspective, we think it's likely that the ROEs are going to stay in that 9% to 10% range in the coming years.

But perhaps as important as what are the authorized ROEs that regulators are giving you, is what's our ability to actually earn them? And that's where the 3-pillars model comes into play.

So let me start with pillar #1, our regulatory mechanisms. And these are things, as I mentioned before, revenue assurance, which is rate decoupling or accelerated revenue recovery mechanisms that allow us to invest CapEx outside of the scope of rate cases that really help us achieve a win-win both from our customer perspective and from our shareholders' perspective.

And let me give you a little bit of context into that. When you look at the chart behind me here, even in 2013, we were starting to see that Missouri and New Hampshire were starting to take a bigger proportion of our portfolio. Utilizing our local approach, we worked with our local regulatory jurisdictions and our regulatory teams to explain to regulators how decoupling can be beneficial to both utilities and to customers.

So this past Thanksgiving, for example, just in November here, in New Hampshire, we were able to implement a decoupling mechanism as of November 1. And what that means is if you guys -- if anybody's from the Northeast U.S., they were forecasting one of the coldest Thanksgivings in about 100 years. Well, from a customer perspective, they were able to enjoy stable gas rates, while from a utilities perspective, we now have revenue certainty going forward. And that's how we establish this win-win.

Fast-forwarding to today, we've been able to utilize that local model and duplicate it to ensure that we've got mechanisms in just about every jurisdiction that we're operating in. As I mentioned just a second ago, we now have decoupling in New Hampshire. And in Missouri, with Senate Bill 564, after our next Empire electric rate case, we're going to be decoupled there as well. What that means is that, from an overall Liberty Utilities perspective, more than 70% of our revenues are going to be decoupled with another 15% attributable largely to commercial and industrial customers who are not really that weather-sensitive. So all told, more than 85% of our revenues are going to be insulated from the impacts of weather.

Yes, it's not advancing. Well, as we wait for the slide to advance, maybe let me touch on a little bit more on -- there we go, on Senate Bill 564 and pillar #1 and how these regulatory mechanisms and our local approach create value. So Senate Bill 564, you guys may have heard of, it's one that allowed utilities to put in place a mechanism called plant-in-service accounting in Missouri. It really came with a lot of great acclaim, not only from the regulator community, but also from the industry. But from our perspective, when we looked at that, we thought, you know what, we're already pretty good at managing our regulatory lag, but the bigger uptake we think from our customer and our shareholder perspective, is to focus on something like rate decoupling. And so what we did was working with our local government affairs teams, we worked with legislators and the other utilities to ensure that the senate bill allowed utilities to have a choice to implement plant-in-service accounting or revenue decoupling. And so that's how we're able to use our local approach to specifically get some of these mechanisms.

The second program I want to talk about, you heard Ian talk about the ingenuity and the creativity of our organization, but one of the programs that's been giving us a lot of applause pretty much across the U.S. has been a program that we put forward in New Hampshire, which will allow the regulated utility to own Tesla Powerwalls, which are behind the customer meter. And what this allows us to do is it opens up a brand-new set of opportunities from a utility perspective being able to invest on a behind-the-meter basis but from a customer perspective, it gives them the



opportunity to take advantage of [swots] of the value stack that just aren't available to them without the utility having some utilization of the battery. So a true win-win, and that's how pillar #1 enables better results.

I'm going to spend some time on pillar #2 and how we actively manage our CapEx. And to set a little bit of context, I think one of the questions that we tend to get asked a lot is, with 13 different states and regulatory jurisdictions, is that somehow a detriment to your business? Or does that somehow make us less efficient?

Well, from our perspective, that actually significantly enhances our ability to efficiently deploy CapEx. And what we mean by that is, with 13 jurisdictions, you can imagine we're always in rate cases in probably a handful of them. And so being that is the case, we're able to deploy our capital, so that it comes in towards the end of a test year, goes right into a rate case and works to reduce that regulatory lag.

Secondly, we've also been working better with our contractors. And to give you an example of that, we utilize what we call as just-in-time delivery with some of our major projects. So just 2 years ago, we put in a new expansion to our wastewater treatment plant facility in Arizona, which was about an \$18 million project. And working with our contractor friends, we were able to get terms that allowed us to take delivery of it right at the end of a test year, make the payment right then, and then it goes right into a rate case and again works to reduce that regulatory lag.

So what this all amounts to is if you see the chart behind me here, the last 6 years or so, if you were an electric utility in the U.S. going through a typical rate case cycle, your regulatory lag would be somewhere in the neighborhood of 9 months. Our \$5.3 billion program that you're going to hear about today has regulatory lag associated with it of under 6 months. And that's how we utilize pillar #2 to create better results.

Before I leave pillar #2, I want to give you maybe a little bit of context into a project that many of you may have some questions about, which is our customer savings plan or Greening the Fleet initiative in Missouri and specifically the regulatory lag related with that. So sometime in the middle of 2020, we're going to be declaring a test year in Missouri and that will start likely about an 11-month process until our new rates are implemented. Using one of those mechanisms that I mentioned in pillar #1, the ability to true up our CapEx through to beyond the end of the test year, we'll be looking likely at the end of 2020 when we take delivery of the projects and we get to true that up while we're already 6 months into the rate case. Sometime around May of 2021, we'll have new rates implemented and that will effectively reduce the regulatory lag associated with a \$1.1 billion project to just over 5 months. And that's how pillar #2 creates great results.

I'm going to spend a minute talking about pillar #3 and our economic development activities. And to set a little context, we've been fortunate in the last 2 years-or-so to really see a tremendous amount of growth coming back through our service territories. To give you a sense, in Missouri alone, Q2 of 2018, it was #3 in the U.S. for GDP growth. And pretty much across the whole country are states in which we're operating are in the top half of GDP growth. What that translates to is more industry coming in, more housing starts. And we combine that with our business and community development team who are a group of professionals that are out there working, not only with the commercial and industrial customers, but also with the communities in which we operate to bring in new business.

So to give you a couple of examples, well, just the last few years, we've had Owens Corning come into our service territory, Koch Foods in Georgia and places like McKee Foods do significant expansions and McKee Foods is the maker of things like the Little Debbie Snack cakes that we all love, or at least I do.

So all told, what that means is there is approximately \$14 million of incremental revenues that have to come in annually from an economic development perspective. And if you think about what that does -- and the revenue -- each dollar of revenue could support between \$6 and \$7 of CapEx. And so it creates an incremental investment opportunity of up to \$100 million without having any regulatory lag and without creating upward pressure on rates. And that's how the economic development pillar creates great results.

So how do we sum this all up? Well, I want to revisit the question I posed at the beginning of pillar #2, which is, does this model that we're deploying create any diseconomies of scale? Or does this model of being across 13 jurisdictions and providing services locally cost more than perhaps centralized or stand-alone models? And the way that we tally that up is we look at the rates of our neighboring utilities. And you can see from the charts behind me that, in every instance, we're either competitive or below the average of our neighboring utilities. And what that means is that our model result is no less efficient than anybody's stand-alone or anybody's shared services models that are deployed.



So to recap here, we've told you about this 3-pillars' approach. And in the context of operational excellence, it allows us to achieve both competitive rates for our customers, it allows us to achieve shorter regulatory lag for our shareholders, and it allows us to reduce the risk associated with our utility businesses.

And now I'm going to ask Jennifer to come up and tell you a little bit about how our operational excellence philosophy weaves through to the acquisition of the Enbridge Gas New Brunswick.

Jennifer Sara Tindale - *Algonquin Power & Utilities Corp. - Chief Legal Officer*

Thank you, Peter. As we talk about operational excellence, we would be remiss if we didn't spend a couple of minutes on the role of mergers and acquisitions in Algonquin's growth.

For Algonquin, the acquisition of utilities really is a core competency. We have a track record of acquiring utilities that were perhaps noncore to the strategy of their prior owners, investing in those utilities with a focus on the 3 pillars of the local approach that's been outlined by Peter and realizing benefits for both shareholders and customers.

Although we have enjoyed growth through M&A, and there may be more where that came from, any future M&A source growth has not been included in and would be incremental to the \$7.5 billion investment plan that's being outlined here today. The M&A market for new investments has been and continues to be fiercely competitive. Against that backdrop, Algonquin has completed 24 accretive utility acquisitions since 2009. And there are 2 more that are in the midst of their regulatory approval processes, St. Lawrence Gas serving Northeast New York State and the City of Perris Water Distribution utility in California.

We pride ourselves on doing things that others haven't done, perhaps haven't even thought of doing. We find value for Algonquin, and we strive to, through our local approach, also find value for the customers of the acquired utilities.

Earlier this morning, we were pleased to announce that we have reached an agreement to acquire New Brunswick Gas. A little bit about that opportunity. The acquisition target is Enbridge's New Brunswick provincial natural gas distribution utility franchise. This high-quality, high-pressure system is relatively new, having been constructed in 2000 and starting operations in 2001. It is the only retail natural gas distribution utility in New Brunswick and it's currently serving approximately 12,000 customers, including in the urban population centers of Fredericton, Moncton and Saint John, together with [rural] taps in Sackville, St. George and St. Stephen. And the service areas are marked in purple on the slide behind me.

The utility operations here are fully regulated. They've been operating under a cost-of-service construct since 2017. And the franchise was recently renewed for 25 years, taking it out to 2044. There's also a committed recovery of some deferred start-up costs.

The existing pipeline infrastructure can support significant customer growth. We believe that Algonquin's utility management model, based on the local approach that Peter was talking about, is expected to support customer fuel switching from heating oil to natural gas. And in fact, we already have a program or 2 in mind to help enhance that timely customer growth. This is a nice opportunity that is aligned with the disciplined growth by acquisition that Algonquin has succeeded with in the past.

The deal is supported by a compelling investment thesis. The enterprise value purchase price is CAD 331 million, and the net rate base is approximately CAD 268 million. As I mentioned previously, there is a committed recovery of some deferred start-up costs and those are to the tune of approximately CAD 4 million annually for 25 years, a present value of approximately CAD 55 million. With this recovery, the run rate EBITDA is expected to be approximately CAD 38 million. This is an accretive transaction with an attractive rate base multiple.

With those economics in mind, let's talk a little bit about why this transaction makes sense. For Algonquin, it provides increased regulated utility diversity, it adds Canadian utility operations to our Liberty Utilities portfolio and it grows Algonquin's cash flow from regulated operations. The New Brunswick operations will increase Algonquin's customer, geographic and regulatory diversity. And we expect that Algonquin's existing, significant and geographically proximate gas utility presence, to provide valuable insight and experience to the investment.



We believe this transaction also makes sense for the customers. In New Brunswick, there has been some historical, political and regulatory challenges that temporarily reduced the capital investment in the utility by Enbridge. With those challenges in the rearview mirror, and with our relevant expertise, we believe that we are poised to optimize the performance of this utility, in particular with a local approach to economic development.

Execution on opportunities such as this, this is what we do. This is part of the operational excellence of which we speak. This opportunity capitalizes on Algonquin's entrepreneurial spirit and aligns with our commitment to increase sustainability.

Similar to what we've done with our other natural gas utilities, we look forward to improving accessibility to natural gas for customers, possibly through incremental investment in CNG, LNG and pipelines.

As we look toward closing, we expect Algonquin's history of constructive regulatory relationships, supported by our relevant expertise in technical, financial, regulatory and customer management matters to help facilitate the requisite transaction approvals. Upon closing, we expect a smooth transition for both customers and local employees and we look forward to making things better for both of their groups.

There appears to already be, within New Brunswick Gas, a strong cultural alignment with Algonquin's philosophies of safety, reliability, customer care and efficiency. And we expect that alignment to help ease the integration process. New Brunswick Gas is a strategic fit for Algonquin, and it can expect to enjoy a valued focus within our organization. We think that dynamic is going to help with the recruitment and retention of talent in New Brunswick.

In summary, the announced acquisition of New Brunswick Gas checks all the boxes in Algonquin's disciplined approach to sourcing, assessing and completing utility acquisitions. We've got a constructive regulatory jurisdiction, solid demographics, opportunity for additional investment and an attractive financial profile.

So with that, continuing on the theme of how operational excellence drives value, I'd like to change gears a little bit and move to the Renewable Generation side of the business.

I'd like to introduce Joanne Atalay, who is our Senior Director of Asset Management, and Joanne's going to join us and talk about some of the value drivers in that business. Joanne?

Joanne Atalay

Okay. Thank you, Jen. It's a pleasure to be here with you today. It's my second adventure into Investor Day. I've been with Algonquin for 3 years now, but I've actually spent over 20 years in the renewable generation space working for European and North American utilities. I also worked for a large oil major leading their portfolio of on- and offshore wind development.

Today, I'm going to talk to you about operational excellence in our Renewable portfolio and more specifically focused on our wind operations.

And I'll start by sharing with you the graphic that we have here, and this is descriptive of the core competencies that we ascribe to the delivery of operational excellence. And you'll see up there we reference safety, asset management, operations and risk management as competencies and those are only to name a few. These are part of our DNA and the way that we do our day-to-day business. But there's always more that we can do to reduce costs and optimize our revenues and the 3 strategies I want to talk to you about today, about how we're utilizing the procurement process, efficient operations and optimized production through analytics to deliver increased value.

If we just pause for a moment and think about why cost reductions are important to us. Well, once we've installed the projects, our capital is sunk and we turn our attention to the financial and operational performance of the asset. With 20% of our life-cycle costs of assets attributable to O&M, this is a key area of optimization through operational excellence strategy. You've watched us grow over the years, and as we continue on that journey, we're looking for opportunities to further create value. We need to ensure that our portfolio operations are scalable and cost-competitive. We're doing that through competitive agreements with our suppliers, but we're also looking at alternative operational strategies for our future,

which could include self-perform. If we are able to reduce our cost of operations by \$1 a megawatt hour, then in 2020, that could look like a cost reduction of \$7 million.

So where do we start on this journey to optimization? Cost optimization starts in the procurement stage. And as we're negotiating with our Tier 1 suppliers, we're leveraging a gigawatt of turbine purchases to achieve competitive price in our O&M costs. And when we look at the costs that we're being offered for our 2020 install versus the contracts that we received in 2016, we're realizing significant cost reductions on a per-turbine basis for O&M.

The large volume of our order also creates opportunities for advantageous terms and conditions where we're shifting some of the operating risk to the OEM with a goal of maximizing value and reducing costs for future operations.

In this stage, we're also gaining access to enhanced data and documentation. And while this may not be as intuitive as for most, it's important that we're able to get a good visual on to how our facilities are operating and also to have the documentation in place to allow us the future flexibility, should we choose to self-perform.

Having secured cost savings and gained access to additional data in this process, I'll just talk to you a little bit about our efficient operations. And what we mean here when we refer to efficient operations is proactively intervening to improve the efficiency and long-term reliability of our assets. We start with our site leadership that monitor the day-to-day performance of our suppliers with the goal of ensuring safe operations and enhanced reliability. We review our data daily, and we have a portfolio data system to make that a little bit easier.

And why I say that needs to be a little bit easier is if I give you a little bit of a sidebar conversation and an insight into our data. We collect 127,000 data points from 578 turbines multiple times a second across our fleet. The reason why we're doing this and paying such attention to our data is that if we are able to influence the availability on our facilities by 1%, that's a potential to increase our production by a reciprocal amount, and doing that, we're increasing our revenue opportunities. And in 2019, that could be an incremental \$2.5 million.

We're not just focused on availability in our operations, we're also looking at the performance and trying to catch what we call the silent stealers. And the silent stealers are a condition on the turbine where it's not alerted by a false status or an alarm, it's something that we have to proactively look for and analyze. And I'll give you an example with a graph on the slide. The blue line is the expected power output from the wind turbine. The area below where it says observed performance is what our plant and technical experts manage to catch. The delta between the 2 is the lost opportunity. It's the lost megawatt hour and the megawatt hour is tied to our revenues. So we're spending a lot of time utilizing the methods that we have in our hands to make sure that we capture those megawatt hours and create that incremental revenue.

We're further looking at our data analytics capabilities through forecasting. So we take our plant availability data, our wind forecasts and our in-house machine learning capabilities and we proactively analyze market data daily, mitigating risk and creating value in complex markets such as PJM and ERCOT. With our in-house tools, we have better predictive power in these markets, allowing us to utilize this data in outage planning, thus managing the asset and production more effectively to create value.

So what are our takeaways today for operational excellence in our wind portfolio? Firstly, the drive to be operationally excellent is in our DNA. It's led by our talented asset management, operations and energy services groups. It's just the way that we do things. We reduced our turbine O&M costs through procurement processes and leveraging our development pipeline to mitigate risk and cost, creating flexibility and reliability-focused terms and conditions.

We've increased our availability in production through proactive monitoring and intervention in the field. And I'm very proud to show you this chart that shows that between 2015 and 2018 we increased our availability from 96.7% to 98.6% through proactive interventions by our team. The target most people aspire to is 97%, we're always looking beyond that.

By broadening our engineering marketing capabilities and the development of our in-house tools, we're able to optimize outages and mitigate risks in complex markets. We're well positioned to deliver additional value in our Renewable Generation business.



So I'll close today, and I'll thank you on behalf of Peter and Jen for your attention. And I'll hark back to Ian's message this morning about through operational excellence we're reducing our risk and increasing our returns across our businesses.

In demonstrating that drive, Peter shared with you an update on our regulated businesses and how that focused approach maintains our competitive position. Jen outlined another strategic and accretive position to add to our northeast footprint. And from our Renewable Generation Group, we've demonstrated our ability to seize life-cycle operational excellence opportunities.

I thank you for your time again this morning, and I'll hand you over to Ian and David for questions.

QUESTIONS AND ANSWERS

Ian Edward Robertson - *Algonquin Power & Utilities Corp. - CEO & Director*

Perfect. Thanks, Joanne. I appreciate I interrupted everybody last time. But if we had continued thoughts, comments, questions. Nelson, I know we didn't get to you last time. Ben at the back next.

Nelson Ng - *RBC Capital Markets, LLC, Research Division - Analyst*

It's Nelson Ng from RBC. So a quick question on New Brunswick Gas. Can you talk about the customer growth in the last, call it, 5 years? And I think you guys were talking about how there was some regulatory disputes and stuff? Can you give a bit of background as to where those disputes were, like, was the utility earning its regulated return? And yes, just to give a bit more background there.

Ian Edward Robertson - *Algonquin Power & Utilities Corp. - CEO & Director*

Sure, yes. So what, Nelson, is making reference to, I want to say it started in 2014, but clearly, there was a spat in the province of New Brunswick in which, I want to say Enbridge, Irving, the provincial government got embroiled, which the effect of it was to chill, from Enbridge's perspective, the commitment of new capital. Understandably, they -- the franchise was expiring -- I mean, the provincial franchise. There were challenges about recovery of some of the start-up costs that had been incurred to get the utility up and going. There's no doubt about it, this utility, when it was conceived back in 1996, I think is when the government sought responses for organizations to build the local distribution system, had envisioned 50,000 customers. Practically, there could be 50,000 customers easily being served by the utility. And candidly, the backbone that has been built is sized to be able to do that. The fight that went on, the entrenchment of the heating oil lobby clearly suppressed the growth of that utility. They have about 12,000 customers today. As we look at the business, we looked at it from 2 perspectives. Today, will it earn its return on its currently invested capital with those 12,000 customers? The answer is yes. And we bought it on the basis of it. And if you do the math that -- including the recovery of that \$4 million a year for the next 25 years, it's a little under 10x EBIT [to] EBITDA. And so, I think, we'll start by saying the utility, in its current form, is a fine utility to add to the mix. And left to its own devices, utility could continue to grow at probably 1% or 2% per year, that's only a couple of hundred customers. I think the real opportunity here with this utility is to say, what has stopped a clean, convenient and economic fuel from being more widely spread used in the province? And I think we can look in the rearview mirror and see a bunch of things that probably rationally constrained the investment of time, attention. Obviously, Enbridge is a very big company. Unapologetically, we're a much smaller company and this asset will be very strategic to us. And so I think, with focus, we can actually be successful in the province. With the issues of the renewal of the franchise are behind us, it's now renewed through to 2044. The issue with the government was resolved without litigation. So that deck has been cleared. Interestingly, a new government just came in and completely coincidentally, Premier Higgs announced an interest in lifting the moratorium on in-province fracking. So if you want to think about a way to reduce the commodity costs in the province and therefore make it more competitive with heating oil, that's a great way to do it. And I say, "Man, I wish I could organize this." But it just worked out that way. And so we're actually enthused about the opportunity to take this utility from the 12,000 customers it has today to the 50,000 customers that were originally envisioned when they built the backbone. It has the capacity to do it and it will only result in lower costs per customer as we can do it. And one of the things that we announced, we'll put \$5 million where our mouth is in terms of this Fuel for the Future fund. This idea of creating a fund to fund



rebates to customers to make the switch from heating oil, or believe it or not, wood pellets to natural gas. I don't know, Nelson, if that's kind of the color you're thinking about from the utility.

Nelson Ng - *RBC Capital Markets, LLC, Research Division - Analyst*

How's it been growing?

Ian Edward Robertson - *Algonquin Power & Utilities Corp. - CEO & Director*

It's been like 2% a year, which is like 200 customers. So -- and candidly, as we looked at it, that -- when we looked at buying it, that's what we had to buy because -- but I think there is a lot more potential in it than what you're seeing right now. Sure, Ben you had a question?

Benjamin Pham - *BMO Capital Markets Equity Research - Analyst*

Yes. On O&M savings, would you characterize yourself as consistent with industry benchmarks? That, there's a little bit of opportunity around the edges? Or are you below benchmarks where there's a lot of gravy in terms of cost savings that you can grind out of the business?

Ian Edward Robertson - *Algonquin Power & Utilities Corp. - CEO & Director*

I think we're probably somewhere in between. When we started this business, our strategy was to enter into long-term operation maintenance agreements with the suppliers of the wind turbines. It was just the low-cost strategy for us to pursue. As we look forward now with a gigawatt -- or more today, 2 gigawatts in 3 years, the opportunity to start to pursue operational strategies that you see from guys like NextEra self-perform these hybrid models where you're doing more the work yourself, and frankly, harvesting the profit that's associated with it, are on Joanne's to-do list. And so consequently, we're not at the top of the curve in terms of being -- I'll say, in fact, I'm unhappy with long-term O&M agreements with our turbine manufacturers. But man, we are -- certainly lots of room for us to improve as we head down that curve. And so I think this idea that the thesis of \$1 per megawatt hour is certainly within the to-do list for us going forward. So I don't know if, Ben, that kind of gives you a sense of where we sit in the curve. There's still lots of opportunity for us to -- as the world evolves. I mean, this is obviously something new for us -- as wind sort of proliferates across the U.S., the ability to operate these super efficiently is just growing, so we're going to take advantage of that.

Christopher Kenneth Jarratt - *Algonquin Power & Utilities Corp. - Vice Chairman*

And we want to keep things on track, so we'll just sneak in one question from Slido before we break for our coffee break. This one will be directed to Peter, and it really has to do with decoupling and decoupling the business from weather phenomena. And could you provide some recent examples of successes that we've had in achieving decoupling?

Peter Eichler

Sure. And definitely point to maybe the 2 examples that I spoke of earlier. But in New Hampshire, our EnergyNorth utility, when we took that over in late 2012, I recall that at that time [Ungad] who owned it, was actually pulling back decoupling proposal from their rate case because it was -- at that time, it just wasn't something the regulator was interested in. We worked with them closely over a couple of years to make them see the benefits. And just this past EnergyNorth rate case, we were able to get a decoupling mechanism implemented there. Similarly, in Missouri, in our gas utility, we now have weather decoupling. That was just implemented this past year. And I guess just, the forward look, we expect that the Empire Electric portfolio will be decoupled in Missouri as of next year as well.

Christopher Kenneth Jarratt - Algonquin Power & Utilities Corp. - Vice Chairman

So with that, a 10-minute break.

Ian Edward Robertson - Algonquin Power & Utilities Corp. - CEO & Director

Yes, yes, we're going to keep it short. I will say there's a hot breakfast out there. Please grab something, bring it back, we'll kind of eat while we work. And so maybe at 10:25.

Christopher Kenneth Jarratt - Algonquin Power & Utilities Corp. - Vice Chairman

10:25.

Ian Edward Robertson - Algonquin Power & Utilities Corp. - CEO & Director

Appreciate it.

(Break)

PRESENTATION

Ian Edward Robertson - Algonquin Power & Utilities Corp. - CEO & Director

All right. We're going to -- in the interest of staying just behind schedule, we're going to -- we'll pick things up and get rolling. We'll give people just a minute or 2 to grab some breakfast and come on in.

So second topic for discussion here is about the falling cost of renewables. And the panel we have today is Patrick Taylor, and I'll let them introduce themselves; Jeff Norman and Ryan Farquhar. And so with that, I'm going to turn things over to Patrick to kick it off. Patrick?

Patrick Taylor

Great. Thanks, Ian. Can everybody hear me all right? That's great. That's perfect.

So I'm pleased to open our well-caffeinated second panel discussion for our Investor Day presentation. Joining me on the stage is Jeff Norman, our chief Development Officer; and Ryan Farquhar, VP of International Development.

I've been with APUC for 2 years, so a new face to Investors Day for you folks. Before joining APUC, I'm working with our Energy Services group. I worked at TransAlta in Calgary for 8 years in a variety of different commercial roles.

I'll really pick up the thread that Ian kind of threw out there about the falling cost of renewables in markets. In the last 10 years that I've been working in utilities, we've really seen that transformation going from renewables relying on long-term PPAs to now being a very competitive form of new generation across many parts of the United States.

So with that, I'll kind of throw out 3 key items that we'll talk about, 3 highlights for this section. The first area is my area where I'll talk about how markets are evolving and how we're evolving in parallel with them. Jeff will talk a little bit about the \$1.7 billion in new growth projects over the next 5 years for the North American pipeline. And Ryan will close out the section, talking about the \$0.5 billion that we have planned in the international space. Taken together, it's an exciting \$2.2 billion of investment opportunity over the next 5 years.



So putting a little bit of a finer point on my section, there's 4 key themes that we'll highlight here. First, is that we're continuing to obtain revenue certainty in markets that have strong fundamentals. Thanks to our investment-grade credit rating and our financial strength, we're able to lock-in some of these long-term contracts that are available to us. Third, growth opportunities continued to be forecast beyond the 2020 sunset of the PTC due to both the falling project costs and the continued support of the market prices. And finally, as Dave Bronicheski alluded to in his opening remarks, we expect to become taxable in the U.S. starting in 2021. And so we have the ability to start self-funding our own tax equity.

So picking up on the theme, like I mentioned, that Ian opened with around wind being competitive in multiple markets, how we're going about leveraging this opportunity is continuing to find long-term revenue certainty. We look for multiple revenue streams across different markets, so not just energy but also the sale of renewable attributes and capacity revenues as well. We optimize offtake from our projects through a variety of different options, including the traditional PPA. We're not going to walk away from those PPAs that are available to us. But in addition to that, we have another tool, which is the synthetic PPA. I can tell a couple of folks may not be familiar with what a synthetic PPA is. It differs slightly from the traditional, in that it's a financial instrument versus a physical agreement. It also -- the traditional PPA you can think of is you read the meter once an hour, every couple of hours and send a bill to a customer. Whereas the synthetic PPA, you've agreed to an hourly profile with your customer over a 10- or 15-year period.

Where we're looking for these opportunities is in markets with strong fundamentals. So what does that mean? People throw that phrase around in a bunch of different industries, but for APUC and for Power, what that means is, it's good liquidity. So there's a variety of different counterparties to transact with. Is there multiple strong credit where the counterparties to do that transacting with, do they have good credit ratings as we do?

Second is there political support and stability for new renewables. Good example of that and probably the most famous is California's recent announcement to go to 100% clean energy by 2045, creating some interesting opportunities for us out there.

And lastly, is there a good structural fit for new renewables? Does the transmission grid allow us to deliver the energy that we need to, to get it to market? And also is there something happening with the grid itself, perhaps coal plants are retiring?

So using this framework, we've come up with the 4 markets to highlight for you on the board. Oh, wrong button, there we go. So the first part represents MISO, that's Mid-Continent ISO for those of you who aren't familiar with Power markets. It's kind of everything from Winnipeg right south to Texas where SVP is kind of in the middle. PJM, which is the North Eastern U.S., Pennsylvania, Jersey and Maryland is what that stands for. California ISO on the West Coast and New York ISO on the East Coast.

What I'll draw your attention to is the black diamond, which represents the levelized cost of energy. Basically, that's the average cost of purchasing and installing the equipment and then operating over its useful life. The blue bar represents the energy contract rates that we're seeing in each of the markets. And the green hat on top represents the value of the long-term REC agreements that we're able to secure.

One thing that might jump out of you right away is just how much lower the LCOEs are in MISO. Part of that driving force is the capacity factors of being such a wind-rich region. In MISO, you'll notice that the RECs contribute a significant part of the project economics by virtue that those are all done through centrally procured auctions with [MISO].

Overall though, these target markets have a range of different attractive options for us. And how we go about enhancing our revenue certainty and locking in that -- those options and these opportunities is really our customer strategy. So the obvious customers come to mind, people who serve your home, utilities, municipalities, and more recently, community choice aggregators out in California are creating quite a bit of waves in the market.

Commercial and industrial customers, otherwise said, corporates, basically the Googles and Apples are the most famous of those, are corporate customers who are looking to take control of their energy destiny and lock-in long-term contracts from renewables. They look to us for both traditional and synthetic PPAs. If you think about the different types of customers that are out there, for example, one might be a manufacturing facility with a concentrated load in one pocket. They might prefer traditional PPA since that makes the most sense for them. Another might be a retail channel that has stores scattered across an entire region, and in that case, the synthetic PPA might be the best choice for them.

It's not just about the upfront setting in place that revenue certainty. We always go out and try to recontract the assets after it goes operational, maintaining that contract length beyond their initial term. We use a disciplined approach on how we manage and extend those contracts and ensure that we're always using the right approach for -- that's fit for purpose.

So I'll pause in the words for a moment and just draw your attention to the graphic that's on the right of the slide. This is comparing indicative MISO wind farm in Illinois. You can see both projects enjoy the initial -- sorry, I keep hitting the wrong button there -- the initial bump is from the production tax credits that are available to new wind projects in Illinois. The blue bar represents the value of the energy output. Traditional PPAs in the last quarter were clearing at \$17 a megawatt hour. By moving into a synthetic PPA, you can get an \$8 pickup on the energy rate in addition to a roughly \$4 pickup on the Illinois IPA auctions for renewable energy credits. So you can see right away by instead of the bottom-up approach on what's the absolute minimum a wind project needs to survive versus taking a market price curve and a discount to that, you can make a significant contribution to your project economics of roughly 2% to 3% incremental return.

So you might be sitting there thinking, well that's obvious, why doesn't everybody do that? And that speaks to where our competitive advantage comes into the fold. As I mentioned earlier, we have strong financials -- strong financial and balance sheet strength. Customers look at us as a creditworthy counterparty and are comfortable with our credit. And secondly, we have a long track record of developing and operating new wind facilities in the market, and they trust that we'll be there through the operating life of the asset.

Thinking about -- a little bit more about the PTC phaseout. In the last slide, you saw that bar was quite a significant contribution to the project economics. As we look beyond the 2020 to sunset of the PTCs, we see attractive opportunities continuing as wind project costs are expected to continue to fall. That's just as manufacturing becomes more efficient and machines become more efficient in capturing the wind. Market fundamentals across our core markets are expected to hold or improve over the next decade due to coal retirements. And so taken together, that means that the wind is expected to remain in the money.

So just to explain a little bit about the graphic on the right again. The blue bars represent the range of Bloomberg's current forecast for new wind installed in the U.S. over the next 15 years. The gray bar at the bottom represents the production tax credits value. And as you can see, if you take the all-in available market revenue from the last slide and layer those on top if you're using the current forward curves, wind is still deeply in the money, and we're very excited about that.

But thinking through the next 5 years, we have a lot of products to the play. And so not only do you need to have good markets, but you need to have the machines themselves, replaced to reinforce, so we've got the 2020 safe harbor components already secured. And we're already in discussions for 2021 and '22 components that will also allow us to deliver those projects.

Dave Bronicheski mentioned in his opening remarks about how we're forecasting to become taxable due to our scale and profitability in the U.S. Our tax equity strategy doesn't change though. We continue to maintain the strong relationships that we have in the tax equity markets for third-party tax equity. But what has changed is that APUC now has the ability to invest up to \$0.5 billion of cash taxes and put those to work and earn a return on those. Tax equity returns are often lower risk and returned over a shorter time horizon, and so we're very excited about being able to self-monetize some of our own tax attributes. It's a competitive advantage for APUC versus some of our competitors, just given our scale and our profitability in the U.S.

So with that, I'm going to turn it over to Jeff to talk a little bit more about how that's translating into real projects for the North American growth pipeline

Jeff Norman

Perfect. Thank you, Patrick. I'm a little afraid of the clicker here, given some of the challenges we've seen, but hopefully I won't mess it up.

I've been with Algonquin now for just a little over 15 years. And through that, I've lived the day-to-day growth that Ian and Chris laid out earlier. And I've seen this incredible change in the renewable sector. And when Patrick says that we're evolving with the market so we continue to seize



opportunities, I fully agree. And the portfolio that I'm going to lay out in terms of our growth opportunities, which is \$1.7 billion, and what Ryan's is going to lay out on the international side, I think are evidence of our ability to evolve.

So to start off with -- Ian's outlined AAGES and its role, and I'm going to spend a little bit of time just showing how we focus our North American development and our international development. But then I'm going to turn my attention just to the North American portfolio, some of the additions we made to that portfolio over 2018, and then give a snapshot of what that portfolio looks like today, what we see it looking like in 2023. And then going through the projects on a year-by-year basis that make up that \$1.7 billion in growth. And then of course, with that much growth, I'll touch on how we manage that growth and some of the tools that we use.

So just quickly moving through here. The structure with AAGES, we worked hard to make it very simple. AAGES is our international development initiative. AAGES will look after all North American development and all global development. And so we have one team focused on North America and another team focused outside of North America or what we call international.

But we want to take advantage of the synergies, and so Algonquin will be providing the majority of the equity required to fund that development and Algonquin will be providing the expertise from its development history and experience and entrepreneurial abilities to drive that team. But we will share the resources across teams, and obviously, the North American team has a strong wind presence and knowledge. The international team has great transmission knowledge and great water infrastructure, and so we'll ensure cross-communication to make sure we take advantage of all of those.

The other thing that I'd point to here is the project AAGES is going to be responsible for development and construction. But upon completion, the projects will drop down to the vehicle that makes the value highest. And so we will take and do calculations to determine value maximization and then drop the vehicle or the asset down into that.

So with that, the -- let's talk about that \$1.7 billion in additions to the portfolio, including some recent additions. Amherst Island is complete. Chris showed the picture of the last turbine going up. Great Bay Solar is complete. Combined, these projects represent approximately \$43 million a year in annual EBITDA, and they build on the theme of diversification in terms of diversification by mode of generation, diversification by geographic location, but most importantly, diversification by the creditworthy counterparty that provides us with the long-term revenue certainty. And they fit well within our overall portfolio, which you can see here, the current operating direct portfolio diversified between wind, solar and hydro. And I draw your attention to the indirect 232 megawatts in Solar, which is our 41.5% interest in Solana and Mojave, which are 2 280-megawatt projects located in the U.S. under very long-term contract. And so it gives us a nice diversification benefit.

Today, we're going to be talking about the development projects here, making up about a gigawatt. And once this build-out is complete, we'll be at 2.6 gigawatts across 46 projects. So once again, focusing on diversity in terms of the number of projects, geographic location, and that really drives the sustainable recurring revenue and earnings from this portfolio.

As we grow, we've got a bigger base to grow from, and I really like expansion projects. And so my team has worked closely with Patrick's team to identify the markets where we can expand our existing assets. And we like those growth initiatives because they have lower cost and lower development risk. And a lower development risk is partially because we really understand the resource. We've been there, we've been operating assets, we have relationships with the various stakeholders, and so there's less risk in that. And we also have a deep market knowledge in terms of the energy markets. And so we're pleased that we've got 4 of these expansion projects. And you can see from the chart that the expansion projects are actually equal to, and in some cases, bigger than the existing projects. And so we're really taking advantage of that footprint.

So moving now to a year-by-year analysis for the next 4 slides. We're going to talk about projects coming into construction in 2019. And the first one is a 45-megawatt expansion of our Great Bay Solar facility in Maryland. This -- Maryland has a very strong state-specific SREC market, or Solar Renewable Energy Credit market, which we will be able to take advantage of. And there is a great Power market there. And Patrick and his team are looking to secure a 10-year synthetic PPA and there's multiple counterparties, and so we're confident that we'll be able to do that. And we are investing in the engineering to facilitate moving forward to construction this year with the majority of construction being completed in '19 and then a portion of the project coming online in 2020.



The other project, Val Éo, a relatively small wind project, 24 megawatts, 20-year power purchase agreement with Hydro-Québec. And it will be 6 ENERCON turbines will start in complete construction this year on that project. And combined, those represent 1.7 -- or \$105 million of the \$1.7 billion.

And so now I'll just flip through to 2020, and this is a great project that's new to this room. It's a 202-megawatt project in Illinois. And we're excited about it because, one, it's construction-ready. It has all discretionary permits in hand. We have secured safe harbor turbines for this to get the 100% PTC in 2016 when we bought the safe harbor turbines. And we've got agreements that are almost final to complete the rest of the EPC and the turbine supply. So this is a very advanced project. And from a commercial perspective, it's got a 15-year REC contract with the Illinois Power Authority and one of the final stages of negotiating a 10-year synthetic PPA to give us revenue certainty, as Patrick had outlined.

The market where this project is located has great transmission in 2 major load centers, including Chicago and St. Louis, and it's seen over a gigawatt of coal-fired generation drop-off since 2016 and is projected to see more coal and more nuclear come off. And so that's why we're able to get a competitive synthetic PPA and why we believe there's a great long-term value in this project.

It represents \$335 million of that \$1.7 billion. And once again familiar, we'll take it from the development through construction and then drop it into a vehicle that allows us to use nonrecourse financing, which Ian referred to before. So this is a new tool in our toolbox, Ryan's going to speak a bit more about it. But it really allowed us to say, what's the value optimization strategy for this project and where do we put it within the growing toolbox that Algonquin has to take advantage of that?

So also in 2020, to take advantage of the 100% PTC, we've got 2 more projects, which are driving on the coal-based retirement theme that Ian and Ryan -- sorry, Ian and Patrick have spoke to. And the great thing about those core retirements is, one, you'll get community support for the projects because, one, you're creating jobs, and two, you're creating tax base. But also the existing transmission structure is in place, so your transmission upgrades are normally fairly modest. And then you're able to take advantage of that strong energy market that clearly the coal generation was built to serve a load with the lower cost wind assets. We're able to serve that load and make the return that we're looking for.

The 2 projects that -- both projects fall into this category. Sandy Ridge is an expansion of our existing Sandy Ridge project, which was built in 2012. So we understand the market, and that's a nice expansion opportunity. Broad Mountain is a project that is quite large, it's about 200 megawatts from a land perspective. But the interconnection available for 2020 is 80 megawatts, so we'll be building out that first 80 megawatts. And so we're excited about these. And they represent another \$280 million.

So then we go into 2021, and I'll start at the bottom of the slide on Shady Oaks. We currently have a Shady Oaks facility that's 110 megawatts. We've owned it for a number of years. This is another expansion opportunity, and it's really building on the same theme and the same pocket as the Sugar Creek facility. So I won't expand too much on that because the story is pretty much the same.

But the Walker Ridge project in California is building on the desire for California to move to 100% renewables and the big benefit that wind provides to solar-based generation in California. And so I'll just take you through the graphs here on the right, which, if you look at it, not a surprise. Between noon and 6:00 p.m, we start seeing the evening peak load, which is really driven by air-conditioning and people returning home. And then not a surprise, as the sun starts to lower on the horizon, obviously, the solar generation falls off. And California, this is creating the duck curve that is talked about in California so much.

Wind is a relatively rare beast within California, and the wind profile in California, specifically in this pocket, is driven by the temperature differences between the cooling land in the evening and the warm ocean. And so as the sun is setting here, those -- that thermal wind is picking up. And so you can see this beautiful mix where we're peaking out on generation just as this is dropping off. And so Patrick's team has been watching this market to see how this asset will perform when it's built. And in July, for fun, they just put this together and said there are supply constraints and the prices started peaking and hitting above \$700 a megawatt hour on 1 day in July. And we look to see how our facility would have been performing at that point in time. And obviously, we would've been peaking out in generation. And so you can see why there's offtakers that want this profit. It's just a great fit and really complements the existing solar within California. So these 2 projects represent \$485 million, and they're the 2021 projects.



Going into 2022, we're back to Canada. We are fortunate to have the 177 megawatt Blue Hill project in Saskatchewan. It has a 25-year PPA with SaskPower, and it is now construction-ready. We've completed all the discretionary permits, in that we've got our environmental permits from the Ministry of Environment in Saskatchewan and we've got our local zoning permits from the 2 rural municipalities that will be our host. The reason we're not building it until 2022 is SaskPower needs to build out the interconnection facilities and upgrades, and so this project will be coming online in 2022. And as I mentioned, Broad Mountain is a large project. We're building the first 80 in 2020, and we're going to expand it by another 120 in 2022.

And so that completes the \$1.7 billion in projects. And I put them on this graph just to highlight a couple of things. The first is we -- oops, now how do you go backwards? There you go. The first is Sugar Creek and Blue Hill are obviously nice anchor projects, at close to 1/3 of \$1 billion each, and they're construction-ready. So I put them towards the top of the chart.

On the bottom of the chart, I put projects like Broad Mountain that still have some way of land control. We obviously have a good knowledge of their resource, but we still need to complete interconnection work, and so I put them lower. They're highly certain, but not as certain as a construction-ready project.

The other thing I'd point out is we've obviously spaced these intentionality over time so that we're not building them all in 1 year.

And so that's the portfolio. Executing in 2020 growth plan, I'm sure most people in the room, if not everybody, has heard 2020's going to be a huge year to take advantage of the 15 gigawatts of wind that's expected to be built. And so our construction and development teams are forecasting that there'll probably be a shortage of turbine availability at the delivery slots that you'll want, equipment for transporting and cranes. And therefore, we have taken very proactive steps to secure those. We will have them secured entirely for the Walker Ridge project in December, and we expect to have them done in Q1 for the other 2 2020 projects.

And just a quick story to kind of put that into perspective. But, if you look at this, this turbine is 100-meter tower. This is the hub height crane. You can see here a much smaller crane. And what it's doing is lifting the bottom of the blade to make sure it doesn't hit the ground when you raise it. That crane would be one of the big lumbering cranes that you drive beside of the highway. This crane takes 18 transports to move, and so it's those cranes we need to make sure that we've got locked up. And that's what tools, like our risk management tool, where we identify those items early and then ensure we get them secure, help us do.

So that's the wrap-up for the North American growth. I'm going to turn things over to Ryan, who will talk about our international growth. Thank you very much.

Ryan Farquhar

Thank you, Jeff. As Patrick stated in his opening remarks, my name is Ryan Farquhar, I'm the Vice President of International Development here at APUC. And like Patrick, I'm a relatively new face to APUC's Investor Day as I joined in April, shortly after the initial acquisition of 25% of our interest in Atlantica and the launch of the AAGES development joint venture.

Prior to being at APUC, I was at Enbridge, where I was the Head of Commercial Development in the eastern part of North America for their transmission and distribution business development unit, and so it's with great pleasure that I joined APUC to try and lead the international growth opportunity and so I look forward to the opportunity to walk you through this today.

So if I could leave you with 3 key takeaways today. The -- the takeaways on this slide. 2018 has seen a line of sight to \$1.4 billion of international growth. The second point is that the AAGES development drop is actively pursuing new opportunities, and that's both domestically and internationally, as Jeff and Ian have alluded to. And last, APUC now has a new tool in its toolbox for financings. And we'll touch a bit more about that, although both Ian and Jeff have in their remarks touched on it a little bit.

But I thought I'd unpack our strategic initiative internationally a bit first. First, speaking about AAGES, then giving a little update on what Atlantic is up to and how that rolls up into the \$1.4 billion you're seeing today.

So as we've discussed, AAGES is focused on all development opportunities in the APUC sphere. There's about 50 investment professionals looking for deals on a day-to-day basis, approximately 20 of those are in Spain and other non-North American domiciles. But the balance of the team, let's call it 30, are domestic. So the team is working well together. They're trying to be synergistic in their approach to things and lever skill sets that one another doesn't have. And we see it as a great way to get opportunities through our pipeline in an efficient manner. So we're thrilled about the way the AAGES team is acting together.

So let's touch upon Atlantica's organic growth. We're pleased to see last month that Atlantica announced about a little over \$0.25 billion of possible investments, it's called a -- we look at it as a basket of 6 investments. And so I thought what I'd do is show you where they are and tell you a little bit about them. So they're -- on this map, they've got a deal lined up to buy a third desalination facility in Algeria. They've got a natural gas transportation infrastructure facility in their sights. They've got 3 -- sorry, in South America, all their assets are electric transmission, 2 being expansions of the ATN transmission system that they already operate. Another being an investment in the ATN2 transmission system that they operate. And the sixth asset being a brand-new transmission line in Chile.

So the team is making good strides in acquiring incremental growth. And while it's not the focus of APUC to see -- to pursue organic growth on behalf of Atlantica, we certainly do encourage it for, amongst a number of reasons, one, as they acquire more opportunities, or headroom for investing, or incremental share of those assets where capital needs to be raised will be increased. And of course, any accretive acquisition is going to increase the dividend that we see which comes into our earnings. So we'll continue to support the Atlantica team and these types of initiatives.

So to roll it all up, the \$1.4 billion of recent investment consists of our almost \$1 billion of investment in Atlantica. We're now at 41%. Excited to tell you that last week, we closed on an additional 16.5% purchased from Abengoa. So now we have all of Abengoa's stake, and that totals to 41.5%.

I just told you about the \$0.25 billion in acquisitions that Atlantica's pursuing.

And finally, there's a commitment for the development of a transmission asset in Peru that the AAGES development team is actively pursuing, and that's going to have -- present an opportunity of up to approximately \$250 million.

So in the last year, you've seen us substantially grow our international presence and position ourselves for growth going forward.

I think I'm hitting the right button. Okay, there we go. So I thought I'd take a second to put up a parallel slide to Jeff's slide. Jeff put up a slide that showed the renewables portfolio in North America. This slide is the assets that are held outside of North America and includes our 41.5% interest in Atlantica assets, the new assets that Atlantica has announced last week and the ATN3 transmission project.

But I won't go through all of this except to say there's a substantial base of 27 projects. And worth highlighting is that there's a lot of transmission and desalination assets in this portfolio that would be something we would normally cover it as APUC in trying to find such facilities in North America. So not only are we reaping the benefit of diversity by geography, but we're reaping the benefit of diversity by modality.

So what sort of international projects is AAGES focused on? Well, the key -- the theme continues to be measured growth. They're going to focus, as stated from day 1, on clean energy, transmission and water infrastructure, and they're going to continue to be responsive to deal flow and pursue tender opportunities for both public and private where they think they can win.

But we're going to increase our focus on greenfield development, where we think we can get a better risk reward return. So, so far, we've got boots on the ground and committed boots on the ground in Spain, Peru and Colombia. And that's not the end of the story, we're going to systematically review other countries where we can -- where we think greenfield development would be advantageous. And in doing so, we think it makes a lot of sense to lever the extensive footprint of our already existing asset base. So look for more to come in the greenfield space.

Now water infrastructure is another key interest area of APUC, so -- and the AAGES team as well. We're pleased to announce that AAGES just recently hired an ex-Abengoa water expert to lead our water platform, and he's going to be able to work with our partner in AAGES to take advantage of their deep track record and bench strength. As you can see on the visual behind me, over 22 million people are being served by operational assets



that have been constructed by our partner in the desalination water treatment and wastewater treatment space. So there's some new market opportunities and an active team pursuing them.

So consistent with what we told you at last year's Investor Day, we're going to be systematic about how we review projects when we get to screening them. And while I won't get into all the disciplined key investment parameters that we're going to -- we go through when we look at an opportunity, I'll mention a few on this slide on the right here.

Clearly, we're going to look for stable geographies with comfort around the currency, the ability to repatriate capital, longer-term contracts being sought and the ability to drop assets down to Atlantica at COD. So those are the kind of features we want to see in almost every deal in addition to some other parameters as the deal requires.

But I thought I might just give you that as the backdrop against what AAGES is looking at right now because AAGES is quite busy internationally. And just to give you a feel for what's on their plate today. They've got over \$0.5 billion in opportunities they're looking at and considering. And these range from a Texas water pipeline to a South African Solar PV site, to a Uruguayan transmission tender, to an Algerian desalination tender. There's lots of market opportunities out there. They're trying to be disciplined in their approach and pick the targets that they think that they can win. So the team is very active and more to come on the achievements that comes from their hard work.

But the project we're most excited to tell you about is one that's already been disclosed, and that's the ATN3 transmission project. This is a project that we disclosed in our recent MD&A. AAGES has signed a contract to purchase the project. And there are -- while there are a number of closing conditions, we don't anticipate any of them being obstacles to closing. So we feel that, all things being equal, this project should be in a position to close in Q1 of 2019. And really, this project hits the sweet spot of what you'd want as a first project. It's got over -- it could be between \$200 million and \$300 million investment opportunity with a 30-year offtake agreement linked with the U.S. dollar offtake -- or linked to U.S. dollar payments and is backstopped by the Peruvian Government. So this is a great asset and it will be the great proof of concept for the AAGES-Atlantica-Algonquin team. So one other benefit to this asset is that it is going to complement, when dropped down to Atlantica, Atlantica's already a substantial 1,000 mile Peruvian transmission portfolio.

So shifting back to my first -- my third key message. APUC is now in a position to collaborate with Atlantica to do asset level financing on deals. And this is new to us, as both -- I think both Jeff and Ian said, but it excites us in that we now have the opportunity where it makes sense to try and optimize our returns and get better competitive financing by exploring what happens with project financing. So the pilot case for this project has been the Sugar Creek project, where APUC sourced the deal and it's being dropped down into Atlantica for access to asset level financing. So this is a tool that we're excited to have in our toolbox. We're not going to deploy it every time, but we're going to deploy it where it makes sense.

So the last 2 slides today are really to try and tie together some of the messaging that Jeff, Patrick and I have been conveying. You'll see that our generation asset growth is driving operating profit. We've got a development project -- we've got projects under development with strong customer demand, and that's fed into by Patrick's work, amongst others. We've got an advanced stage of pipeline that Jeff talked to, and you're seeing our growing international opportunity set. All of which we see contributing to a projected CAGR of 11% over the next 5 years, clearly helping to support APUC's earnings growth.

And to summarize what each of us conveyed today a little bit more. Patrick told you about opportunities in evolving markets. He told you how we're staying ahead of the curve. He's already looking at a post-PTC world, and he's well positioned to be doing so.

Jeff has an exciting portfolio of \$1.7 billion in his renewables pipeline and a PTC strategy that's going to unlock growth.

And you heard from me that over the course of the year, we've had a line of sight to \$1.4 billion in international investments and that we've also, as part of working with Atlantica, acquired a project financing tool within our toolbox that we didn't previously employ.

So it's been my pleasure to speak to you about the international growth and to work with Jeff and Patrick in putting this together. So with that, I'd hand the microphone to Ian and David.

Ian Edward Robertson - *Algonquin Power & Utilities Corp. - CEO & Director*

Perfect. Thanks, Ryan. So a quick -- if there's questions, we can continue the dialogue or we can -- that -- oh, yes? Go ahead.

QUESTIONS AND ANSWERS

David Galison - *Canaccord Genuity Limited, Research Division - VP of Research of Pipelines, Power and Utilities*

David Galison with Cannacord Genuity. So you got both significant (inaudible) renewables going forward. Can you talk about other (inaudible)?

Ian Edward Robertson - *Algonquin Power & Utilities Corp. - CEO & Director*

So David's question is, as the price of renewable energy falls, how does that -- how is that going to factor into the -- what we'll be able to renew our generation -- our existing PPA set? Well, let me start by saying is, we've got nothing coming off from a PPA point of view in the near term. And so I think we will be well past the expiry of the PTCs, as an example, in terms of when we're going to have to renew any contracts. The second comment I'd make is that the renewal of our PTCs, are our projects that -- post PTCs, [maybe I should perhaps] -- and during PTCs, needs to be -- will be done in the context of the market prices if you rolled the top end, not what the LCOE is for new projects being built. And so as long as we are comfortable and we are -- that as nuclear plants and coal plants kind of roll out of the mix, that the market will continue to be supportive from a price perspective, we're actually sort of cautiously optimistic that when we renew that PPA that ends in 2031, that it will be in the context of a market that is constructive to value going forward. So I say near term, no issue; longer term, we're going to get whatever the market offers. And that's the issue candidly with owning a commodity -- our commodity, and it's perhaps one of the reasons you need to be very careful about the markets you pick. And that's why, as Patrick has thought about the new markets in which we usually go into, you want to have one that's going to have strong fundamentals and not just today to get the PPA, it's the next time when the PPA rolls off that you have to be very comfortable with. And I think -- we think about markets like California, which is heading for 100% renewable by 2045. And when you think about all the retirements of the coal and nuclear plants coming off in PJM and MISO, I think we pick markets in which we don't think there's going to be a lot of exposure going forward. And I know it's not a perfect answer, David, but I guess in the short term, it's just not a problem for us at this 10 seconds, but we are thinking down the road. So Nelson, another question.

Nelson Ng - *RBC Capital Markets, LLC, Research Division - Analyst*

(inaudible) about the Sugar Creek.

Ian Edward Robertson - *Algonquin Power & Utilities Corp. - CEO & Director*

Sure.

Nelson Ng - *RBC Capital Markets, LLC, Research Division - Analyst*

(inaudible) level financed, so wind projects in the U.S. typically only have (inaudible). So what's the (inaudible) where you raise -- or where you're looking to raise (inaudible)



Ian Edward Robertson - Algonquin Power & Utilities Corp. - CEO & Director

The project level financing isn't actually at the project co. It's up at the sponsor co. And so really, as opposed to being right down at project co, it's up at the sponsor co. And it -- and because of the nature of the synthetic PPA, sponsor co. is able to raise more financing than we could do off at -- at our level under our credit metrics. And that's the pickup in terms of value. Sean?

Sean Stuart - TD Securities Equity Research - Research Analyst

What are your return expectations on (inaudible) power developments going forward outside of (inaudible)

Ian Edward Robertson - Algonquin Power & Utilities Corp. - CEO & Director

Well, I mean, actually, the good news is I don't think they've -- our return expectations have dropped. I mean, let me start by saying is, we're not a merchant player, and so we're not interested in building merchant energy. I mean, as I think Patrick had mentioned, it's always about getting revenue certainty. And we will trade away upside for getting that revenue certainty. And just to recall back to Patrick's slide where he said that \$25 synthetic PPA, that was against the market price of \$30. And so presumably, if you really -- if you were comfortable with the risk proposition associated with the merchant project, go and take the \$30. We're not, and so therefore, we're going to take the synthetic PPA approach to -- from our perspective. But the good news is that we are seeing project IRRs that are still in the 8% to 9% range. We -- I think if you were buying an operating asset, arguably maybe if you felt the need to go and get that busbar PPA because you didn't have the capital structure or the creditworthiness that will allow you to participate in the synthetic PPA market, you're probably taking 7% project IRRs. I think the good news is we're able -- because of our capital structure, because of our investment-grade balance sheet, we're able to surface opportunities to still see project IRRs are in the 8% to 9% range.

Christopher Kenneth Jarratt - Algonquin Power & Utilities Corp. - Vice Chairman

And we'd like to get one slide -- one Slido question...

Ian Edward Robertson - Algonquin Power & Utilities Corp. - CEO & Director

You're going to slide a Slido question, okay.

Christopher Kenneth Jarratt - Algonquin Power & Utilities Corp. - Vice Chairman

Before we swing to our last segment. And Ian, this really has to speak to regulatory risk. And this person writes that a key theme they've been seeing is government interference. And I guess this could apply on both our reg and nonreg business that in light of previous challenges Enbridge experienced and New Brunswick, Doug Ford in Hydro One, other examples across Canada, and the potential for this vote buying to continue, how do you think about these risks? And how do you think about managing these risks?

Ian Edward Robertson - Algonquin Power & Utilities Corp. - CEO & Director

Well, we certainly keep our eye on them, let's -- let's not say we're oblivious to them. I'd say diversification on your regulatory jurisdictions is obviously one strategy for managing it. Specifically, as we think about New Brunswick and New Brunswick gas, some aspects to the challenges -- at least the challenges of the day that were there in 2016 are behind them from a rearview mirror point of view. They have sorted those out, but that doesn't say that you can relax on this. And I think one of the approaches that we take is this local approach to managing all of our utilities. We are -- we have people on the ground. We are in the regulator's office frequently. And so we're trying to build a constructive relationship. That doesn't stop political interference. And in the U.S., many commissioners are appointed by the Governor, and so therefore that's something that you have to keep your mind -- your eye on. Right now, and I will just say, I think we are comfortable in terms of our strategy of managing political risk. But I

mean, we shouldn't underestimate what happened with Doug Ford and Hydro One. I mean, that was -- frankly, I don't think it was Ontario's finest hour, but the fact of the matter is you need to manage your way through it. And I think the way you do it is through diversification. I wish I had a better answer for that.

Vote Liberal, no don't do that. I'm just kidding. I'm kidding.

Christopher Kenneth Jarratt - *Algonquin Power & Utilities Corp. - Vice Chairman*

The last swing for the last segment.

PRESENTATION

Ian Edward Robertson - *Algonquin Power & Utilities Corp. - CEO & Director*

All right, okay. So we'd like to invite to the stage Todd Mooney, Mike Griffin and Gerald Tremblay to wrap us up with some comments on our utility business.

Gentlemen?

Todd Mooney

Thank you, Ian. And good morning, everyone.

Our final panel discussion for the day addresses how Algonquin's focus on sustainability is expanding our investment opportunities in our regulated utility business.

As Ian mentioned, my name is Todd Mooney, and I'm Vice President, Finance. And for the past couple of years, I've been supporting our regulated utilities in our greening of the fleet initiatives in the West region and in the Central region. Joining me on the panel today are a few familiar faces. We've got Mike Griffin, Senior Director of Strategic Planning; and Gerald Tremblay, Senior Vice President of Operations.

Our focus on sustainability presents us with an opportunity for investments. And it's quite significant, \$5.3 billion in our regulated utility business. Of this opportunity, Jen presented earlier about \$400 million of acquisitions, that being St. Lawrence Gas and the just announced New Brunswick Gas. This panel will discuss the remaining \$4.9 billion of opportunity.

That starts with greening of the fleet. And greening of the fleet is brought about by the compelling economics of renewable energy, with the falling cost of wind and solar driving a real value proposition for customers and for investors. I'll have a couple of key opportunities to discuss with you very shortly.

Natural gas complements renewable energy, and it provides reliability in greenhouse gas reductions. Mike will be discussing our opportunities in our regulated business for natural gas. And finally, Gerald will discuss the customer expectations, which are evolving rapidly and leading to additional opportunities.

Customers are demanding more reliability and more control over the utility customer experience. This leads to a significant organic investment opportunity. Over the next 5 years, these opportunities will lead to a \$3.1 billion growth in Algonquin's rate base in our regulated utility business.



So now we'll take a look at our greening of the fleet \$1.4 billion investment opportunities. Low-cost renewables represent a triple win for customers, investors and the environment; and have been a key driver of growth for Algonquin for many years. In fact, we've got a 30-year track record of successfully completing renewable energy projects.

Over the past 5 years alone, we have completed over 600 megawatts of wind and solar in both regulated and nonregulated businesses. This leaves us very competitively positioned to leverage the opportunities as the utility industry transitions its generation fleet. This is brought about by an alignment of customer demand; regulatory support; reliability; and most importantly, compelling economics.

As I mentioned earlier, the low cost of renewables, wind and solar, they beat conventional generation, hands down. And it's important to note that this economic proposition is not based on subsidies. If you take a look at the chart on the screen, you can see that the levelized cost of energy for wind is already significantly below the LCOE for conventional gas generation, and this gap is expected to widen as the years progress. Even though the opinions of administrations of various political movements will vary on the benefits of renewable energy, we have significant support where we are implementing our greening of the fleet strategy, with the Missouri Public Service Commission indicating that our greening of the fleet strategy is clearly aligned with the public policy of the State of Missouri.

Today, we're pleased to present to you \$1.4 billion of opportunities from greening of the fleet, with \$1.1 billion represented by our customer savings plan in our Central regional electric utility, about which you heard some details last year at Investor Day. As well, we have our greening of the fleet initiative, our 100% renewables initiative, in our West region electric utility in California, something that we call C100.

The customer savings plan in our Central region is a true example of sustainability delivering savings to customers. We called it the customer savings plan for a reason. This project will displace inefficient coal generation with 600 megawatts of wind, all made possible by that continually falling cost of renewable energy. With the green light from the regulatory bodies in July of this year, our plans to construct 600 megawatts of wind are now a reality and are expected to produce customer savings of approximately \$300 million over the life of the project, leading to an investment opportunity for us of \$1.1 billion. This project is fully supported by stakeholders, including our customers, our employees, our regulators and environmental NGOs. And we're pleased to provide additional detail on the significant progress that we've made over the past 12 months since we last stood in front of you here.

All 600 megawatts of projects for the customer savings plan are now fully secured, with development and engineering activities well progressed. North Fork Ridge and Kings Point projects represent 300 megawatts or half of the portfolio and are located in our electric service territory in our Central region in the Southwest of Missouri, near the city of Joplin. Neosho Ridge makes up the balance of the portfolio at 300 megawatts, and it's located in Southeast Kansas, in Neosho County, just 45 miles west of the North Fork Ridge project. These locations were chosen based on an ideal combination of excellent wind resource, proximity to customers, support of landowners and limited environmental impact.

Now let me walk you through what we've accomplished to date and the remaining steps in the plan. This year, we progressed through site selection, contract negotiation and the regulatory process. You'll recall that in July of this year, the Missouri Public Service Commission issued a ruling supporting the customer savings plan and clearly affirming the savings being delivered to the customers. In the Show-Me State of Missouri, we clearly demonstrated the savings to our customers.

In the last couple of months, October, November, we filed applications for the full 600-megawatt portfolio for certificates of convenience and necessity to progress with construction. In the coming weeks -- actually, for the CC&Ns, we have also agreed to a procedural schedule that will see the approval of these projects by Q2 of 2019. In the coming weeks, we will also be making additional regulatory filings in the other states that make up the service region of our Central electric utility, and we'll further progress the regulatory process in those states. Construction is planned to begin in the second half of 2020, with the facilities coming online in Q3 or Q4 -- sorry. Construction is expected to begin in 2019, with completion in the second half of 2020. And as Peter explained earlier, the rate-making process will begin with a rate case filed in the second half of 2020, with full rate recovery expected by 2021.

If there's one takeaway with respect to the customer savings plan, you can see that our \$1.1 billion investment opportunity is on track and will be recovered in rates starting in 2021.

Moving further west to sunny California, let's take a look at our electric utility and the investment opportunities there brought about by sustainables.

In California, the movement towards sustainability is accelerating, with the government passing a bill earlier this year requiring all electric utilities to achieve 100% renewable electricity by 2045. At our California electric utility, we're already on that path, with the Luning and Turquoise Solar projects. Now at 25% renewable energy, this leaves us uniquely positioned to achieve the 100% goal much sooner, and this is a really good thing because that's exactly what our customers are demanding. In regular conversations with our customers, they've spoken loud and clear, indicating that 2045 is way too late. They need renewables much sooner. And they need them much sooner because they're cheaper as well as being good for the environment and a good investment opportunity for us. Moving to 100% sustainable energy in the West region will allow us to deliver these tangible savings to customers while also achieving the ultimate goal, 100% sustainability.

Looking at our path to getting there. This year, we filed an Integrated Resource Plan with the California Public Utilities Commission. We've also prepared a request for proposal to procure an additional 160 megawatts of renewable energy and storage to support our buildout of sustainable energy for our utility.

Looking at this plan, we believe that we're ideally situated to achieve this goal much sooner, not 2045, not 2035. In fact, we think we can get there by 2022, producing as much renewable electricity as our customers consume. We believe we can get there because of our customers' demands. They've clearly indicated that this is a necessity for their utility. As well, we don't have any commitments in our West regional electric utility to legacy fossil generation. We can plan our future with a clean slate.

We are leveraging these opportunities naturally brought about by the falling costs of renewables, and hence we are in fact proving that the environment and the economy and investment opportunities actually go hand-in-hand. There is no false trade-off between environment and economy. We are achieving both, 100% sustainability with a great investment opportunity that delivers returns to shareholders while as well delivering savings to customers.

And with that, I'd like to pass the microphone to Mike Griffin, who will talk about natural gas investment opportunities, including sustainable natural gas.

Mike?

Michael Griffin

Thanks, Todd. So today, you're going to -- you have heard an awful lot about the electric power business, the compelling story that low-cost renewables play. In this section, I'm going to talk about the natural gas utility, but I think we also have an opportunity to start looking at renewables in the context of the gas utility.

So our view is that natural gas is a complement and an enabler of a renewable future. Natural gas is available in whatever quantity you want. It is low cost. It can be stored easily. It also has some compelling attributes for customers. It reduces emissions. It allows the use of high-efficiency appliances. And as I'm going to discuss a little bit more later, it also now -- we believe there's a path to getting even further reductions in greenhouse gas emissions through the use of renewable natural gas. All told, we think that there's just under \$0.5 billion of investment in the 2 projects that I'm going to talk about today.

So the first project that I'm going to talk about is our Granite Bridge project. This was introduced at Investor Day last year, and this is a natural gas infrastructure project in New Hampshire. And it is intended to provide service and reliability and cost savings to the existing gas utility customers in New Hampshire. And as you can see from this graph on the right, the gas system in New England and New Hampshire in particular, is constrained. There is very limited transmission capacity to bring gas into the region, and there's no domestic or internal generation of gas in that area. And what happens is, in the winter, when it gets really cold, you see incredible price spikes. An example of this would be in that polar vortex of 2014. The average price of gas in New Hampshire was just under \$25 an mmbtu. This was at the same time when gas in the shale regions and in the central parts of the Continent would have been generated at or produced at \$2 to \$4 an mmbtu, so you can imagine there's some significant opportunity here for cost savings.

The Granite Bridge project is really 2 parts. The first is a lateral that's going to connect 2 existing interstate transmission pipelines. So it's going to solve some local constraint issues in the transmission system. The second piece is adding a 2 billion cubic foot liquefied natural gas storage facility connected to that lateral, right in the middle of the service territory for these customers. Has some advantages in that it will provide a path to extending gas service to some unserved communities.

So when we talk about compelling customer savings, I think that this picture is a pretty good one for the Granite Bridge project. This shows the forecasted savings over a 20-year horizon, looking at all of the commodity costs, looking at all of the capital costs, all of the operating costs, as compared to other alternative means of procuring this fuel for customers. And as you can see, for an investment of about \$400 million, \$1 billion of savings is an incredibly compelling story.

So given the economics and the customer savings that are created by this project, we think that it's all steam ahead on getting this project done. At the moment, we've -- we're about halfway through the environmental permitting process. We expect to be having a hearing with the Public Utilities Commission in early 2019. At the same time, we'll be filing with the New Hampshire Site Evaluation Committee. And through that process, we expect to be complete with all their approvals, all the permits required to start construction in Q2 2020, allowing us to commence construction in the later part of that year.

Once construction's started, we think that -- the plan is to have the pipeline in service in 2022 and then to have the storage facility in service in 2023. So there's strong economics, customer savings. In addition, we also have key stakeholders supporting the project. We have a range of political support, including from the Governor's office. We have business communities supporting the project. And we also have organized labor in the state saying, "We support this project and the jobs that it's going to create."

So all in, we think the Granite Bridge project is on track to deliver this opportunity.

So now I'm going to switch gears to renewable natural gas. So renewable natural gas is basically gas that's coming from a nonfossil source. It is upgraded to pipeline quality through a chemical process. It's indistinguishable at that point from conventional gas. It can be used in an existing pipeline system, distribution system, existing appliances. So if you think about it, this presents a pretty rapid path to reducing greenhouse gas emissions and provides some pretty compelling sustainability indicators for customers.

In addition, there's also significant renewable -- or sorry, regulatory support across the United States for renewable natural gas. Specifically, there's a federal program that's been in place for some time on the Renewable Fuel Standard. There's also local state-level support specifically for the projects that I'm going to talk about. In New Hampshire, they have recently changed the rules regarding the renewable portfolio standard, creating a thermal REC, which is a Class 1 renewable energy credit that you can get for the use of renewable natural gas in a utility -- a gas utility, setting.

The final one that I'm going to talk about here is for -- is in California. California is actually moving ahead. There's a lot of talk in California about sort of the 100% renewables on the electricity side. Well, they've also passed a rule recently saying they want 5% of all of the gas provided to customers to be from renewable sources by 2030. So you can see that, looking at this, the renewable natural gas is starting to create a significant market. Our approach is to focus on proven technologies. And at the moment, that is, we're looking at landfill gas. And we're looking at anaerobic digestion as sort of being the primary source of the gas to be upgraded and supplied to customers.

So our initial project is in our New Hampshire utility. It's located at a -- will be located at a landfill in Bethlehem, New Hampshire. At that landfill, the landfill gas being generated naturally from the landfill is being collected and flared. It's not being used for anything. As part of our project, we're going to install the equipment to collect that gas, upgrade it and then transport it to our gas system. It will qualify for the renewable energy credits. And at this point, we already have 40% of the capacity from this project dedicated to 2 anchor tenants. So we think that this renewable natural gas is going to be something that we'll -- you'll be hearing more from us on, but it's a local, reliable source of power, particularly in a constrained gas environment.

So how big is the renewable natural gas potential? I think there's a couple of pieces to this. First, there's some additional technologies that I haven't talked about. There's thermal gasification, where you can use a much broader range of feedstocks to produce renewable natural gas. And ultimately, you can get to synthetic natural gas, where you are creating gas from things like water through electrolysis. Clearly, these are technologies that



need some development and deployment at commercial scale, but if you look at the market potential that's out there, with California alone looking to create something like 70 billion cubic feet of gas demand per year, these technologies are going to be driven through this kind of government program.

At the moment, we are currently looking at 5 other projects. Our initial focus is to support our existing gas utilities. And in the tradition of Algonquin, we're thinking big, but we're going to smart -- start small. But I expect that this will grow rapidly.

So with that, I'm going to pass the control to Gerald, who's going to talk about organic CapEx in our utilities.

Gerald Tremblay - *Algonquin Power & Utilities Corp. - SVP of Operations*

Well, thank you very much, Mike. And it's always great to be here, especially part of the third and final team, and the last guy that's up here to talk to you today.

So today, I want to provide you with an update on the organic investment plan that's within our existing regulated utility footprint.

So as you know, our utilities today, they really provide the essentials of life for our customers, whether it be in gas, electric or water, but in order for us to be successful in developing a 5-year organic plan, we need to truly understand what our customers want, so we've engaged J.D. Power to help us out with that, and they can dig into our customer base, interview them, survey them. And believe me, our customers told us loud and clear what they want. They want increase in safety. They want improved reliability. They want an overall enhanced customer experience, and they want everything at an affordable price. So this allowed us to develop our 5-year organic plan of \$3.1 billion.

So today, I'm going to break this \$3.1 billion into 3 broad categories. The first one I'll talk about is improving the overall safety and the reliability of our current infrastructure, and that's about \$2.1 billion-worth of investment. The second item is our grid modernization plan, which we're excited about, and that's about just over \$0.5 billion-worth of investment. And our final one is improving the overall customer experience, which we call our Customer First initiative, which is just under about \$0.5 billion of investment.

So let's go on to our first initiative here. As I said earlier, J.D. Power performed surveys for our customers. And out of that survey, with all those questions, their #1 priority that they told us is they want increased safety and reliability. And that's why we developed our plan to be at about \$2.1 billion in order to do this. It's mainly around the replacement and upgrade of our existing, aging infrastructure. So within our electric modality, we're going to look at refurbishing our existing substations, putting new substations in. We're going to invest in new poles and wires, and we're going to harden up our transmission and generation fleet. Within our gas modality, we're looking at replacing a lot of our gas lanes and -- gas mains and lines, and it's really around our cast iron and bare steel replacement program. And in water, we're looking at new main replacements, storage reservoirs and wells.

And across all of these 3 modalities, Peter pointed out earlier that the housing market within our service territories are on the rise, so we've put aside about \$0.5 billion here to accommodate for new customer organic connections to come on within our systems.

So you can see that investing in our existing infrastructure in order to accommodate what customers want out of us, increased safety and reliability, allows us to deploy about \$2.1 billion here over the next 5 years.

So let's move on to our second initiative, and it revolves around our grid modernization plan. What does grid modernization mean? Well, I could tell you this, the future growth within the utility industry in general is changing. There's rapid improvements in costs and in the performance of energy storage technology. Microgrid technology has now proven itself over the past few years, and really that's become almost like the investment of choice within the utility industry in order to improve the reliability and build more resiliency within the distribution side of the business. And that's in order to accommodate for that ever, call it, intermittency that's arising from new renewable generation that's been coming onboard.

Electric vehicle adoption rates are on the rise. And I don't know if you've been listening here, but I heard something from General Motors come out, and they can see what's happening. They're going through a transformational change here. They know that the car industry is changing. And



in order for them to be successful, they have to change their business model, but what it does for us is more electric cars on the road, adds additional load on the distribution business and therefore allows for additional investment.

And finally, smart city campaigns are now in effect. So cities are looking for a smarter infrastructure to be put in place, and why do they want that? They want to attract new talent. They want to attract new businesses, retain their existing businesses and ultimately increase their overall population base.

So how are we going to take advantage of this grid modernization that I'm talking about here? When we spoke to you last year, we've already been toying around in this. We have several pilot projects underway. Over in our West region, we have 2 microgrid projects. In our East region, we have a behind-the-meter battery storage project. And in our Central region, we have a community solar project that's now underway.

So we always said, let's start small. We'll learn from these projects. We always think big, and now we're initiating on it. So our local business development teams have dug into our -- and focused on our large commercial and industrial-based customers, and we found out they want this modernization in place. They want this because it improves the reliability and resiliency. The less downtime they have, the more revenues that they're able to generate.

So this allowed us to deploy just over \$0.5 billion within grid modernization.

So if you think about this and you look at the picture up here. Grid modernization conceptually is, there's investments behind the meter with battery storage technology, there are investments around the meter with microgrid, and investments a little bit further away called those community solar projects. But I'm here to tell you that if there's any sexiness in the utility industry in today's day and age, that it's on the distribution side of the business. And I'm here to say that this is just the tip of the iceberg. And as we continue to define and look into more investment opportunities here, this is going to grow in future Investor Days to come.

So let's move on to our third and final initiative here, and this is called our enhancement of our customer overall experience. We're very excited about this opportunity that we have underway. And we call it our Customer First initiative, where we plan to invest just under \$0.5 billion over the next 3 years.

So this investment, it's really to accommodate ever-changing customer expectations. Our customer demographics are changing. Ian pointed that out earlier. We have the aging baby boomers are now being replaced by those famous millennials. And those millennials, they're actually finally starting to move out of their parents' place and go into their own homes. But they have a different customer experience expectation. They want -- they've seen what they're getting from the Googles, the Amazons, the Facebooks of the world. And they're saying, "Gee, why isn't my utility provider giving me this type of experience?" They want more choice. They want more technology. They want more information at their fingertips, and we're going to provide this for them.

A few examples that we're going to be doing here. We're going to give them a realtime billing and usage information, where they'll be able to look at it and say, "Well, I'm currently using this much of my water, electric or gas. And that's more than last year, at the same time. So I have a budget. I've got to watch out for that." They're going to have more choice, so they should be able to choose the type of energy perhaps that they want to purchase. If they want more renewable energy within their portfolio, they should be able to pick that. And if they have batteries, battery storage behind their meter, they should be able to have the choice to say, "I want to sell that excess storage on to the grid."

We're going to provide them with notification alerts. If there's a planned outage in electric, water or gas, we should be telling them that way ahead of the time, telling them what -- when it's going to happen, what we're doing to improve the reliability of the service, when they're going to come back online. And if there's another type of, call it -- if we have like a weather event that happens, an unplanned outage, we should be able to tell them we're aware of that. They don't have to call us. We'll let them know, "There's a problem here. We're working on it. We're fixing it. And you'll be able to see your service tech come to your door and fix the problem at a certain time."



So this overall project not only helps out our customers when it comes to their requirements, it also helps us become more efficient. And therefore, when we get more efficient, we're replacing operating costs with technically a capital investment opportunity here. So you can see this platform we're talking about not only sets us up for current customer expectations but really sets us up for, call it, the utility platform 4.0 of the future.

So let's summarize everything that we spoke today on the regulated business and when you look at it from an investment perspective.

Well, Todd spoke to you about our Greening the Fleet initiative, \$1.4 billion of investment. Mike spoke to you about how natural gas aligns with our sustainability goals, our Granite Bridge project. And Jennifer spoke to you about 2 natural gas acquisitions that are now in place, New Brunswick Gas and St. Lawrence Gas. That's about \$0.8 billion. And I spoke to you about the organic investment opportunities just by listening to what our customers want. That's about \$3 billion, \$3.1 billion of investments. So when you total that up, it's \$5.3 billion-worth of investment. And it's a -- looking at the chart there, that's a pretty solid growth trajectory that we see over the next 5 years within our utility business. And if you compare this -- we're always looking for more investment opportunities. If you compare this to last Investor Day, that's \$1.7 billion of incremental investment that we've identified.

So now you're probably saying to yourself, and I can see hands trying to get up there, is how are customers going to afford this? Can the rates actually sustain this? Well, we're happy to say that the majority of the capital we're talking about today really has no incremental rate impact on customer rates whatsoever. And that's because some of this capital revolves around asset replenishment, which is depreciation which is already in rates. Some of the capital we spoke about today is new customers coming on, new connections, which in essence pays for itself. We spoke about more technology that we're putting in, which is allowing us to become more efficient, and replacing operating cost with capital investment. And finally, our Greening the Fleet initiative and the Granite Bridge project, this is a replacement of commodity costs with capital investment.

So if you look at the chart here on the right, you can see that \$5.3 billion-worth of investment translates into about a 12% CAGR increase in rate base growth but simply only provides for an average annual rate increase to our customers of about 3%. And think about the value that we're providing to our customers, of what we're creating here for them. We're giving them more renewable energy at a better price, increased reliability and resiliency and an overall enhanced customer experience. These are all the things that they're looking for.

So I spoke to you about customers. There's another key stakeholder we pay particular attention to, and that's our shareholders. How do we ensure that we're maximizing the return on equity that we're allowed to get? And this is through our capital optimization program.

Not only are we diversified from, call it, modality, electric, gas, water, we're diversified with a lot of utilities across the U.S. and, soon to be, Canada. What this allows us to do is take advantage of some of these utilities will be in a test year. They'll have a really wide envelope of capital investment at their fingertips to deploy, while other utilities that are in between a test year will have a smaller amount of investment at their fingertips. And they'll focus mainly on that mechanism capital that we spoke to you earlier. This allows us to maximize the return on equity and minimize that regulatory lag that all utilities face today. And if you look at the chart here on the right, we're happy to say that 87% of the capital we're talking about today really only has a maximum regulatory lag of about 6 months.

So how does this all translate into from an operating profit perspective? Well, \$5.3 billion of investment translates into about \$3.1 billion of rate base growth, an operating CAGR over the 5-year time frame, an operating profit of about 12%. And by the time we hit 2023, we'll be at about \$925 million in operating profit.

So I'm going to leave you with this. If there's 3 key takeaways that I want to leave you with, is the first one, low-cost renewables allows for a triple win. Our customers win more renewables at a lower price. Investors win \$1.4 billion-worth of investment. And of course, you have the environment wins with a lower carbon footprint. The second one, natural gas is a sustainability that's aligned with our natural gas. And we spoke about -- Mike spoke about our Granite Bridge project that allows us to deploy about \$0.4 billion. And then we have our 2 new natural gas facilities coming on, another \$0.4 billion, for a total of \$0.8 billion. And finally, just listening to what our customers expect from us, improved reliability, safety, more resiliency, allows us to build a day-to-day organic investment plan of \$3.1 billion. So a strong pipeline of growth here of \$5.3 billion within our regulated business.

And with that, I'm going to pass it over to questions.

So Ian?

Ian Edward Robertson - *Algonquin Power & Utilities Corp. - CEO & Director*

Perfect. Thanks, Gerald.

So maybe just before we get into questions, let me just give you kind of -- I'll just give you the 3 messages for the day.

Obviously, we think operational excellence, as this organization matures, is an opportunity to drive incremental value. I think, as Ben's question came up, that we see opportunity where we're positioned on that evolution curve in terms of renewable energy assets. The falling costs of renewables, it's a theme that you've heard through all of our presentations. It probably drives \$3 billion of our \$7.5 billion investment, probably more. And so that is the theme. That is just continuing on. And obviously, we're happy to ride that wave, and hopefully, we're a long way from the beach on that one.

And then lastly, this organization, perhaps now at its heart, is a regulated utility. \$5.3 billion of growth going forward is going to maintain a business mix of like 2/3 to 70% on the reg side. But those lines are blurring, the lines between the nonregulated IPP business and the regulated electric utility business, are now coming together. And we're thrilled that as an organization we have the core competency within this organization to develop renewable energy assets because it's a competency which is enhancing our provision of electric service to our electric utility customers.

So with that, David, any Slido questions before...

QUESTIONS AND ANSWERS

David Bronicheski - *Algonquin Power & Utilities Corp. - CFO*

Well, we have one question we'll take a live question from Jeremy, first.

Ian Edward Robertson - *Algonquin Power & Utilities Corp. - CEO & Director*

Jeremy?

Jeremy Rosenfield - *Industrial Alliance Securities Inc., Research Division - Equity Research Analyst*

Jeremy Rosenfield, Industrial Alliance. Okay, so we've heard a really good, consistent message in terms of lots of investment opportunities. And the execution seems to be consistent in previous years, with you investing in the regulated side and the nonregulated side, international opportunities. What are some of the things that you see as potential risks to the outlook? And you're clearly going to say that a lot of this is secured, but what are the things that keep you up at night and that you have to really maintain your focus on to make sure that you can execute on the growth program that you have outlined here for investors?

Ian Edward Robertson - *Algonquin Power & Utilities Corp. - CEO & Director*

Well, yes -- I'm not going to -- I think it would blowing smoke up your kilt to say all of these are secured. You heard Jeff actually clearly state that we're still pursuing permitting issues. We're in the midst of negotiating PPAs. So I guess what keeps me a little bit up at night is making sure that we are aggressively competitive, that you can't have -- you can't afford to be less efficient than the competition if you want to be the guy who wins that PPA. So there's a challenge that I think -- but the good news is I think that's kind of built into our DNA going forward, which we are an aggressive, fairly lean shop. And so we're not carrying the overhead that maybe some other larger developers have, in front of us. Maybe that's one of the

things that -- and maybe the follow-on corollary to that concern is that we are a lean shop and we are out there hustling and that we don't blanket these things. We're more sharpshooters. And man, if you miss with -- as a sharpshooter, it's you're missing with -- as a sharpshooter. And so that's an issue. The good news is we haven't missed too many shots. And I think it's back to Sean's question earlier today, is what kind of churn have you seen in that portfolio? And so Lord know's I ain't saying it's 100% derisked, but the good news is, when we've said something, we've been able to get it over the finish line. And that's probably a characteristic of the organization which is good. And I think the last one, and someone asked the question -- maybe asked it through Slido, is it's the black swan, the black swan event. I don't know if Doug Ford was the black swan or not. And maybe if he followed on Donald Trump -- maybe there's something in there thematically that we should be thinking about, populist governments and what the impacts they're going to have on our business. I'm not sure there's a lot we can do about it. We have to manage our way through it, and we do it through diversification, but that's something that probably keeps me up at night. But all in all, I guess in summary, I mean, I'm not dissuaded from the fact that we've got a portfolio of stuff that we can execute on, that is largely within our control. Like if -- and if we don't do it, it will be self-inflicting gunshot wound, as opposed to it being imposed on us, but if it was all locked and loaded, then man, we should be getting much higher multiple than we're getting right now. So I don't know if that's helpful, Jeremy, but...

David Bronicheski - *Algonquin Power & Utilities Corp. - CFO*

So we have a couple of financial questions, which I'll handle, coming in from Slido. One is related to how we think of financing of New Brunswick Gas. And I'll just say, I mean, we manage our capital structure on a consolidated basis, and we manage it to our BBB flat credit metrics. I mean this particular acquisition happens to be of a size that we've got sufficient liquidity within our system to be able to take it in. But over time, with -- as with everything else, we'll look at making sure that we've got that optimal balance of debt and equity. The equity thickness for New Brunswick Gas is 47%, so you'll be able to guide yourself on that. We had a question just on kind of what's driving our cash tax leakage that we've provided some guidance to in the book. Listen, it's -- really it's 2 things. It's the Part VI.1 tax here in Canada. It's about half of that cash tax leakage, and then the other half is related to the BEAT tax that was just introduced as a result of tax reform in the U.S. And the final question was about our DRIP. Our DRIP program, it will continue to be a part of our capital financing program going forward? It's about \$75 million of equity for us a year that comes through the DRIP program. It's reasonably well subscribed to. Another question coming from Ben.

Ian Edward Robertson - *Algonquin Power & Utilities Corp. - CEO & Director*

Ben.

Benjamin Pham - *BMO Capital Markets Equity Research - Analyst*

It's Ben Pham, BMO. Atlantica Yield, you own 41% now. Any thoughts about owning more long term? And the reason why I ask that is, isn't there more value in housing international assets in Algonquin rather than dropping down to Atlantica Yield where you're probably capped at 10x EBITDA? And if that value isn't [served] you can just offload it to pension plan money.

Ian Edward Robertson - *Algonquin Power & Utilities Corp. - CEO & Director*

Well, it's a -- I mean, it's a question -- the -- I mean, the question is, are we interested in, first of all, in expanding our interest in Atlantica? And clearly, we see a kind of a cap on this at 49% just given part of the thesis is not to consolidate all of Atlantica's project debt. I think the problem that you're raising right now is, if we were to drop a great project down into Atlantica when we're at, call it, just to keep the math simple, 50%, effectively we're giving away 50% of that investment opportunity, though presumably selling it for cash. And if you -- as long as you feel you're getting fair value for it, for the 49% we drop into it, basically we're going to take back an equity interest and presume -- preserve, I guess, the equity cash flows. In the first instances, for Sugar Creek, since we're below the 49%, the thesis is actually not to take cash but to take an equity interest back that it will provide us those same cash flows. So it's not today's problem that we would run into in terms of having to sort of make that choice of taking cash rather than preserving the equity value. I think that will be a decision that goes into -- and I think, I don't know if it was Ryan who mentioned it, not every asset should drop -- get dropped down into Atlantica as a holding vehicle, for simply the fact that you are making that tradeoff. And so right



now, not today's problem. If we see an opportunity, we can drop the -- we have sufficient headroom. We could drop that asset down, but we will have to think about it in the years to come. Nelson, this is 3 questions, man.

Nelson Ng - *RBC Capital Markets, LLC, Research Division - Analyst*

But this is my last one, but it will be a multipart question...

Ian Edward Robertson - *Algonquin Power & Utilities Corp. - CEO & Director*

Okay, Part B. Go ahead, Nelson.

Nelson Ng - *RBC Capital Markets, LLC, Research Division - Analyst*

So can you touch on -- like California fires and regulatory risks has been a recent topic. And I noticed that safety and reliability has been, I guess, a lot -- I see a lot of capital has been allocated to that. So could you talk about whether there's -- has there been a larger focus on safety and reliability which is why there's this \$2.1 billion allocation? And then can you talk about CalPeco, which is obviously in California, is that area prone to forest fires?

Ian Edward Robertson - *Algonquin Power & Utilities Corp. - CEO & Director*

Yes, yes -- no. So I'll start by saying, I don't know if I'd say it's a larger focus. It is a focus, and man, you just cannot take your eye off that ball. And I'll go further to say, I think the capital markets, maybe even regulators, are punishing events that may be not even your responsibility, perhaps more severely and more quickly. Social media. Things spread like wildfire. Regulators want to put people in jail. I get it. So that's the backdrop against which we need to think about managing our safety program. I don't know if it's more or less than we would have done absent that, but it's definitely, we are definitely focused on the whole safety and reliability thing. Very specifically about California, very interesting situation. It was -- up to now, it's been run by utility guys, largely we inherited from NV Energy. We had them create a plan, just this past fall, for actually de-energizing parts of the utility system in -- where there was areas where you could potentially end up with a fire situation. And that almost goes -- that's almost antithetical to what a utility person kind of holds near and dear, which is providing reliable service. And so we have actually instituted plans, with the support of the CPUC, specifically in CalPeco that if there's an area, that we will de-energize it, if there is a heightened concern of fire. Thank goodness and -- that we have just never had a problem, so far. And obviously, that horrific fire up in Paradise is to the North and to the West, of us. But I don't say, there for the grace of God go we, in terms of -- could be a lightning strike. You just have -- but there's -- we will do everything in our power possible to make sure that -- including shutting down the electric system, if necessary, to prevent those fires. So we're working with the CPUC to execute on those plans. So we're on it.

David Bronicheski - *Algonquin Power & Utilities Corp. - CFO*

Yes. And there's 2 other things that I would add to that. First, in the CalPeco electric utility, we actually have a specific tracker for vegetation management. So we are not disincented to spend the required amount on vegetation management throughout. So I will say that. And well, fire is a risk, and we're on top of it and aware of it. This area actually -- the Tahoe region actually does get precipitation. It gets about 50 inches of rain a year, 400 inches of snow. And it precipitates on about 70 to 80 days a year. So that's different than other parts of California. It's still a risk that we're...

Ian Edward Robertson - *Algonquin Power & Utilities Corp. - CEO & Director*

Very mindful of.



David Bronicheski - *Algonquin Power & Utilities Corp. - CFO*

Very mindful of, though.

Ian Edward Robertson - *Algonquin Power & Utilities Corp. - CEO & Director*

Part B? Just kidding. Okay, well, if there's no more questions, hey, thank you so much for attending our ninth annual investor morning. Appreciate all the interest and happy to hang around and answer questions for as long as anybody wants. So safe home, everyone.

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