



Brookfield Renewable Partners L.P.

2016 Investor Day Transcript

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SACHIN SHAH:

Well, good morning, everyone. I guess first, thank you for coming. It's always appreciated. I'm Sachin Shah, I'm the CEO of our renewable power business at Brookfield, and today with me is going to be Nick Goodman, our CFO, and Stéphane Landry, who's our Head of Market Research. We're going to talk a little bit about the business, and our growth prospects that we've updated you on every year. But I think the key theme today is just that, we're at the beginning of what we believe is multi-decade growth in this sector and more and more choices are starting to evolve, and we want to just tell you how we're positioned, how we think about investing capital, the type of business we're trying to build, because we think increasingly over the next decade investors will have significant choices to make if they want to have exposure to the renewables sector, to power generation in general. That's a good thing, and obviously investors need to line up their capital where they feel they can have the greatest returns, and we think we can make a compelling case for that.

The other thing that we're going to talk about, and Nick will talk about it in a little bit, is given that we're in a very low rate environment and given that today many, many investors are looking at dividends and dividend growth, one thing that we wanted to make sure that we spent a little bit of time in our business, comparing it to the other options that are out there in the renewables sector, that all cash flows are not created equal. What we mean by that is that dividends you receive from certain types of assets are very different than dividends you receive from other types of assets, and it really comes down to the underlying quality of asset base, the growth potential of that dividend over time, and the nature of that dividend, whether you're receiving a return on your capital or return of your capital. I know the prior group touched on that a little bit. We're going to spend a little bit of time on that today.

So, first, the renewables sector globally. Obviously, it's a very large sector; it's got a significant amount of growth; today, over \$300 billion annually on renewable investments around the world. What's interesting is that five years ago, when we launched Brookfield Renewable Energy Partners—in fact, 18 years ago, when we launched our predecessor vehicle, the Great Lakes Hydro Income Fund, there was no concept of the word “renewable,” it just didn't exist, it wasn't in people's nomenclature, and this whole idea of global warming and needing to change supply, that was something that was talked about on the periphery, but wasn't really a driver of growth. Today, what we've seen in the last five years, in particular, is a significant, significant increase, and almost a step-change, in how much investment is going on in this sector, and you can see that in the first part of this

slide, where you had very modest spending in the early 2000s, and what you've seen is a real ramp-up since 2011. The driver of that, and the single most important driver of that, is climate change.

So, investors who have a long-time horizon, who are thinking about investing their capital not just for three or four years, but for 10, 20, 30 years in multi-generational investment opportunities, we think that renewables presents a really unique opportunity, because it's a global issue, climate change is a global issue, and governments and people around the world are committed to policies and change that ultimately will lead to more and more investment. We feel that we're uniquely positioned to be a part of that solution, but also to help investors make money through the investments that will happen over the next 20 to 50 years.

So, what should investors look for? The reason we're asking that question this year and we didn't ask it maybe five years ago is that five years ago, we would come up here and we'd tell you that we're unique, there's not that many people who you could comp against, there weren't that many companies making bulk investment in renewables. But if you look at what's happened in the last two-and-a-half to three years, you've got U.S. IPPs who are transitioning away from thermal into renewables, you've got yieldcos that evolved and now are dedicated renewable vehicles, you've got companies in Canada, in Europe, throughout Southeast Asia that are solely focused on renewable investment. So, what it has done, is it has allowed investors to have significant choice and to look at each of these different platforms of where they could put their money and think about which markets do they want to be invested in, what type of assets do the underlying management teams invest in, what their track record is, and "How can I obviously be part of the next 20 to 50 years of growth in this sector?"

As I said, one of themes we want to lay out today is that cash flows that come out of these assets are very different in nature, they have different qualities and characteristics, and ultimately it comes down to a very simple premise, that you have to focus on quality assets and quality cash flows, because if you do that, you will, over the long term, have the greatest earnings power in a business.

So, what is quality? When we talk about asset quality, when we talk about cash flow quality, we wanted to give you a little bit of an indication, in our minds, of what is quality. Long duration cash flow streams—and again, in a world where interest rates are zero and people are looking for an extra 50 basis points on returns, often nobody is really thinking about 10 years from now. What we present in our business is an asset base that's largely perpetual. We have hydros in our business today that

were built at the turn of the century, in the 1900s, and that will be here for another 100 years in front of us. So, when you have a perpetual asset base that produces largely a return on capital, you can build your businesses off very stable, long-duration cash flow streams that earn a high margin. The other thing we have is a track record of generating strong margins through the cycle.

We started back in the early 2000s, as markets deregulated. We've now gone through almost four power cycles where prices — everyone talks about reversion to the mean in power markets, but ultimately what that means is prices are very low, they ramp up because of some sort of scarcity issue or some sort of supply side issue, they come back down as more generation is built, and we've gone through three or four of those around the world. And what we're able to demonstrate, and we have a track record of showing, is that our assets through all of those cycles have produced cash flows, but mostly importantly, at the bottom of the cycle, our assets generally produce a 60% to 70% cash margin. It's a very unique position to be in, when you're in a business that has a power market that goes up and down, and you can comfortably be at the bottom and make a 60% to 70% cash margin. The reason that's important is not just to show the robustness of the business, but we'll line it up a little bit later to why we invest heavily when we're at the bottom of the cycle and what we believe that provides investors.

I think it was Ben, or somebody in the earlier presentation, that talked about what are the game changers that are going on, and technology is obviously a game changer. It's changing productivity; it's changing how people receive goods and services. Obviously, the renewable sector has been infiltrated with new technology in the last five years, whether it's improving wind and solar, whether it's distributed generation, whether it's batteries that provide storage. Ultimately, if you're an investor in this asset class and technology is something that can impact the quality or the lifecycle or the relevance of the underlying assets that you've invested in, it can have a very detrimental or positive impact to the business that you're putting money into.

One of the things we believe is that we are investing in a proven technology, which is hydro, that hasn't really changed in a hundred years, that has tremendous scarcity value. When we build or buy a hydro facility on a river, you can't replicate that. You can't create a new river next door and actually just build your own dam facility. It doesn't mean that we're disparaging wind or solar, these are good assets and it means that we will invest in them over time, but we recognize the importance of scarcity value and the importance of a proven technology, and so we've generally tended to focus on hydro

and been very selective and cautious about our approach to wind and solar. We think that will, over the fullness of time, prove to yield us the highest returns in the long term.

We also have a very long-term track record. We've been investing in this sector for 20 to 25 years. As a public company, though, we have a 17-year track record, and I'll show you a little bit about our dividend growth over that time.

Then, obviously, with all of that history behind us, with a proven technology, a long-term track record, what's most exciting about this sector is the significant amount of growth that's in front of us. I talked about how much money is going into this. I think, just stepping back from that, what's a really unique part about renewables today is that in many, many businesses, in many sectors around the world, people make investments assuming demand will grow and skate them outside. What's unique about the power sector today is if you're in the renewables space, it doesn't matter if you're in an emerging market economy or a developed economy, it's all about supply. In emerging markets, they don't have enough supply, period, so you're always fighting this undersupply situation and more and more demand for power, and the gap is enormous. So, you always have an ability to invest, because supply is just constrained. If you're in a developed market, like North America or Europe, they have enough supply, but the supply has too much carbon, and with the policies and people's mindset changes to reduce carbon, it ultimately means too much of their supply is carbon-oriented, not enough is renewable, and so you're again in an undersupply situation on the renewables side. So, it's a very fortunate position to be in. As a management team, you get to invest based on supply fundamentals, which are far stronger than hoping that economies will grow and that demand will skate you outside, and then you have all of that growth which just adds to the return equation.

This is our marketing slide, obviously, but we have \$26 billion of assets. We would be one of the largest platforms in the world as an investor of renewables. We're in seven different countries, 15 different power markets, and I'll get to our global scale in a second. As I mentioned, we have a 17-year track record as a public company, and almost 90% of our assets are perpetual hydros.

Just to give you a little bit of sense of our scale, we've made a concerted effort in the last five years to grow globally, and growing globally for us wasn't just about making investments in new countries, but it was about setting up operational expertise in each of these markets we went into. We continue to believe, that our operational expertise is really our key differentiator, not the fact that we can put

capital to work around the world, we obviously have that skill set, but the fact that in every market we're in we can develop assets. So, we can pursue greenfield and brownfield development in addition to M&A. We can sell power into wholesale markets. We can sell power to commercial customers. In Brazil, we have a book of 200 commercial customers that we sell power to every day. It's a very, very unique feature to have, because it means you can toggle back and forth between wholesale markets, commercial customers, long-term utility contracts, and it gives you tremendous flexibility in your business.

Having a development capability means that when too much capital is chasing M&A, you can slow down your M&A program and you can start to build out your pipeline. So, we've embedded the business with a 7,000 megawatt proprietary internal development pipeline. It's not something that we outsource; it's not something that we buy from anybody. It's ours, it's in the vehicle, and we get to keep all of the premium returns that we attach to those projects. We generally build out somewhere between 200 and 300 megawatts per year at 15% to 20% returns. So, you can see it gives you this great feature to have, that in the event that M&A starts to become too expensive, we can arbitrage our capability, and it's an internal capability. We run all of our assets in-house. We don't rely on outsourced O&M, we don't rely on outsourced consultants, we do all of that work internally, and we have about 2,000 people in the business today embedded internally in all of these markets who can operate our facilities.

From a track record perspective, we're showing the last five years here, and like I said, we've made a concerted effort in the last five years to expand globally and to really increase our reach and our capacity, and so you can see it's led to commensurate increases in dividend growth. We've been careful in dividend growth, largely because we are, in many sectors, in depressed power markets. So, although we have 5% to 9% dividend growth guidance, what we've told people is, as long as power prices stay at sustained low levels and at historical low levels, we'll generally target the mid-range of our dividend growth targets. You've seen we've been able to meet that for the last five years.

From a performance perspective, we trade both on the Toronto and New York Stock Exchange, and we've had a long-term track record of high-teens returns, well in excess of our 12% to 15% target. So, what we target is 12% to 15% per share growth for investors over the long term, and we've been able to stay within those targets.

Again, coming back to choices investors have—we haven't obviously put up the comps that are out there, but if you look at the various indices that are now available for people to invest in, that have ETFs that reference them—there's the Global Clean Energy Index, which has had its challenges. Obviously, there's the Utilities Index, which has done quite well as rates have come down. There's the MLP Index, which has also had many challenges. So, you can see again that there's sort of this hybrid theme in our sector, which is there's many people who are focused on just yield and then there's those who are focused on renewable and the growth opportunity in front of us, and in both of those cases, we think we present a really compelling opportunity.

Just to remind people a little bit, before we get into the bulk of our presentation, what is it that we offer investors today is just the base business. So, in addition to our operating expertise and in addition to our global capability, 90% of our cash flow is our contracted, with a duration of 16 to 17 years. Our contracts are inflation-linked, meaning our cash flows grow every year with the commensurate inflation of each country we're in. We target and we have a good history of putting about \$500 million to \$600 million of Brookfield Renewable equity capital to work in new accretive investment every year, and we target 12% to 15% returns on every dollar we spend. We have an almost 7,000 megawatt development pipeline, it's internalized, we own it, and we use it to enhance our returns over time, and we use it to ultimately, as I said, arbitrage the skill set that we have, which is an operating skill set.

Then, we've been very, very selective and careful to embed the business with the very long-term option. What we mean by that is that, although we have these long-duration assets and although we have contracted cash flows, we recognize that we need to think 10, 15, 20 years out in the future. We've been in this unique period, it's been about seven years now in duration, of very low gas prices, very low power prices, and then subsidies that are promoting renewable investment, and through all of that, what we've been able to do, and not just in North America but in other parts of the world, is ultimately buy very unique hydro in markets that are supply constrained at this low price environment, at \$0.50 on the dollar. And what it gives us is—if prices just stay low forever, if that's what you believe, then we're going to make 10% to 12%, at the lower end of our target range. But, if prices go up, which we believe they will over time, as assets need to be replaced, because you do have limited supply, then we have an opportunity to deliver into this business high-teens to low-20 percent returns with those same assets. When you have perpetual assets and you've got a long-time horizon, and you can buy at \$0.50 on the dollar—for investors, what we've done is we've laid out all of these long-dated options, and those long-dated options will make a reasonable return today or they'll make an

exceptional return in the future, depending on your view. So, what we're going to talk a little bit about now is just that view and how the markets work, and I'm going to hand it over to Stéphane to talk a little bit about that.

Before Stéphane comes up, just we will take questions after everybody speaks. So, I'm just going to pass it off to Stéphane first, I'll come back, and we'll take three or four questions after each person speaks, and then we'll wrap it up and we'll take Q&A at the end, as well.

STÉPHANE LANDRY:

Good morning, everyone. I'm Stéphane Landry, I'm in charge of Market Research for the Renewable Group, and when Sachin wants to insult me, he calls me Chief Economist, so don't ask me if the Fed is going to raise rates, because my answer will be yes, soon. So, what I'll try to do today is focus my remarks on North America, and especially the Northeast of the U.S., where we have most of our merchant exposure, so where market prices have a greater impact on our business. I'm going to try to answer three questions, why prices are so low, will they ever increase, and finally, how, as investors, we think you should be positioned. So, let's start with just a polling question before I get into those answers.

So, what you should see, eventually, is a question on which of the following will have the most significant impact on the power industry over the next decade, is it distributed generation and storage, carbon pricing, fuel cost or regulation?

That was a bit of a set-up question. I was hoping anything but regulation, because that's really what I will be talking about. All of these things—for sure, distributed generation and storage will have an impact on the power industry. Carbon pricing, for sure will have an impact. Fuel cost is having a daily impact on the power markets. But, what I want to focus is more on regulation and the importance of market structure on market outcomes. So, maybe we can go back to the slides.

Addressing the first question, why are energy prices so low—I'll get back to the chart, but maybe give you a bit of background on power market structure—and I know you didn't come here to hear a long exposé on the inner workings of the dispatch algorithm, so I'll keep this high level.

Twenty years ago, when the markets were open, the idea was that, while you could make a case that you could regulate transmission and distribution as natural monopolies, and so you had vertically integrated companies, the generation part was clearly something that could be competitively organized to get cheaper power generated, and so you had this breaking up of utilities and opening of competitive markets, and then electricity was supposed to be like any other commodity. Any other commodity is fairly simple. Whether we look at iron or coal, or oil or gas, you look at demand, you look at supply, and in supply, you try to figure out what the cost structure is, and if demand is greater than supply, then prices will go up and you'll build new wells or you'll build new mines, and if demand is too low, then you'll have prices drop. Electricity was supposed to behave the same way.

Then, if you fast-forward 10 years—and on Sachin's chart, it's when really the renewable supply picks up—what you have is a desire to decarbonize the economy and reduce pollution from the power sector. So, the idea was to tighten up the emission allowances for especially coal plants, and also try to reduce the carbon footprint, and then renewables looked like a great candidate for that. The problem is that their cost was nowhere near the prices in the market. So, prices in the market may have been \$50, \$60, \$70 per megawatt hour, renewables were costing \$100, \$120, \$150 per megawatt hour. So, what you got is governments coming in and start to incentivize renewables. So, either through a production tax credit or through direct subsidies or through special procurements or through renewable energy credits, you had a lot of instruments that were used to bring in new capacity to the market, because the cost of that capacity was greater than the prices you were seeing in the market.

So, the analogy I would draw is, when the government decided that we shouldn't have high-sulphur diesel in the system, it basically set a date at which high-sulphur diesel would not be allowed, there would be a maximum of sulphur in the diesel, and then you have that time to comply, and prices for diesel will migrate to whatever you need to provide that low-sulphur diesel. We didn't go out and say, "Well, we're going to incentivize the wells. We're getting lighter products that have low sulphur and subsidize those directly." Prices went in the market to wherever they needed to go. What you've seen in power is not that. What you've seen in power is a segregation between all of the new plants that are being built under long-term contracts and/or subsidies, and then the workings of the dispatch algorithm and the spot market, which, because you're adding new supply that has zero variable costs, pushes prices down.

So, we can spend a lot of time discussing where gas prices will be and where next week's prices will be in the spot market, but really, the question is, if you're building offshore wind farms that cost \$160 per megawatt hour, why aren't wholesale prices \$160 per megawatt hour, and the answer is the wholesale markets are broken. So, the idea that you would get electricity treated as a normal commodity, I think is more or less over, and that's why we present those as there's the subsidy market and there's the wholesale market.

Now, what's clear is there's a desire to get clean energy and renewable energy, and that's what we provide with our hydro plants, except we're not getting the compensation that anyone else that provides those new renewable plants are getting. So, what is that doing to other market participants?

The nuclear fleet is at risk. Nuclear provides something like 20% of generation in the United States, and in the Northeast, our estimate is about a third of the nuclear plants are at risk of shutdown because of economic reasons. The coal fleet is also, more or less, in distress. Gas prices are so low that actually they're setting prices, and so they're making no money, and they need to invest to basically clean up, and so they're under a lot of duress. The gas plants are doing okay, because they get their own little subsidy, which is the capacity market, but the problem is, once you have more coal plant retirements, and now you have gas plants setting prices in the market, well, it's hard to make money if a gas plant is competing against another gas plant. For now, I think they're doing okay, but they're, I would say, a bit at risk in the future.

Wind and solar are a bit strange. There is some money to make if you find a fantastic project, bid it right and make some development arb, and Sachin will talk about that a little bit when he talks about growth, but once they're operating, what you have is they are priced as high yield bonds, they're seen as having very low operating risk, and so the returns are very low, once you have operating plants.

You probably wonder what about us. So, we're still having good margins, even in this environment, because of a few things. The first one is we have no fuel costs. So, when you have a thermal plant setting prices, we're still making that margin. The second thing is we're getting some of that capacity subsidy that gas plants are getting. The third thing is we're providing other services to the grid. So, it's reserves, it's frequency response, and many things that you probably don't want to hear about. The last thing is we have storage capability, which means that we can increase our generation when prices are high and capture better prices, and ramp down when prices are low, and we do believe that

that storage capability will become more and more valuable as you're bringing into the market more and more intermittent generation in the form of wind and solar. So, we're doing, in the circumstances, okay.

The gap I describe between the value of power as desired by policy makers and the spot prices, that gap is what we would like to capture, and we see a few paths to get there.

The first one is we see a pushback on subsidies. I don't think you can make the argument anymore that wind or solar are new industries. So, things like the PTC are constantly being discussed, and currently there's no plan for renewal, but I'd say worldwide there's a view that we should walk away from subsidies. A lot of movement that's been seen, also, in direct contracting—so a lot of companies are now saying, "Well, you have these standards of procurement. We want to go way beyond that. We want to be 100% carbon-free, 100% pollution-free," and I would say the more the subsidies are taken away, the more the cost of doing that becomes greater. So, we're seeing Microsoft, Facebook, Google, Ford, GM, more and more having programs to contract power, and then we become one of those alternatives that enable them to provide 100% supply of electricity from renewable sources.

We're also seeing states going, I would say, beyond the normal renewable portfolio standard, where the utilities are forced to buy a portion of renewable power. As an example, three states in New England have run a process where we've bid to provide a solution that integrates wind, hydro and transmission, as they're running out of good wind sites to develop near their footprint, so they're going wider and wider in the market to make that work. Bringing, say, wind from Maine is expensive. If you don't fill the transmission line, it's going to be extremely expensive. So, we bundle products and we see more and more of those opportunities to bundle hydro with other renewables, bring the transmission solution and offer a complete product.

Finally, I'd say, everywhere, we're seeing growing pressure on climate change. It takes the form of carbon taxes, carbon cap-and-trade schemes, price floors, forced shutdown of coal plants. Like, all that I'm describing, there's Alberta, Ontario, Germany, the U.K., France, all of these are examples of places where it's only going one way, towards more aggressive targets for decarbonisation.

In all of those cases, we think that we stand to benefit from a closing of the gap between the value of what we produce and what we see in the market, in the wholesale market I described.

So, next is how do you position yourself as investors, and I will put it in fairly blunt terms. The dotted line is the side of history you want to be on. There's a wrong side of history and the right side of history, and there's the question of timing, but what we put here were two dimensions. One is the life of the asset and the second one is carbon-producing or non-carbon-producing. I would say pollution is also a very important driver, and I would say for coal plant retirement, pollution has been way more of a driver than carbon in the past five to seven years. So, it's pretty clear that coal is currently under attack everywhere around the world for carbon issues and for pollution issues, but I would say from a carbon perspective, and even from a pollution perspective, gas is next, and why I say next—I'm not using my Fed example, it's not soon, but I would say 10 to 15 years from now the ability of gas plants to emit carbon and some of the pollution that they emit will be more constrained.

So, clearly, a non-polluting, non-carbon-emitting asset is a better, long-term bet, and because of duration of the assets, we tend to like—in case you didn't notice, we kind of like hydro, but wind and solar and nuclear, on those criteria, are pretty good, as well. So, we think that because of the flexibility we provide, because of the duration of the assets, we think it's a superior class of assets when you look at long-term investing.

So, where have we been investing in that context? We've been looking for, I'd say, two areas of investment.

The first one is hydro in the U.S. Northeast, where, as I describe, you have a lot of coal retirements coming, you have a lot of desire to get more renewables in the system, and we think that in the broken wholesale market you're probably at the bottom of the cycle. It's very hard to believe that prices would be consistently lower without triggering a lot more retirements. So, something needs to give, and we think that the downside versus the upside is way biased towards the upside.

In Latin America, what we're seeing is fantastic growth opportunities. You're talking of markets that have probably an electricity intensity that is 1/20th to 1/10th of what you have in North America, so that means decades of growth of demand, and we think that with our platforms in Brazil and Colombia, we're extremely well positioned to grow in those markets. Also, we play the scarcity of capital. With the commodity price downturn, what you had was devaluation of all the currencies in South America for the commodity-exposed countries, whether it's Colombia, Chile, Peru or Brazil, and that provided a

much better point of entry, as capital was getting out of those countries instead of going in. So, we think that in all the investments we made, we bought those at deep discounts to replacement cost, and what we think as a lot more upside than downside.

Briefly, on our other core markets, I would say in Brazil—we've already discussed—Bruce mentioned yesterday that we think that the worst is over, that the consensus is that the economy will start growing again next year. Earlier, the Infrastructure folks talked about the assets they could buy. Well, it's not a coincidence. The reason why these assets were for sale is that the construction companies and the firms, like Petrobras, were implicated in the scandal, the corruption scandal, and had to firm up their balance sheet, and they did that through asset sales, and as they were seeing their access to credit markets shut down, they basically couldn't invest in the projects that they had in their books, and what you saw is a steep drop in investment in Brazil. So, we think that as these balance sheet recoveries take place, the economy will also recover.

The other theme in Brazil I think we should keep in mind, is the cost of new plants is rising. Another way to put it is the era of state-owned, promoted, large hydros in Brazil is coming to an end. You used to have Eletrobras and others build these massive projects, and I'd say pressure prices down, because they had cheap capital and they were developing fantastic sites. That's coming to an end. Brazil is coming to the end of this potential for very large hydro, there's still plenty of small hydro to develop, but both on what's environmentally acceptable, this is going away, and what is a cheap cost of capital from those state-owned firms is also going away, and that's a bit of a result from the crises. So, we're very positive on the prospect for both how much development we can do in Brazil and the type of prices we should expect when re-contracting our assets there.

In Colombia, Sachin will talk a bit more about why we like the country, but the two things I would say is just that we see a lot of organic opportunities in Colombia. As I said, you need to develop year after year, decade after decade additional generating capacity to meet growing demand, and there's a lot of hydro sites in Colombia. It's not running out of rivers any time soon.

The other thing I would mention on Colombia is—you may have heard of the FARC Peace Agreement, after 50 years of conflict. I would say we liked Colombia before that announcement, and we always saw this as an upside. So, if the agreement is ratified—it has to go through a referendum, but if it's ratified, we think that's going to turbo-charge investment in the country, and what we think is maybe

3% to 4% growth on a sustained basis over the next few decades—it may be actually better than that, if the agreement goes ahead.

Finally, what I'll say about Europe is that it's kind of everything I described about the Northeast in the U.S., except worse, from two standpoints. The first one is the drive to build renewables is way more aggressive and the carbon policies are way more robust, and the second thing is that you have more legacy utilities that are impacted by those very, very low spot prices. So, we see a lot of distress in the utilities space and we expect that this will trigger two things. First, the renewable policies will create a lot of development opportunities and we're kind of set up for that in our Ireland business, and in Scotland, we have a good pipeline, and we're looking for others, and the second thing is utilities, as they refocus on their core business of transmission and distribution, may be open at some point to dispose of assets and that may create some acquisition opportunities.

So, with that, I'll take maybe three questions and then I'll turn it over to Sachin. I'm sorry, it's not polite, but I'm supposed to point so that they bring you a mic.

MALE SPEAKER:

Rupert Merer, National Bank. I'm looking at the broken or distorted wholesale market in the Northeast. How long do you think it'll take for that to normalize? We have the PTC in the U.S. with a four-year extension, could be more distortion coming before normalization, but how do you think about the timeframe?

STÉPHANE LANDRY:

Look, I've made a career of being wrong on gas prices, so I'm betting on regulatory changes. It would make my track record look good. We don't know. We don't how things will be reformed. Ontario provides an example of—at some point, the government understood that they've destroyed their wholesale market and went to a fully contracted market, which we think makes plenty of sense. You can re-regulate. You can basically shift all of the renewable energy credits or the procurements into a carbon pricing. There's many avenues by which you could either supersede or fix the wholesale market. We just don't know how that's going to take place, and what we like to focus on is what are we seeing today on which we can act that will bridge the gap that we're seeing growing, as we have, I think, a superior product that is not correctly priced in the market. So, I couldn't call when we're going to see these changes.

NELSON NG:

Hi, it's Nelson Ng from RBC. I think in the Infrastructure presentation, we saw the reversal of pipelines, and that's being a trend. Do you think that's going to make any material difference on the price of natural gas in the Northeast, and as a result of that, is there any follow-on impact on power prices?

STÉPHANE LANDRY:

Well, the short answer is, yes, it's going to help prices in the Northeast. What you have is basically too much gas coming out of the Marcellus, and then that gas is trying to find a home, and the more prices are depressed in the Northeast, the more you can justify going farther and farther out. So, yes, it's supportive of prices in the Northeast.

Maybe one last question, or maybe not. Okay, thanks.

SACHIN SHAH:

Just to follow up, I think Rupert asked a question about when do markets change. As much as we don't try to predict when they're going to change, what we take a lot of comfort in is in these markets we're buying at \$0.50 on the dollar, and so what it does, is it gives you a tremendous amount of time to be patient and wait, and make a return in a very depressed market, and that's been our strategy. Rather than having to time things that are out of our control, what we focus on is seeing those situations where markets are very depressed and sellers, for various different motivations, whether they're focusing on their core business, they're reinvesting in regulated utilities, or for whatever reason, are getting out. If we can buy at a very, very deep discount to replacement cost, it just gives us a huge amount of cushion, and it lets us feel that our downside is protected, because we've underwritten at the bottom, and that underwriting gives us a base level of return. As the markets evolve, whether that's through re-regulation, whether that's through contracting opportunities, whether that's just through wholesale market prices going up and the market is starting to function again, all of that will be additive to our returns. So, we feel that we're in a good position, but ultimately it's predicated all on where we buy in the cycle.

So, before I get into growth, I think I'm doing a polling question. If you look at your iPads, maybe we can just flip over to the polling question. So, which of these attributes do you prioritize? A bit of a set-

up, of course, given our theme. So, obviously, asset quality, which is good to hear. Like I said, often in periods like we're in—and you can use real estate as a corollary, when rates are at the bottom and everyone's chasing a dividend, quality starts to—people start to chase more and more outside of the range of high quality, because they want that slight incremental return. But, on the unwind of that, it's quality which saves the day, and if you have the highest quality assets and you have the highest quality portfolio, and you have a portfolio that as an economy starts to heat up, rates naturally start to go up, underlying cost of goods and services starts to go because of inflation, you can capture all of that and your margins can grow your way through that period, well, then, you should be the most protected from the impact of rising rates, and although we believe rates will be low for a long period of time, we do have perpetual assets, we do have to think beyond the next 10 years, and so what we think—and it's comforting to hear that most of our investors at least prioritize that, as well. We think our asset quality not only has the most scarcity value, because you cannot replicate our river systems, you cannot replicate our dam structures, you cannot replicate the long life of them, they also have this unique attribute where their revenues naturally grow with economic growth, and that's a great offset to interest rate rises over the very long term, and given where we bought them, it gives investors a great cushion that if this entire sector of comps in our universe, that are mostly based on fixed contracted wind and solar, are exposed to rising rates over the long term, we have this really nice, natural offset. I think that's the takeaway from at least how we think about investing.

So, moving into my presentation, if we can flip back, what is our growth strategy—and this really hasn't changed for many years, other than specifics around numbers. I'd say the biggest thing we try to do when we're out there looking for investments—it's a highly competitive environment. The people who we compete with are financial institutions, yield-oriented investors, asset managers, infrastructure investors, and now all of a sudden, you know, 10 to 15 public companies out there doing exactly what we do, so it's highly competitive. What is it that we think we bring to the table? We have a very unique blend of global scale, through our network at BAM and through our private institutional relationships, and our offices around the world, and our operating expertise, and then we layer that with deep operating expertise, and I talked about that a little bit before, and I'll even talk about that in the context of wind and solar, because we think we're pretty unique in that regard, too. But, the blend of those two things, when we see an opportunity to arbitrage, or to actually move into a situation where few others can compete on those two factors, that's when we move very quickly and we make a big investment, and I'll get into Colombia, because Colombia is the classic example of that.

Our target is to invest \$500 million to \$600 million per year of equity capital. We've generally done a little bit better than that in the past, but that continues to be our target, and really to pursue opportunities at 12% to 15% returns.

Somebody said it before, maybe it was Sam who said, you know, you don't see a lot of the things that we don't invest in. Our Board asked us that six months ago, about all the things we don't see. To give you a little bit, just a data point, we would review, on the power group, \$20 billion to \$30 billion of equity transactions per year, just in terms of what comes across our desks, the opportunities we see, and out of that, we're putting \$500 million to \$600 million to work. So, you can see how enormous just the volume of opportunities we see, or how selective we are, and that when we see an opportunity that is truly unique and that leverages that global scale and that operational expertise we have, that we will move quickly.

We're obviously focused on quality. We continue to think hydro has the highest quality, but we also think within the wind and solar universe there's a way to differentiate quality, and I'll talk a little bit about that, but that's important to us that, as we move more and more into other technologies, that we stay true to the quality components of those asset classes.

We have a development pipeline, we invest about—or we build about 200 megawatts per year, but it actually equates to, on an equity basis, about \$200 million of equity per year that we put to work, \$400 million of enterprise value.

Then, we are focused on building out our wind capabilities. We have a 1600-megawatt wind business, which if that's all we did, we'd actually be one of the large wind players in the marketplace, but it's dwarfed obviously by our hydro business, and I'll talk about how we got into wind and how we've been different on wind, and we have a very small solar business and we continue to look for opportunities to get into that.

From a global scale perspective—we call them fully integrated platforms, and what we mean by that is can we sell the power to multiple customers, can we access wholesale markets, can we bid on transmission lines, can we move power to adjacent markets, can we develop relationships with commercial counterparties, utilities, to have a varied revenue profile so that we're never overly exposed to one type of customers. Can we operate the assets, can we manage them internally, can

we manage stakeholders, health and safety, and run the plants with a view to owning them forever; can we fund the facilities if we look for growth and can we do development? If we can check all those boxes, that means we have a fully integrated platform, and that is our objective in each market we're in. So, today, we've got that in North America, we've got operating centres in Canada and the United States, we've got that in Brazil and Colombia, we've got that in Europe, largely based in Ireland and the U.K., and now in Portugal, and we're obviously continuing to always expand our capabilities, but we're monitoring Asia and Australia. Those are two markets that we think present unique opportunities.

The obvious regions, India and China, just given the huge population base, the huge infrastructure deficit that Stéphane mentioned, these are markets that are deeply, deeply undersupplied, but what's unique about both of them is they have a tremendous hydro potential that's really largely been unpursued, and many of the investors in our space who have gone into those markets have gone in on the wind and solar side. So, we're monitoring them because we think there's a unique angle for us to get into. One example I give is that India, with a 1.3 billion, 1.4 billion population, has 300 gigawatts of installed capacity, or 300,000 megawatts of installed capacity. The U.S., with 300 million people, has a million megawatts of installed capacity. You can see the disconnect in these markets, of how deeply undersupplied they are, and that presents the same supply side equation that I talked about earlier, which is you can bank on the fact that supply is needed and you can build out your business that way, but also India has about 15% of that 300,000 megawatts, is actually hydro, so it's very unique, because it's a market with a significant amount of hydro, high scarcity value, deeply under-supplied, and you can build a great business and franchise in that market. It's really centred around hydro, and then cautiously approaches wind and solar, which are the technologies to blend out into.

China, the same thing, more supplied, about 1.5 million megawatts in China. What's unique about China is that it just—if India has a lot of hydro, China has three times as much. China has 75,000 megawatts of small hydro. It's largely held in private hands. Now, it's domestic private hands, but it's private hands nonetheless, and this is small hydro, under 50 megawatts. So, if you think about 75,000 megawatts and you look at our business, where we have 8,000, just think about the opportunity to just make small investments in China on the long term, as we get more comfortable with that market, to grow out your hydro base.

So, we wanted to spend a bit of time on how we're able to pursue transactions, and generally, not to disparage our competition, but why we spend so much time trying to explain to people our operating expertise. Our operating expertise gives us this really unique advantage. What it allows us to do is avoid the herd, and you've seen the pictures put up in the various presentations, but, today, most of our comps and most of our investors that compete against us in transactions are really forced into contracted wind and solar in markets around the world, that are bid into auctions or bid into procurement processes. What happens is, if everyone's going into that, returns get ground down to mid-single-digits. You can see that in the United States. You want to buy a solar project, you're going to make 6% or 7%.

If you're a financial investor, that's your really only option, because you're going to get a proxy to a bond-type return and you're going to get a spread, and you're evaluating whether that spread is reasonable enough to offset the operating risk, because these plants do have operating risk.

What we get to do, is we get to, effectively, avoid all of that and look for opportunities to buy hydro, which has significant barriers to entry, needs operational expertise, in markets that are deeply depressed, at cents on the dollar entry points with strong returns. We get to get involved in development. We have a 1200-megawatt development pipeline in Scotland. We have a 7000-megawatt development pipeline around the world. Most financial investors, most yield-oriented investors couldn't pursue that development capability. We also have this unique investment capability, with the ability to enter capital markets, to enter into restructurings. A number of our assets, if you look at our pump storage asset, many of our assets we bought in the Northeast were all through restructurings. Balance sheet issues, that we could go in, we could work with the underlying sponsor to help restack the capital base to put it on better footing and ultimately secure certain hydro or power generating assets on that basis, and we have the capital markets expertise. So, we can buy in the capital markets where we see a divergence between capital market valuations and private market transactions.

So, for us, we've been able to create a group and a business where we've blended that operating expertise with an investment expertise, and that allows us to filter that \$30 billion of opportunities that we see per year and pick the \$500 million to \$600 million of the best that we feel will generate the highest returns. So, I'll talk a little bit about a few of them that we've entered into over the last five years and what that means for the business.

Merchant hydro, I talked about the long-dated option that we're creating, the upside optionality with strong downside protection. We've invested \$2 billion in merchant hydro in the last five years, and like I said, we've been doing it through this protracted low price cycle. So, what does it mean? It means if prices never change, well, then, we're going to earn inflationary-based returns, based on a going in 8%, 9%, 10% return. With inflation, with some modest refinancing, we should earn between 10% and 12%, if nothing ever happens. But, if prices just go up \$10 in these markets—so if you get a \$10 increase in a \$40 power market, that's \$25 million to our bottom line. That's the power of the leverage that we're building into the business, that over the long term will help our FFO grow and give us this great upside optionality, whether that's because gas prices rise, interest rates rise, supply starts to get more constrained as coal and nuclear and gas continue to suffer from low profitability, and for us, that gives investors a great upside to our cash flows that today is not reflected in our stock price.

On development, when I say that wind and solar provide low returns, they only provide low returns if you have to buy them in a competition and they're fully operating. They actually provide an exceptional return if you're a developer and you build them and you source the site, you underwrite the resource, you go and get a contract, you finance the project and you build it. So, we have a big wind business, we're 1600 megawatts of wind around the world, but what we've done, and we've made a concerted effort of doing over the last seven years, is largely building all of it. We've built 1200 of our 1600 megawatts at hold-to-maturity mid-teens returns. So, that means if we never sell it, if we just take the cash flows that we've got based on contractual structures that are in place—these are fully contracted wind farms—we'll make 15%, when our competitors who are going into these situations and buying are buying them at 7% or 8%. So, with that, we're not only generating a high return for our portfolio, but we're now looking to selectively sell assets. We sold our first wind farm last year in California, a 100-megawatt wind farm that we had built ourselves. We locked in a contract with PG&E. We did the financing. Because we underwrote it at a mid-teens return and a buyer came in after about two years of operating history and bought it at a mid-single-digit return, we crystalized a 30% IRR for our investors, and that is what is at play today in terms of the divergence of values between development and acquisition.

Capital markets, we've been saying for a long time—and a lot of our investors, our analysts, and others have been asking, "When are you going to get into wind and solar in a more meaningful way?" and we've said, "When we see better returns." So, we saw an opportunity this year with a public

company, TerraForm, which is a subsidiary of SunEdison. SunEdison was, you know, at one the point the largest renewable company in the world, with operations everywhere. It obviously had too much debt on its balance sheet, filed for Chapter 11 bankruptcy. Its underlying subsidiary, TerraForm Power, which is a North American-based wind and solar company, has tremendous assets, but had a sponsor that has a broken balance sheet, and needed sponsorship, and ultimately its share price had the overhang of the SunEdison bankruptcy. So, we've gone in, we've got a 25% exposure to the stock of that company, we've got a partner with another 10%, and we're effectively positioning ourselves to provide sponsorship to TerraForm to ensure that it can have a robust balance sheet that backs it, have a growth story that backs it, and then can reposition itself in the market as a strong wind and solar company with the ability to continue to grow.

Whether we're successful or not, we don't know, but what this is a sign of is our ability to go into the capital markets, because we understand where these assets trade, we understand the quality of these assets, and most importantly, with this business, is it has 3000 megawatts of wind and solar, but they didn't have an operating expertise. They had outsourced 100% of their O&M. So, they have sites all throughout North America, Canada, the United States, down into Chile, and they had none of their own people. They've got a small corporate team. They were basically being run with outsourced O&M services. The unique thing that we can bring to the table here, because we've taken the time over the last 20 years to build this all in-house, is we can actually put our arms around all of their assets, because we have people in every single market they're in, we can run the assets, we can do the O&M in-house, we can reduce the cost structure of this business, and we can ultimately reposition it for growth in the future.

Our ability to move capital around, you can see that we've been very selective about the markets we've gone in and when we've gone into them.

So, Brazil, we did very little in Brazil from about 2009 to 2015. We had some development projects we would build out, because ultimately M&A opportunities were too expensive. So, we build 50 megawatts of development every year, we capture a contract, we'd earn the return that we were looking to make. In 2015, so at the end of last year, we bought a bulk hydro, wind and biomass business. It was one of the largest platforms that went on sale that year. We spent \$600 million in the country. We were able to buy it with virtually no competition. Ultimately, we were timing that market for all the reasons you've heard about Brazil, which is we saw a recovery coming, we were still in that

deep, deep place of a recession where nobody saw a recovery coming, and we were able to secure assets at a very strong value and a very low point in the cycle.

We went into Ireland. Nobody would look at Ireland today as a market that's distressed, but back in 2013 and '14, when you had the Eurozone debt crisis, Ireland had borrowed money from the IMF and the EU, they needed to repay that money, and the Irish government put up its fully integrated utility for sale to effectively raise proceeds and pay back the EU and the IMF. We were able to secure a 300-megawatt operating wind portfolio, so that's roughly where we bought most of operating wind, but it came with another 400 megawatts of development and allowed us to establish a footprint in Europe, from which we'd further run. That was a \$900 million transaction. At that time, going into that market, we were underwriting operating wind in Ireland at around 13%, in Euros. To put that in perspective, those same plants that we just bought three years ago, today, people are buying plants in the exact region, because Ireland is not considered distressed anymore, at a 7% or 8% yield. So, if you think about the operating plants that we bought and that we could sell at north of 25% returns, if we were to monetize that today, that's on the operating plants.

Since then, we've also built, out of a 400-megawatt development pipeline, we've built another 250 megawatts, and we built those out at mid- to high-teens returns. So, you can see the power of timing our acquisitions and taking that contrarian view to be able to invest capital, but really leveraging operating expertise that we have.

Lastly, we entered Colombia last year, and I'll talk about the Colombian transaction in more detail, but ultimately that was a market that we had been looking at a long time. We never predicted a scale opportunity like this would come on, that was not our objective, but it did and we were able to move quickly, and we had staying power to be there when the others fell away. I'll get into Colombia in more detail in a bit.

We've put this slide up a few times, I don't think we had it last year, but we get this question a lot, so we felt the need to answer it, is there any hydro left to buy? When we launched Brookfield Renewable as this fully global public company back in 2011, we had about just over 4,000 megawatts of hydro and people were really concerned that we wouldn't be able to buy anymore hydro, "You guys were done. You're going to move into other sectors." Today, we have almost 9,000 megawatts of hydro. So, we've doubled that in the five years that we've been there.

What we try to show people is the world is a big place and even if you just took the United States, of the hydro that we don't own in the United States — and we'd be the largest private owners of hydro in the United States — there's still \$35 billion of hydro that's left to acquire in the United States.

Seventy-five percent of those plants are owned by somebody who just owns a single hydro and who obviously has other uses for capital and presents a great consolidation play, a tuck-in strategy for us. There's a tremendous opportunity of just focusing on the U.S. If you just tried to acquire 5% of it, you can deploy almost \$2 billion in hydro opportunities just in the United States alone. Obviously, if you look at the rest of the world, it's a huge opportunity to acquire hydro. There's many hydro originations around the world. There's a \$340 billion opportunity, and that's just simply doing a \$2 million per megawatt type of analysis, that's not a true IRR-based valuation. Out of that, we would have on our list somewhere between \$12 billion to \$20 billion that we are targeting today, through active outreach, through relationships with developers and with owners, that we would say that we are advancing and looking to secure into our pipeline.

On our development pipeline, as I mentioned earlier, we have a 7,000-megawatt development pipeline. Much of it is early stage, about 1,250 megawatts is what I'd call advanced. What we mean by "advanced" is that permitting is largely in place. We're moving through the final stages of permitting before we are construction-ready and then we would start to build. The bulk of our portfolio is wind, with some hydro and some solar, and much of that wind is actually in Europe. Europe, as Stéphane mentioned, very low growth rate environment, very low return environment, and so we've taken a very targeted approach to building our business in Europe, that focuses on development. Financial investors stay away from development. What it'll allow us to do is ultimately not have to compete with single-digit-return investors, but allow us to build at mid-teens returns in Europe, which most organizations would not have the opportunity to generate that kind of return. Then, if you look at where our pipeline is, you can see the spread out. It's still largely a North American/European pipeline, with a smaller subset in Latin America.

So, what I wanted to lay out here is ultimately we think we bring this unique capability, as I've said, of operational expertise and investment capabilities, and what we're really trying to do is position this business very long term, as a place that we can compound our capital for multiple decades in an environment where power prices are at historical lows—we think that builds a very great defensive position—rates are zero, so we have a significant amount of competitors chasing low yield. Our operating expertise is unique and it's something that we spend a lot of time focusing on in trying to

build out these integrated platforms around the world where we have that capability. In this environment that's seen as highly competitive and presenting very low returns, it's allowed us to have the best pipeline that we've had in over a decade of very strong return opportunities, and that's something that I think not many organizations could profess to have, and we've got a good track record in the last five years of being able to deliver on those opportunities.

So, moving to our Colombia investment, we have a short video that the company actually had before we bought it, but it's a good video, just to show you the scale of what we bought in Colombia, and then I'll follow that up and talk a little bit about that.

(Video presentation)

I know a lot of that won't mean a lot to most people. I think all we wanted to show you was the scale of the plants there, the utility nature of them, and the quality of the facilities, and just really the scale of the transaction that we entered into with Isagen.

So, when we were here last year, we talked a little bit about moving into new markets and what we generally look for as a criteria. For those of you who aren't familiar with Colombia, it's the third largest country in Latin America. There's 50 million people who live there. It's the oldest democracy in Latin America. It has a truly independent judiciary and a banking system, a rule of law, and it has had a long track record of growth and foreign investment. Oil and gas companies have been investing in Colombia, and North American oil and gas companies have been investing in Colombia for well over 30 years, and there's been a framework from a regulatory and government perspective that treats foreign investors quite well, it's not interventionist, and it's generally market driven. So, we've always liked the country fundamentally for what it brings from just a rule-of-law perspective and a competitive market perspective.

It also is a country where, like many of the emerging markets in Latin America and around the world, has a significant infrastructure deficit. So, for 50 million people, it has 15,000 megawatts of supply, which, if you don't know what that means, Canada, with 35 million people, has 100,000 megawatts of supply. That's just a way of comparing a very developed country and the power supply stack to a very emerging market. In an emerging economy, where you have GDP growth of 3% to 4% and you have 50 million people who are relying on a small electrical base for them to continue to grow at the pace

that they desire, they will need to invest significantly in new supply. This business that we got not only had great utility-scale assets, but had a very strong development pipeline, and a very good track record over 20 years as a developer. All the assets they have, they built themselves. This opportunity presented the ability for us to acquire all of that talent they have in-house.

So, it's a 3,000-megawatt portfolio. Generally, hydro, replacement cost of hydro in North America would be somewhere between \$5 million and \$7 million a megawatt, just if you wanted to build a new one today. In Latin America, because labour costs are a little bit cheaper, you can generally build it somewhere between \$3 million to \$5 million a megawatt. So, just using the low end of that scale, at \$3 million or \$3.5 million, it's a \$10 billion enterprise business, just based on the 3,000 megawatts of hydro they had. We were able to acquire this at \$5 billion of enterprise value. So, right off the bat, our entry point is \$0.50 on the dollar or 50% of replacement cost.

The transaction here, it was a government privatization. The government owned almost 60% of the shares of this company, it was a public company, and had been talking about selling their shares for well over a decade. It was all part of their plan to redeploy capital into their infrastructure program and building out roads and networks throughout the country, and they launched a program three years ago.

So, just a little bit of the background here and how this opportunity came to us.

They launched obviously a very public process. It was an auction to buy the shares. Two-and-a-half to three years ago, when the opportunity came across our desk, to be completely candid, we kind of ignored it. It seemed like the auction was going to be highly contested, there was going to be a number of large players who were going to be in it, and returns would get ground down to very low levels. So we looked at it, we did a little bit of work, but we knew that at the value we wanted to pay for this, there was formidable global institutions with a far lower cost of capital, a far lower return hurdle, who would pursue this much more aggressively than us, and this would include players in the United States, players in Europe, the Chinese government, large utilities in Latin America, all of whom were aggressively expanding beyond their borders and investing capital into emerging markets.

I guess, you know, sometimes you have to be good and sometimes you have to be lucky, and this was a situation where I think both of those things happened, but the one thing we did was we had staying

power. We monitored the process, we stayed with it. We knew it was unique, because 3,000 megawatts of hydro just doesn't come to the market very often, and the operational skills you need and the expertise you need, not many people had. So, we knew that we had an angle and we had an advantage, but we didn't have the cost to capital or the ability to chase this at a return that didn't make sense for us.

Well, if you think about the last two-and-a-half years and what's happened, or the last three years, what's happened? You know, you've seen commodity cycles slow down, you've seen China's growth slow down, you've seen Brazil enter into a recessionary environment that it's now coming out of, you've seen capital markets in the U.S. suffer from a period of volatility with low oil prices, and you've seen a lot of retrenchment all of a sudden, and for us—and this is where we got lucky—was that it happened right at the time where this process was going on and a lot of diligence was happening, and a lot of the global institutions who were looking at this had their own domestic issues to deal with and started to fall away. So, it left it as a very small auction, three players, effectively, including ourselves, one of whom would have been a formidable competitor and who had a much lower cost to capital than us, and another who also would have paid more but we knew didn't have the money. Ultimately, to make a long story short, we ended up, with our staying power and our view of value of these assets, being the only ones who stayed in at the end and being able to acquire this without paying a premium to the government to their reserve price. So, a very unique opportunity.

This is not something that we would say we could replicate on many instances, but it shows a few things. One is that we do have a deep conviction of a view of value. It's a market we liked. We stayed with this for three years. That takes its toll on an organization, to be able to stay with a transaction for that long, but we had people working away doing diligence, and our conclusions at the end of it were this is the highest quality portfolio we have ever seen, full stop. We have not seen the utility nature of these assets and the quality of these assets even in North America. It was a government utility. They spent more money than you would ever see the private sector spend on building high-quality utility-grade assets and gold-plating them. So, one, we got very comfortable with the asset quality. These assets, on average, are 18 years old. When I mentioned to you that hydros last well beyond 100 years, you have very, very low CapEx requirements, you have assets that are virtually brand new, and you've got a market that needs significant growth.

Before I get into entry point, the other thing we liked about it is—many of the investments you make in emerging markets are supported with a finite concession term. What we're buying here is a perpetual franchise. So, you own these assets forever, there's no concession wrapped around it, and we have time on our side to effectively generate the returns and optimize this business, and that is truly unique to Latin America, and ultimately with that, the replacement cost of this business and its incumbent status as the third largest generator in the country, we felt that we had a platform from which we could build out and be in the country for multiple decades.

I mentioned earlier the supply gap, but what's also important is demand is also growing in this market. So, you've generally seen demand track to GDP. GDP in the country is at 3% to 4% growth long term. We've seen demand for about 15 years now track at about 2.5% to 3%, and that's typical of many emerging market economies, where more and more people are emerging into the middle class, they're buying more goods and services that use electricity, and industry is growing, and so you're seeing a healthy level of demand. To put that in perspective, in the United States or in Canada, you get a half a percentage point of demand growth per year, or flat.

In terms of our entry point, as I mentioned, the macro-environment globally was changing. So, on the far right, you can see that the country for five years had a very strong currency, tied largely to its exports and a strong global economy, and all of a sudden, in 2015, and early 2016, right when we bought this, the currency dropped by almost 45%. We were the fortunate benefactor of that. It meant that not only were we buying these at a steep discount to replacement cost, but we were also then going in, on a currency basis, at a historically low point, and so we've got multiple features that support this investment that we'd never factored into our underwriting, and are not in our return analysis.

In terms of the technologies there, it's largely a hydro-based system, because it's a small system, but as the country grows and as new technologies are starting to build out—what's going to get built out in the country is largely gas, which is domestic but is running out, and coal, which is domestic, and both of those today would need a power price or a long-term contract, or something to support them in the range of \$100 a megawatt hour to sustain a reasonable return in that marketplace. Hydro could be built for a little bit less. There's a lot of rivers to be built out. You could probably do it for somewhere \$80 and \$100. So, all of that gives us a significant amount of cushion. That our underwritten price, which was in the mid-40s, is well below replacement cost, it gives us this great entry point in terms of

a low basis to be in, but is also what ultimately led to a steep discount to replacement cost as an entry point.

So, what are we going to do with this business and how are we going to position it?

First of all, just to give you a few data points on a government-owned utility and how different it is than a private sector business.

When I mentioned we have 2,000 people who work for Brookfield in our operating business and do many of the key operating functions that we do every day, that's to support 240 plants, excluding Colombia, in six countries around the world, so 2,000 people, six countries, 240 plants. This company has seven plants in one country, pretty close from a geographic perspective, has 650 full-time workers and 1,100 contract workers. So, you can see just the way a government would operate its facilities is entirely different than the way we would and that presents us a great long-term opportunity to, over time, optimize the costs for us, the cost base of the business, optimize the labour force of the business, and ultimately just drive better margins and improve margins long term.

Two is the business was effectively a price taker, they would sell their power into market, and if you saw some of those facilities in that video, what's unique about this portfolio, it has the largest reservoir in the country. Just think about reservoir as a battery and how important batteries are today.

Everybody talks about batteries and distributed generation and how important they'll be to the equation in the long term. Well, our hydros that are reservoir-based have an embedded battery in there, and that storage allows you to ultimately optimize and sell power when prices are higher. So, with this portfolio, we've got the largest reservoir in the country and it holds 14 months of power in it. What that will allow us to do is ultimately play the power cycle and capture that peak pricing, which was very unique, and the incumbent Management Team just didn't have a practice of doing that, they were just selling the power as it showed up, rather than optimizing around their optionality.

From a power marketing perspective, we have other investments in Colombia in the group. We have a distribution business. We know from speaking to distributors and utility customers that there is an appetite for 5- to 10-year contracts, but today the prevailing contract in the marketplace is 2 years. So, in this business, the power is contracted for a couple of years and then it's wholesale. We're going to work with the management team and with customers to try to extend the nature of contracts, extend them for 5 to 10 years, and what that'll allow us to do, assuming we get the right price, is

ultimately to add a little bit of leverage to this business and pull some capital out. What I mean by that is, today, it's got two times debt-to-EBITDA, very low for the infrastructure-type nature of these assets, and just getting to three to four times, still within investment-grade parameters, could significantly reduce our capital at risk.

Then, lastly, tax planning. This was a business that was government owned. Paying dividends to your government owner was a good thing. With modest tax planning, with a little bit of additional debt and some tax planning, we think we can also surface better returns long term.

So, all of that is stuff that we can do within our control, it doesn't rely on high prices, and that should, without factoring in an improving price environment, without factoring in improving currencies—so just in local dollars—should give us a high-teens return, the development pipeline should get that high-teens return up to close to 20% in nominal currency, and then obviously we have all of those other factors that we talked about, with rising prices as the economy continues to grow, building out our development pipeline, and so you can see the earnings power of this business tremendous, and that's why we were so excited about buying it.

So, maybe with that, I'll take three or four questions. I will come back at the end, but I'll take a few questions right now and then I'll pass it on to Nick.

ANDREW KUSKE:

Andrew Kuske, Credit Suisse. Sachin, how do you reconcile the end-of-life problem with some of the funds that the firm has broadly? So, if, say, 10-year duration with some extensions, how do you reconcile that issue, and just the perpetual nature of hydro? This is something we haven't seen before out of BEP, this has really been issue for the last, say, five years, and pronounced with Isagen. So, how do you reconcile that dynamic and is there ultimately an end-of-life issue that happens with BEP 10 years out?

SACHIN SHAH:

Yes, I think the fundamental question is, if you're buying forever assets that have long-term upside and you have finite life funds—our funds are generally around 12 to 14 years—at some point, the fund expectation is that you would sell the assets. So, I think a couple of things. One is, obviously, if we've surfaced value, we're large enough now that we could sell assets, and we could ultimately repatriate

the capital to our fund investors, but that all assumes that we've surfaced the value that we see in the portfolio and that there aren't better opportunities to compound capital than what we have in front of us.

I think this comes down to our reputation and our relationships with our partners. I think we've been at this long enough now that many of our partners understand what we're buying, like what we're buying, and are actually participating in over-allocating dollars to co-investment into these opportunities, and what that means is we need to just have this continuous dialogue with them, that if we all see better opportunity to keep generating premium value to what our other options are, that we would create some type of continuity vehicle and carry on with the asset. Obviously, for those who want out, we would have to make sure that we are able to get them out at a valuation that's appropriate. But, it comes down to our relationship with our fund partners. We've spent seven years raising funds and educating our partners about the quality of these assets and their long-term nature, so it doesn't come as a surprise to anybody.

ROB CATELLIER:

Rob Catellier, CIBC World Markets. Actually, I have a couple of questions here. First, I'll start with power prices. Given your asymmetric view of power prices in some of your key merchant markets, how does that inform your hedging strategy; and, specifically, if you could address whether or not you'd consider taking on more merchant risk, given that you do have that asymmetric view? Related to that, what's the minimum level of hedging that you'd be comfortable with on merchant power?

SACHIN SHAH:

Right. So, I guess to paraphrase, should we hedge at the bottom or not hedge at the bottom, how much exposure to merchant markets do we want in the portfolio? So, first of all, if we're buying at the bottom, we're not hedging. It doesn't mean that we're not hedging near term. It just means that longer term, if we're confident that prices can't go down, within a reasonable band from where we bought, then hedging really doesn't get us a lot. It gives us the comfort that, you know, the bottom—we've timed the bottom perfectly, but it doesn't give you any of the upside that you should want as an investor.

How do we get comfortable that we're at the bottom, which is really the real question, is that we know the fuels that ultimately are setting price in each of these markets and we know what their breakeven

costs are, and we know that prices never go below their breakeven costs, because otherwise they'd just be out of business. Historically, it was coal. Today, it's coal and gas. We've seen, with tremendous stability over the last seven years, where that breakeven is. So, we get a very strong level of comfort that at that bottom. Those other players in the market, those other fuel sources, are just recovering their costs, they're making a small amount of profit and they're surviving, and maybe they can't survive a big CapEx requirement or a major refinancing initiative, but they're just getting through, and at that level, that's when we say we're still making 60% to 70% cash margins. So, at that level, we feel quite comfortable that we should keep our exposure, we know we're going to get that price for a very long period of time, and then as the price layers up, because either the fuel price goes up, because cost to capital goes up, because government policies change and those projects are no longer viable from a carbon perspective, all of that creates pressure on the stack and prices rise to incent new development, in a normal functioning market.

So, our preference would be to not give away all that back-end value and lock in, but to actually keep the exposure. Now, in the front few years, we might hedge out. So, in the front few years, we'll enter into one- or two-year contracts to just protect the near term, but that's mostly just managing the very front end of returns and just putting a bit of risk aside.

In terms of how much exposure we would take on as a business, today, we have 90% of our business contracted, so it's not really something that keeps us awake at night. Obviously, I think our long-term preference is to have a highly contracted business. So, I think you'll always see our preference to stay very contracted, to stay in a range that's close to where we are. We have room to get more merchant exposure, but we're not going to turn this into a 50% merchant business and a 50% contracted business. That's not something you'll see us do. We will err on the side of keeping it contracted, but we might shorten up the duration of some of those contracts to make sure that we still keep the upside optionality that we have in the business.

ROB CATELLIER:

Okay, and then my second question is—you've referenced a replacement cost to economics, and I think it was referenced in the presentation, as well, and I wondered if you had a firm view on how you manage inflation risk, however remote, vis-à-vis the Company. I'm not talking about the power plant price inflation risk, which you've obviously already been through cycles and managed that, but just

generally, if we get into a situation of sustained low inflation globally, or even deflation, how would that impact the Company and how do you manage that risk?

SACHIN SHAH:

Yes, so the question is if you get protracted deflation and just rates go to negative territory, how do we manage that. I think that is why we're focused on very long-duration assets, because if you have a business that's locked in and short term and you've got deflation, that's a terrible place to be, because it means at the end of the life of the asset it's worth less than what you signed up for, whereas we've got this perpetual asset base and we've got a very long-term presence. First and foremost, it's fundamentally investing in very high-quality assets, that through the fullness of time and through the fullness of the cycle will be the best positioned to capture value. That's number one.

I think we've always done a good job in our business of locking in our capital structure, locking in our revenues long term, and protecting as much as we can against near-term macro-factors. It is important to us that 90% of our revenues are contracted. That's an important pillar to the cash flows that you have as investors. It's also important to us that 85% to 90% of our debt is locked in with fixed interest rates, with a very long duration. Our debt duration is somewhere around 8 to 10 years. So, we try to build in those structural protections, and then it's the global diversity of the business. So, you might have regions where you get a little bit of that going on, you have the U.S., you have Europe, but the fact that we're investing in emerging markets, like Colombia, like Brazil, it's a great risk mitigant for investors, and I think it's one of the things that maybe gets lost on investors as we move into markets, like Brazil—yes, you have the fear, but it's a great diversification and risk mitigant to the capital allocation that we take a look at from the top, about where we're putting dollars to work.

ROBERT CATELLIER:

Thank you.

SACHIN SHAH:

I think I'm just getting the time comment, so I'm going to pass it on to Nick and then we will come back at the end.

NICHOLAS GOODMAN:

Thanks, Sachin, and I guess it's now afternoon, so good afternoon, everyone. In the final section, I'm going to draw on comments from Sachin and Stéphane, really focus on the key attributes of our business.

There was going to be a bit of a planted polling question which Sachin already covered, which is going to ask you to prioritize a number of attributes when you're looking at an investment decision. They're going to touch on asset quality, technology, risk, growth prospects, balance sheet and track record. The punch line really being that in the overwhelming response was asset quality was the priority. We feel that we have a business that is the highest quality assets in the sector, but we also feel we have the highest quality business. And what we mean by that is we really complemented our high-quality asset base with a business that has strong growth prospects, be it organic—and we've touched on these, inflation escalators, development pipeline, exposure to rising prices, our strong track record in M&A. We've a disciplined approach to funding, which means that we have a very conservative balance sheet but a strong access to capital, and we have a track record in delivering hurdle returns or target returns to our shareholders on a per unit basis, all of which, in our mind, feels that we have a business which should be trading at a premium to its peers.

At the heart of our thesis is a concept that's on this slide, and that's where I'm going to spend a bit of time, and Sachin touched on it earlier, is not all cash flows are created equal. What I really mean by that is a dollar generated by one portfolio should not be valued the same way as a dollar generated by a different portfolio. It's very important to understand the two different components of that cash flow when you do your valuation, being return on capital versus return of capital. What you see is when projects are valued at the project level and an IRR-driven basis, that IRR model barely captures that difference in cash flow. So, what we're seeing in the public markets is there's not a true reflection of the difference of quality of cash flow in public company valuations.

So, I'm going to focus on the concept of return on versus return of capital, with a specific focus on the renewables sector, I'll look at a breakdown of the BEP distribution between those two categories, I'll profile our robust balance sheet and access to liquidity that underpins our business, and then pull it all together and look at the relative value of BEP as it trades to its peers, but also to our intrinsic value, bearing in mind all the time that not all cash flows are created equal.

So, here's a simple graphic to illustrate the concept that I touched on, with specific focus on renewables, and it's really contrasting the cash flows of a typical wind or solar investment with a useful life of roughly 25 years to that of an essentially perpetual hydro facility. You'll see there's a small component of return of capital that comes through a hydro, which really is reflected in the small, average annual maintenance CapEx, which we would have in our portfolio. What this is really illustrating is that for every dollar you invest in a hydro facility, \$0.98 of that is a return on capital and only \$0.02 is a return of, whereas for every dollar you invest in a finite-life wind or solar farm, roughly \$0.35 of that, of your annual cash flow, is a return of capital.

I think we touched on this through the presentation. To be clear, we're not saying that we or you should not be investing in wind or solar, these are very high-quality assets, they come with high-quality off-takers, high-quality cash flows. It's just when they're valued, people need to understand there is a fundamental difference in the nature of the free cash flow and how it should be valued.

When you look at public company valuations—and we're going to obviously make this specific to our Company—we feel that the public markets currently do not actually reflect the difference between a business like ours, which is 88% hydro and predominantly a return on capital business, versus some of our peers out there which are predominantly based on depreciating assets. Again, that's not a reflection on the quality of their business or the quality of their cash flows, we just feel that a slightly different valuation methodology should be applied, and we would expect that a dollar generated from our assets should be trading at a premium to our peer set.

So, if we adopt these assumptions and apply them to our business, we see that 95% of a BEP dollar distribution is a true return on capital, and we've split that down between our business—we do have wind in our portfolio, we do have authorization-based hydro in Brazil, and so I would just address that and say that even for our hydro in Brazil, it is authorization-based, but at the end of our life we receive undepreciated replacement cost back, and as we've touched on, we've been acquiring assets at a discount to replacement cost, which means that essentially most of that cash we receive in Brazil is truly a return on capital.

What is also a compelling proposition about our business is when you look at our return on capital, 85% of that would be coming from investment-grade countries. Again, this is highlighting what we feel is a very unique, high-quality cash flow distribution that's received by our shareholders.

So, why is this important? There are three key reasons that we feel this is important.

Number one, if you think that 95% of our cash flows are true return on capital, that means that 95% of our distribution to date is supported by our current cash flow and our current assets. That means that we are not under pressure to invest capital in order to maintain our distribution, and instead, as we've highlighted throughout this presentation, we can really focus on accretive growth in our business and patiently advancing our development pipeline, and that's exactly what we've done. If you look at—currently, we have 75 megawatts of hydro under development in Brazil, across three projects. We've had those assets in our portfolio for a while and we have repeatedly passed on low-priced options in Brazil, when the government was looking to procure power at what we felt was that a price below the long-term value of power and didn't meet hurdle returns. We were patient, because we weren't under pressure to deploy capital and we waited and we waited, and then we bid those 75 megawatts into an auction at, probably, the end of 2014, early 2015, and we secured very high-priced, long 30-year inflation-linked contracts that would deliver close to 20% returns, because we were patient through the cycle and we waited for the right time to bid our assets in.

We then combine what we feel is very high-quality assets and high-quality cash flows with our deep operating expertise, stable cash flows and a robust capital structure, to further enhance the value proposition. We have stable and growing cash margins. We have a very high cash margin business and we've seen that maintain. Recently we've acquired merchant hydro in the U.S. Northeast, it's in a very low price environment, our assets are still delivering very healthy cash margins. Also, we have inflation-linked revenue that's coming through our contracts, which is far out-stripping any inflationary impact on our cost base. Our cash flows are highly contracted, 90% of our revenue for the rest of this year is contracted, and we have a good contract profile out five years, with a 16-year average remaining term on those contracts with predominantly investment-grade counterparties.

I touched on our capital structure, but we have a very disciplined approach to funding. We have very conservative capital structure, primarily interest only. About 80% of our debt would be nonrecourse at the project level. Sachin touched on it, 90% of our debt would be fixed rate with average duration of eight years. We're really focused—when we do a financing, we're very focused on—when we acquire assets, sometimes we will take shorter dated bank facilities to help us with acquisitions, but we're very focused on terming that out into the private placement market shortly after execution. When we put in

place our financings, we're also very focused on putting in place investment-grade debt based on current market prices, where we have strong conviction that we will be able to term our debt into the long-dated institutional market.

What that all means, when you put all that together, what we have at the top at BEP, we complement our project level debt with a modest amount of corporate debt, and we're very focused at the corporate level on maintaining our investment-grade ratings, and we're currently BBB high with DBRS and BBB flat with S&P, and that remains a focus as we look at our capital structure going forward.

We take all that and then you look at our access to capital, you see that in the last 12 months, we've proven we have a very strong access to liquidity that helps us fund our growth initiatives. In the last 12 months, we've raised close to \$1.8 billion from a combination of corporate debt, preferred equity issuances and capital recycling, and we also did our second equity issuance, an \$860 million Canadian dollar issuance, which is only our second since BEP was formed in 2011. As the business has grown, we have become a seasoned issuer in the Canadian MTN market and preferred equity market, and we continue to see very strong demand for our issuances. At the same time, as I said, we've maintained a focus on keeping our investment-grade ratings at their current levels.

We've combined that access to capital in the public markets with capital recycling, which for our business really comes in two forms, the first of which we've touched on, which is selling select assets. We have a 1600-megawatt wind fleet, which we've largely built ourselves, we contracted it, we financed it, and it's leaving very little room now for us to grow our cash flows or enhance our returns over time. While the assets are continuing to perform very well, there is a universe of buyers out there that are willing to pay a lower cost of capital than ours for these assets, which translates into very attractive values, and if we can take that capital and recycle it into much more accretive growth, then, for us, that's a much more accretive way to grow the business than to be issuing equity. We touched on it earlier—last year, we did sell a wind farm in California. It crystalized at north of 20%, 25%, close to 30% IRR for the business. We've stated previously that we have other assets in our portfolio, in Canada and in Europe right now, that would attract very high multiples and very high valuations, and we would consider those as a tool to create liquidity to fund further growth.

The second tool of our capital recycling really relates to our hydro facilities, and I think we've highlighted why we feel hydro is the best asset in this sector. We've touched on the growing cash

margins, you have ability to enhance returns over time, and what we see is cash flows have grown, but what we've also been able to do is rebalance the leverage of our assets. So, as we buy our assets, we finance them at current market prices, which means we put in place conservative investment-grade leverage, but as we've been able to capture higher prices in those assets over time, we're able to rebalance the leverage, maintaining our investment-grade ratings, but pull that capital out and recycle it into the growth. In the last 12 months, we've done that with our Bear Swamp facility in New England, we've done it with two hydro facilities in Canada, which means you're raising capital at 4%, less than 4% over a 10-year basis, to be able to fund your growth, which again, in our mind, is a much cheaper way to fund your growth than issuing equity.

As I said, lastly, we do look to issue equity. It is expected that we will be issuing equity to fund growth, but we do consider that a last resort, because we always consider that the most expensive form of liquidity. So, even in the low priced environment that we're in, we haven't lowered our return thresholds because we've been trading at lower yields. We've maintained our return thresholds at 12% to 15%. So, in our minds, if we are issuing equity, we have to deliver 12% to 15% to our shareholders. It's also, arguably, the most dilutive form of liquidity, so we look at that in a very disciplined manner as we consider issuing equity.

So, when you put all this together, what we feel we have is a very compelling investment proposition. We have a very stable, predominantly perpetual core business, with organic growth levers, proven M&A track record, and this allows us to maintain our 5% to 9% annual distribution growth, and firmly, in our mind, we feel that BEP should trade at a premium to its peers. However, if you look at where we have been trading—and I'll note that these prices were taking share prices as of the end of August—our yield is actually trading wide to most of peer sets. We've taken a cross-section of global utilities, Canadian IPPs and functioning yieldcos, and what you see is we're trading at a spread to all of these comps.

When you talk to investors and you talk to analysts, there's probably a couple of views as to why that could be. One could be our exposure to Brazil, which is unique in our peer set, but it's 15% of our business. The other is merchant exposure in the U.S. Northeast, again 10% of our business. If you put those two together and you think that 25% of your business, in our minds, is 25% of cash flow that we've acquired at cyclical lows that have offered investors accretive day-one cash flow, strong downside protection and long-term embedded upside, to us, this has been a much better place for us

to be investing capital than to participate in the kind of well-attended cost of capital auctions, in which most renewable assets are traded in in North America and Europe. So, to us, we've created what should be a much more compelling investment proposition and doesn't necessarily justify why we should be trading wide of our peer set.

If you take that to the next level and then look at our distribution, and then look at that distribution as what is the component of that is a true actual return on capital versus those peers, the spread will actually widen. So, if we do that in a simple illustration, just taking the functioning yieldco set that we put up there, which trades at 5.6%, and if you apply that generic kind of 65% return on the capital component they would have for a predominantly wind or solar asset base, what you have is effectively about a 3.6% dividend return on the true return on capital. If you look at that for our assets, our spread, which was 30 basis points on the previous page, widens out to close to 200 basis points, if you look at it from a purely quality and return on capital component of cash flow.

So, where are we to see a re-rating to a yield consistent with our peer group? We could see a compression of 100 to 150 basis points, all things being equal, which could equal up to \$10 of share price depreciation for our shareholders. But, just doing a generic yieldco assumption, we've actually then taken that back and if you use recent market transaction comps for assets that have traded in the market and using those—applying them against our assets, where does that triangulate from a value perspective? As I suggested, as I touched on earlier on, when investors look at valuing and buying these assets in a true IRR approach, which takes into account return on versus return off capital, we start to see a divergence in what people are willing to pay for hydro versus wind. You can see that, but if you look at the average multiples of North American hydro, or even Latin American hydro would trade at, you see that the spread for North American hydro, for wind, there's a true valuation spread, and that's due to the underlying nature of the cash flow, the life of the assets, and the fact that with the hydro you can really grow your margins over time and there's an ability to earn higher returns.

When you look at the average multiples, it boils down to about 15 to 17 times for our business, a NAV of about \$34 to \$42, but it brings you back to a yield which is closer to our yield to our peer set, and so we triangulated this value in a couple of ways. It delivers potential returns of 15% to 40%. What it means really is that there is \$10 of upside in our business, which, in our minds, will really come from people spending the time to understand the cash flow that we generate, and the return on capital component that we generate on an annual basis. That excludes our development pipeline. We were

just truly placing that on the run-rate EBITDA in the business today, ignoring all the growth that we have, organic growth we have in the business.

So, pulling it all together, and really in conclusion to our presentation, the business that we have today, in our minds, really is the highest quality, lowest risk assets in the sector—and Sachin set this up earlier in the presentation. The renewable universe is becoming a very large investible universe on both the public and the private side, and investors are really figuring out, in our minds, figuring out where should they be invested and we feel that BEP is a very compelling investment proposition in the current landscape and even it will be moving forward. We have a very single determined focus on delivering 12% to 15% total annual returns to our shareholders on a per share basis, and we've proven that, we have a strong track record in this regard. We've built the business, we've a very unique asset base, we've embedded the business with organic growth levers, we've delivered accretive M&A, and we feel that we will continue to deliver accretive M&A, all the time while maintaining an investment-grade balance sheet, and we've consistently grown our distribution. I think we showed that earlier, we've had a 7% annual distribution growth since we were formed, and we'll maintain our 5% to 9% distribution growth guidance going forward. Now, we plan to continue this growth going forward. We have an unrivaled investment universe, the opportunity to deploy capital is greater than it's ever been, and we feel this business is very uniquely positioned with a very bright future.

With that, we will take Q&A on my section, and all sections, Sachin will come back up, and we can take more broad Q&A on the themes.

It is lunchtime, and I know everyone's hungry.

Okay, thank you, everyone. Thank you.