

Participants

Mike, President and CEO of Pattern Energy Group ([PEGI](#))

Nate Abercrombie, [The Stock Podcast](#)

Interview Transcript

Nate: Hello, and thanks for tuning into the IWTB podcast. Our guest today is Mike Garland, president and CEO of Pattern Energy, ticker symbol PEGI, and more commonly called PEGI. Pattern is a wind energy company and commonly referred to as a yieldco. Yieldcos are a fairly novel type of company. They are very similar to MLPs in that they own and operate infrastructure assets and they pay out most of their cash flows to investors in the form of a dividend, hence the yield in yieldco. Similar to drop down MLPs, many yieldcos fund growth projects by issuing shares or equity to purchase an operating asset from a related party. But the biggest difference between MLPs and yieldcos are the assets they own. While MLPs are primarily oil and gas infrastructure, yieldcos primarily own renewable energy assets.

Nate: PEGI was one of the first publicly traded yieldcos in the US, with an IPO in 2013. PEGI is one of the largest independent owner/operators of wind energy assets in the US and Canada. Just recently, Pattern announced a big entrance into the Japanese market with an acquisition. Pattern owns 2.9 gigawatts of generation capacity. To put that number in perspective, if all of PEGI's generation was operating at full capacity, Pattern could put Doc Brown's DeLorean through time almost two and a half times.

Doc: "But I need a nuclear reaction to generate the 1.21 gigawatts.... 1.21 gigawatts. .21 gigawatts. Great Scott."

Marty: "What the hell is a gigawatt?"

Nate: Yeah, that's right. If you got that Back to the Future reference, I'm talking to the right people. In all seriousness, the general rule of thumb is that one gigawatt of generation capacity is roughly enough to power 700000 homes. Denver county, where I live, has about 311000 houses. So Pattern's 2.9 gigawatts of generation, operating at full capacity, could provide enough power for all the houses in 6.5 Denver counties. Suffice it to say, that's a lot of electricity.

Nate: It's probably important to provide a little more detail about the yieldco model and how the model became broken a few years back. If you look at Pattern Energy's corporate structure, you'll see that PEGI is 92% owned by public investors and 8% owned by Pattern development. You'll learn more about this in the interview, but one needs to think of Pattern Energy is the owner/operator of assets and Pattern Development as the company that takes all the risk in getting a wind energy facility from concept through construction.

Nate: Pattern Development essentially gets a project across the finish line and then sells the project or wind facility to PEGI. So when you hear backlog or development backlog, that's in reference to the total number of gigawatts Pattern Development currently has in the race. Based on the most recent investor presentation, backlog consists of about 10 gigawatts of total capacity and about one gigawatt earmarked for potential sale to PEGI.

- Nate: Most yieldcos work in a similar way. A few years back, a company called Sun Edison, which was also a yieldco sort of. It owned two other yieldcos called Terraform, and I think it was Terraform Global, became the poster children for renewables in yieldcos. The management team targeted massive growth targets. Sun Edison's stock price went from about \$2 a share in 2012 to \$32 a share in 2015. That was the year everything fell apart.
- Nate: Investors started to realize that they didn't know everything they probably should know about Sun Edison and the company eventually filed for Chapter 11 in April of 2016. The whole story is complex and involves some pretty shady deals from what I understand. Hopefully we'll see a business case or even a documentary someday soon. But the big picture is that the negative publicity and super negative investor sentiment for yieldcos affected the entire space. Leverage or debt levels draw a lot of investor attention, and rightly so, because it's one of the biggest risks when you're making an equity investment.
- Nate: But investor attention on leveraging debt in the renewable space quite possibly became a little bit of a distraction, depending on how you look at it. And growth is a big concern now, given the uncertain policy outlook in Washington. And the other big concern is the inability, or at least the perceived inability, to fund growth when equity issuance may not be feasible given the extremely high cost of equity in the yieldco space.
- Nate: But not all yieldcos are alike. That's why it's a real pleasure to have Pattern's Mike on the program to talk about Pattern's business model and the outlook for the industry. But before we get to the interview, let's hit on high level financials, industry terms, and [cell 00:06:42] side ratings.
- Nate: PEGI's share price, as of this recording, was almost \$18 a share. Market cap is about \$1.7 billion cash on hand, a little over \$100 million. Total debt of about \$1.9 billion and a minority interest of about \$1.3 billion. This results in an enterprise value, or an EV, of about \$4.8 billion. PEGI pays a dividend of \$1.69 per share, which means the dividend yield is 9.4% today. You'll hear more about the dividend during the interview, but PEGI's board made the decision this past quarter to keep the dividend flat after increasing it about 35% since the IPO in 2013.
- Nate: Consensus estimates for 2018 aren't super helpful, especially after you hear Mike talk about using multiples like EV to EBITDA for a business with so much going on on the tax side of things. But it might be helpful to know that management has provided CAFD guidance of \$151 to \$181 million. If you're wondering why the range is as wide as it is, keep in mind that we're talking about wind energy and you need the wind to blow in order to make money.
- Nate: The midpoint of guidance is \$161 million, resulting in a CAFD yield of 9.8%. If you're wondering what CAFD is, you may recall the acronym DCF from the previous interview. Yieldcos have their own term for basically the same metric. This is CAFD, which stands for Cash Available For Distribution. You'll also hear the acronyms PPA, PTC, ITC. These are all pretty wind or renewable specific. PPA stands for Power Purchase Agreement and it's essentially a contract that allows a wind facility to sell production at a certain price. These agreements or these PPAs are anywhere from 10 to 25 years long. PTC stands for Production Tax Credit. ITC stands for Investment Tax Credit. And just keep in mind that the PTC is more specific to wind and the ITC is just a little bit more specific to solar.
- Nate: And then lastly, you may hear the term ROFO. ROFO stands for Right Of First Offer, which basically means that Pattern Energy has first dibs on buying an asset that Pattern Development would like to sell.

Nate: The Bloomberg Terminal includes ratings and recommendations from 14 sales side analysts, with nine of the 14 having buy ratings on PEGI's stock. The average price target, including neutral rated or cell rated analysts, is \$22.25 a share. With all that covered, let's get to the interview. I hope you learn something and I hope you enjoy.

Nate: Mike, I can't say thanks enough for coming onto the program. Getting management teams to agree to an interview hasn't been the easiest task in the world, and you said yes and I thank you from the bottom of my heart.

Mike: Okay. Well, I hope this goes. It's interesting. I guess it's the age thing that most CEOs don't understand that. There's been a change in communication approach to life in our business.

Nate: Well, so I was hoping that we could just start out talking about your background and how you got involved in the renewable energy business and the role you played in building Pattern Energy.

Mike: Yeah. Thanks a lot. I have been in the business a long time. I think I did my first wind project in 1989. So I got into the business, really, through energy efficiency and wind renewables. Pattern was spun out of a disaster company called [inaudible 00:10:39] in June of 2009. And the development company basically, we brought a bunch of employees with us, about 80 employees, and we got funding from [inaudible 00:10:55] investment fund and some co-investors and that's really when we kicked off our business.

Nate: That's great. So what were some of the critical steps for you and for Pattern and building one of the most, or probably the preeminent, pure-play wind business around today in North America?

Mike: Yeah. The number one step is finding capital that supported our development opportunities. But really, it was hiring smart people and then having a no fear, anything's possible attitude where we didn't feel that we couldn't get things accomplished. We felt like when we thought it through, we could make it happen. So that's really the thing that drove both our development efforts and our going into the operations business and building one of the best-operating groups in the country.

Mike: So that's been the driver for us.

Nate: What were the issues early on, starting out? Was it just getting the investors comfortable with the tax incentives? And we'll get into that a little bit later, but tax incentives, or was it just the technology? Was it because it was so new or what was it?

Mike: No. Actually, it was really, we had a good track record of developing opportunities and we had a good backlog of projects. But there weren't that many investors out there that were willing to invest heavily in the development side, and by having a good, strong track record, there were a lot of startups, people saying "Hey, this is a good market, there's going to be a lot of opportunity to grow renewables in the coming decade and more." But there weren't that many people that could go to investors and show them actual returns on invested capital during the development period and we were able to do that and were able to attract a number of very interested private equity type investors to support our spin out. Riverstone, we've known a number of the Riverstone principals for year and had a good rapport. The nice thing about what we were able to accomplish in raising capital is we hooked up with people that understood business there. Riverstone primarily only invested in energy. Most of their principals have been around various forms of energy for

decades. So they had good access to the market for us to help us with our opportunities. And it also facilitated our being able to explain why we were doing things the way we were doing them and making decisions more quickly because they had really, a strong foundation in our energy business.

Mike: So that was a Godsend really, to find knowledgeable capital that could move quickly with us and getting us moving immediately. And the great thing about it is we went out in June and by November, we were financing our first project. So we needed somebody that could move quickly with us.

Nate: How long has that relationship existed?

Mike: Well, I've known a couple of the principals for decades. So they've been around the energy business, a couple of them have been involved like Chris Hunt and even in the wind business. But we've crossed paths and worked together. One of their former principals, who was a client of our investment banking days, where we had come up with a pretty unique structure to acquire some assets, so we got to know him really, really quite closely.

Nate: That's great.

Mike: Yeah.

Nate: So tell me about the development process and just what is involved in building a wind farm?

Mike: In the wind business, you really have to start with the land and there's two elements of it that are obvious. One is, is it good land for wind resource, and two, is it accessible in terms of interconnecting to the grid. Then you have to then step back and look at the macro features of "Is there somebody there that wants to buy your power? Is it a sensitive place for permitting?"

Mike: So we typically, it'll take anywhere from six months to six years to develop a good wind site. The first one or two years is really around getting the data on the site, what are the wind characteristics, how complex is the site, is it fairly uniform over the entire site or do you have to look at special features within the site and move operations around or locations of turbines around. In recent years, it's become, really, a fascinating business because it used to be, you'd look at an entire wind site and say "Okay, what are the average wind conditions we're seeing here?" And pick an average turbine for the site and estimate your energy production and do your economic analysis to determine how feasible it is to do the project.

Mike: Now we go in and some sites, we have maybe six or eight [met 00:16:20] towers where the past, we'd only have a couple, we may have various LIDAR equipment, others, to measure the wind. More specifically, what the wind characteristics are like, where we want to put the turbine. And in some cases, where we even pick different turbines for different locations. They're not fundamentally different. We typically will use similar models that may have different blade lengths. So for example, in the [Miko 00:16:47] project in British Columbia, we have two different turbines. One or more robust turbines where the wind's higher at the front ridge and then the back ridge, it sees a little lower wind, so we can go with longer blades, and so on.

Mike: The manufacturers and we are getting far more sophisticated. So that takes a little more intensity upfront than it used to. But you spend a good one to two years. Some people have done it in six months. I don't think

that's such a good idea, but you spend one to two years gathering the data and looking at reference stations in the area to build up 20, 30, 40, 50 year history of data.

Mike: Then, in parallel to that, if you think you have a good wind site, you may be doing your permit work, which will take one to two years, and so it takes a good couple years to fully develop it. Then it's just a question of the market. Is there an outlet for the market? Is there adequate transmission connection?

Mike: So it's a very interesting process. Sometimes you need to be patient. We've had deals that have gone dormant for six years and then all of a sudden the market becomes really active in the area and a demand for electricity, especially renewables, and all of a sudden it pops up and in a year we're building the project. So the development cycle, the development business has the short and long and cycles that you've gotta be flexible and be able to react to it.

Nate: Yeah. Yeah. Is transmission ... I don't know if you remember some of our previous conversations, Mike, but I was in the wind business for awhile. Before I was on the Buyside, I worked for [Gamesa 00:18:37] and [Clipper 00:18:39].

Mike: Yeah.

Nate: And I remember transmission was always a big issue for at least the projects we were trying to develop. Is transmissions, are the issues around transmission the same today as they were five, 10 years ago? Or how is transmission [crosstalk 00:18:55]?

Mike: Fundamentally, transmission is still an issue, but it's evolved since five or 10 years ago. It's much more sophisticated in a couple ways. People used to think of transmission as "Hey, windy sites are usually not where a lot of people are, so you've gotta build out transmission to get a large volume of wind." You have to have stronger, more robust transmission lines like in West Texas, where in the early days it was built out and it was a rural community and they couldn't handle 1000, 2000 megawatts of wind that got built out. So you need transmission upgrades to be able to handle that capacity.

Mike: How it's evolving now is there's a little bit of that. There's still plenty of opportunities, like we have a project in New Mexico that can bring a tremendous amount of high quality, high wind capacity, low cost wind into California. So that's a transmission line accessing good wind sites. But the other part of it is some of the things we're doing now in the west, in particular the things we call the Western Grid, we're trying to connect all the grids of the Western states to allow a lot more flexibility in being able to generate renewable energy pretty much anywhere you want it at any time. And if you have a big enough and a robust enough grid, you can move electrons around more easily and efficiently to fill up the pipes. Now it's just a matter of pulling it out where you need it.

Mike: So there's two elements of it. How do you expand the grid to be able to be more robust and be able to move more efficiently? It's kind of, think of it as a highway going from a very small set of highways that everybody has to drive on to a whole region of highways that you can spread people around and bring people in and out of the highway system more efficiently. Secondly, the technology has changed where you can be lot more sophisticated in how you manage and improve and balance the systems. That's, we're at the early stages. We're just breaking ground on what people call "Smart grids" and being able to even use the grid itself for storage or regional storage. You may have a hot weather going on in LA where there's a lot of buildings that

have thermal mass. You can use the thermal mass in storage as well. You can do battery storage to help. You can use electricity being produced in one location like New Mexico and store it in another location to balance the system.

Mike: So we're going to see tremendous changes over these coming years if the regulators and utilities and the investors all come together and really keep pushing forward on how to make a more robust grid. It just facilitates the ability to produce whenever the renewables are needed and to balance [inaudible 00:21:58] and store some of that electricity that you wouldn't be able to if you have smaller, more focused grids or just gen ties tying into a utility grid.

Nate: Yeah. That's fascinating. Could you talk a little bit about costs? So maybe you don't want to mention specific numbers, like turbine costs, for example. Kind of curious if you could frame up how costs have come down over the past decade and where do you see costs going, both from the perspective of development costs and then also equipment costs?

Mike: Let's start with the easy one there. Equipment costs and the long term cost of energy for renewables. It's going to keep going down and if you look over the period you've mentioned, 10 years, the cost is reduced by more than 50%. What's happened, though, within that 10 years, in the early days, on capital cost, you would think of like \$1 million a megawatt. Then it grew up to \$2 million a megawatt and \$3 million a megawatt. And in some locations, it's still there and in some locations like Japan, which is extremely expensive to build at, but in North America, for example, it went up, in some areas, \$3 million a megawatt to build projects and now it's come back to where it's going somewhere between \$1 million, \$1.5 million, and going down.

Mike: At the same time, the turbines have become more efficient. They're longer blades, higher towers, more efficient in converting the wind to electricity through blade design and other things, better mechanics, if you will. And better and more sophisticated software. So that's driven the costs by more than 50%. So it used to be, 10 years ago, you'd be lucky to talk four cents in the high wind region, and now you're at a penny and a half to two cents for wind generation in high wind regions. So it is continuing to be driven down and there's an unwritten goal of the industry to keep driving down costs, energy costs, from wind to compete head to head with solar when we come off of the PTC, the production tax credits, and then that's in most regions of the North America where we can compete head to head. And particularly if there is some coverage of carbon contribution from fossil fuels. We just make renewables even more competitive.

Nate: So when you say carbon contribution, you're talking about renewable energy credits?

Mike: Yeah. Carbon taxes or carbon pricing.

Nate: Okay.

Mike: In various forms.

Nate: Yeah. What are the various forms right now? So California has a market and then there's one on the Northeast?

Mike: Yeah. And Ontario does and New York and Washington recently. And they're cap and trade in California, which is a little different than carbon pricing. There are people out there that are talking about things like

carbon dividends where the money that would come in from that carbon tax would be distributed to all the taxpayers in the United States or whatever country it was in. And you'd be able to create a virtuous cycle of raising taxes from the carbon pollution and then spreading that to all citizens to gain their support and commitment and understanding of the issue, a more robust version.

Mike: There's other ways of doing it. There's plenty of ways to do it and I think there's a recognition, certainly globally, that something has to be done and some people like to regulate by direct [inaudible 00:26:10] emission reduction standards or emission standard, and others believe the free market or some kind of market mechanism, like carbon pricing is the more efficient way to deal with it and let people figure out the best way to lower their use of carbon as a way to solve the problem rather than trying to mandate it.

Nate: And what do you think the chances are of a carbon tax under this administration? Just kidding. That's a trick question.

Mike: You know, carbon tax is a tough thing. May not be under a federal mandate. We may have to do it state by state. But there's a lot of conservatives and a lot of Republicans who support a carbon tax. And as you know, this administration is pretty unpredictable. So it's not necessarily ... I haven't ruled it out. I think there's always a chance that you could have this administration change their mind one way and support something that's more interesting than what's been approached today. And it could either be, like I said, this concept of a carbon dividend or as a way to try to spread the wealth out there and be able to send money to working class people, that would be attractive, I think, to this administration. It could also be used to fund the infrastructure bill and/or additionally, it could be probably the most efficient way to pay down the deficit, which is now huge. At some point, the administration is going to have to start facing how they're going to pay for some of these things, whether it's the deficit or the infrastructure or other things that have to come along. You can't do it by just pure taxing people. We know that's not going to work. So why not do something that even many of the oil companies support putting a price on carbon and using that to achieve some of the goals of the administration?

Mike: I don't rule out anything at this point. We're in uncharted territory anyways, and we shouldn't lower our expectations. We should raise them and expect higher opportunities to come along and help our industry and help the problems that we're facing on the carbon pollution.

Nate: Yeah. I think it was James Baker who wrote a paper awhile back. Maybe it was a year ago? On carbon tax, which he was just making arguments for it, which I thought he made a lot of really good points.

Mike: Yeah, he and George Schultz and Paulson and all those guys have come together and supported some form of carbon dividend.

Nate: Yeah. Yeah. Okay, so back to the development business real quick, costs there and then I'm very curious to know, I remember hearing a few statistics being thrown out a long time ago about your success rate, Pattern's success rate, in terms of developing projects and then ultimately executing on a PPA. So could you just talk about costs and your success rate?

Mike: Yeah. Costs vary considerably depending on where you're at. For example, developing projects in Texas, like in the panhandle of Texas, is a fraction of developing a project in Ontario or Japan. So it really is site specific.

We try to be very conservative in how we spend capital early on and until we have an economic proposition and it can be a very modest amount until you have an economic proposition.

Mike: The art of this business is trying to figure out how to go far enough to be able to hit the bid, if you will, when you hit a power purchase agreement and run to a finish line quickly. 'Cause as soon as you execute on a power purchase agreement, your funding writes itself. You have to put up security to say you're going to build your project to the off taker, you're putting up security around the interconnection agreements and so on.

Mike: So what we try to do is keep a relatively low [inaudible 00:30:38] to that point, but do enough that you know you have a high probability of succeeding on your project and you can take from the point of signing a PPA to financial closing, make that as short as possible. So you have that ability to hit and run as soon as you start ramping up your expenditures and you keep the time that you have those high expenditures exposed before your project is built to a minimum.

Mike: That's really the art of the development business is to balance that. That gets you your best economics. In our case, we've never not built a project and operate a project out of project operational that we've executed on a PPA. Economic proposition for the project. So we're very proud of that track record and we work really hard at making sure all projects, that we deliver on all projects.

Nate: Yeah. Yeah. And just in terms of the number of projects, development projects, have you had to abandon?

Mike: We have abandoned a number of projects. I would say it's probably less than 10% of the projects we develop.

Nate: That's amazing.

Mike: We've had projects that we've kept, like I said earlier, in incubation, if you will, for five, six, seven years, and then they emerged and became successful. The panhandle project is a good example of something that had been on our books for six, seven, eight years. We have various projects that we start, do a minimum amount, get some good data on, get the plan tied up, try to make minimum land payments until we get a power purchase agreement. Then that allows us to keep those opportunities alive until the market becomes more robust. So we're able to have a high success rate as a result.

Mike: Where you run into problems is if you sink too much money in too early and the market just isn't there. You may have to abandon it if you're paying out too much money. We've only had a couple in our business where we have spent millions of dollars and had to abandon the project. Which, not something we like to see happen.

Nate: Yeah.

Mike: But it does happen. It's part of the business. That's why you should get oversized returns for taking the risk of doing development is that you do sometimes have to write off projects.

Nate: Yeah. Yeah. I think that the companies that I worked for, or at least the last one that I worked for, success rate was pretty close to your abandonment rate. Which is why it's not around anymore.

- Mike: Yeah. Exactly. Well, some people just like throwing money at things. It's kind of a field of dreams. Go after it and hope they come. They don't really analyze the opportunity in a very effective way. They just feel like it's a little bit of a fad where people feel like "Hey, everybody wants renewable energy. I just have to find a good wind site and then everything will be good." And they just start throwing money at it. And that's a sure way to get out of the development business before long.
- Nate: Yeah. Yeah. Absolutely. So you mentioned returns and strong, oversized returns. Could you talk about your return profile? At least your target return profile for an individual wind asset from development to sale or the drop to Pattern, the public entity? And how have those returns changed over time?
- Mike: Yeah. In our development business, we target private equity type returns. We're really on a second phase, if you will, of development [inaudible 00:34:39] that we announced last year where we brought in close to a billion dollars for what we call Pattern Development 2.0. The second coming of Pattern Development.
- Mike: The first set of investors will seek private equity, high returns. So historically, private equity looks for the 20, 25, 30% returns. Today, those returns have come down some, particularly because of the interest rates being stable for so long and the substantial amount of capital that's out in the marketplace. I think most of the private equity return funds and investors are looking for high teen returns. That's what we try to prevent in our development business and have successfully done that off and on for several decades.
- Nate: Yeah. Yeah. That's phenomenal. So moving to ... Well, I think it is probably important just to clarify things for listeners in terms of what tax incentives are associated with renewable projects, or at least wind projects, and what is the outlook there?
- Mike: You want me to give you a little history of the production wind credits, production tax credits?
- Nate: Yeah, that would be great if you could talk about the PTC and the ITC?
- Mike: Yeah.
- Nate: Even the grant, if you'd like.
- Mike: It's a pretty wild ride when you look back on it. PTCs, I think, were enacted in 1992 as part of the energy policy act. And God, they first lapsed in 99 and then got extended for a year and then they lapsed again and I remember in 2001, they expired and we waited until late March, I think it was, or mid-March 2002 before they were enacted. Which really delayed the market and disrupted the market terribly. I think there were only four projects being built that year and we had three of them.
- Nate: Wow.
- Mike: And then they got another one-year extension in 2004. So it's been this really fits and starts kind of PTC experience until really till 2015 when we agreed to a five year PTC extension that would have a phase-out. So the phase-out started in 2018 100%. And then in 2019, it goes to 80%. Excuse me, starts in 2017 at 100% PTC, 80% runs out in 2018, and then in 2019 goes to 60% of the original PTC and then goes down to 40% in 2020 and then goes away.

- Mike: It started originally about 2.2 cents a kilowatt hour. For every kilowatt hour you produce, you get a PTC for 10 years. And it is escalated year to year by inflation. And with the disruptions and the great recession, it created a real problem because there weren't really any taxpayers anymore. Most of us in the industry, I estimate it at one point, about 80% of the entire industry was small developers that didn't have a tax space or medium-sized developing companies that didn't have a tax appetite, because we had enough deductions from maybe retaining some of the ... Like, what we have done is retained some of the depreciation and we have interest deductions and so on. So we typically aren't taxpayers for quite a long time.
- Mike: So we use institutional investors to monetize the tax credits that are available to wind projects. And in 2008, they started disappearing. And by 2009, there were very few, if any, remaining. So when the Obama administration came in, we worked very closely with them. Our company and several others like General Electric and others worked very closely with the transition team because the administration wanted to boost, if you will, the renewable business and do more renewables. We kept saying "Right now, it's a dying industry because there isn't anybody to monetize the tax benefits and the tax benefits are still needed."
- Mike: And we wanted a rebate, at the time, and they kept saying "No, no, impossible. Impossible." And it was really the Obama administration came up with the treasury grants as a solution to allow for monetization of the tax credits until the institutional investors went back and recovered so that they were paying taxes and we could switch over to monetizing the tax benefits through the various tax structures we used.
- Mike: So it was really kind of a savior of the industry to have the treasury give grants for a few years.
- Mike: The PTC's phasing out over that period of time, through 2020. ITC, for solar, it's 30% investment tax credit. That's an upfront tax benefit. And they have a similar type of phase out period, but they have a three year longer window than wind does. So they don't start phasing down until 2020, which gives solar a competitive advantage with the tax benefits over wind during that period.
- Nate: Why do you think that is? Why do you think that it was structured that way? Stronger solar lobby?
- Mike: No. If you ask me honestly, I think there was a last minute play that people didn't really understand fully what was going on. I think we all thought ... Most of the big companies that are in wind also do solar. But we like to have a balance between the two. I think, really, we all believe that the [inaudible 00:40:51], the tax bill was being created on the phase out, that what was going to happen is that solar and wind were going to be treated the same. What that meant was starting the phase down in the same year, phasing out over the same period of time.
- Mike: I think there was just some 11th hour miscommunication that what some people that was phased out the same, was, like I said, it's starting in the same year, but what actually was being thought about when they said that was that the PTC was going to expire for wind three years before the ITC was going to expire for solar or phased down to 10%. So what was considered the same was at the expiration date, we'll start phasing it down for them over the following several years. So it ended up having three year longer runway than wind did.
- Mike: It was just that application of "Hey, we're here to phase it down the same way we're doing wind," but it was really a different time schedule. Personally, I think most of us in the wind and solar business don't feel that's really a fair balance because we think that wind and solar are both very competitive and equally as

competitive. We think the solar business is a terrific business, but doesn't need relative to wind that kind of support.

Mike: Now having said that, there are other industries like gas and oil and so on that get tax credits as well that have gotten tax credits substantially longer and better than wind and solar. So for example, [inaudible 00:42:37] production 29 tax credits, that really created the modern natural gas industry we have now with directional drilling and all that, started in the 80s and went for 20 years. So it went as long as actually was predictably available through the entire period. So it went longer than what a PTC were available for wind. So there's been substantially as much or more tax benefits provided for the natural gas and oil industry than the wind and solar. But the still have additional tax credits that are still in place.

Mike: So the unfortunate part is that while the wind tax credits are going away, some of the other competitive fuels, be it solar or be it gas, still have tax benefits that aren't enjoyed by wind. Which we think that's unfair, that we wish they would have leveled the playing field. We're happy to compete against any resource. It's just some of these benefits to fossil fuel in particular have been around so long, they feel almost like they're God given as opposed to government given.

Nate: Yeah. Good point. No, I think there's another important point that you could make, just about a good wind site in Texas versus a new CCGT plant built in Texas. How would you compare the cost to produce electricity for those two facilities? So good wind site and a good CCGT site. We'll call it \$3 Gas.

Mike: It's cheaper for wind now than for \$3 Gas, gas turbines. [inaudible 00:44:17] and others have published the numbers so they're publicly available that indicate what the numbers, the difference is. The two things that I point out that is, if you just look at it on a dollar and cents basis, gas, at \$3, is more expensive than the latest best wind sites in Texas by a significant amount. It is more expensive. But what's more interesting is you look at it over time. What we contract for in our projects is 20, 25, even some cases 30 years, but say 20 to 25 years, and it may be flat. Less than 2 cent power for 20 years. Whereas there's no gas projects, that I'm aware of, that contract for much beyond 10 years at a fixed price, because they assume that gas prices are going to go back up at some point and they're going to have the opportunity of making more money.

Mike: So the other value that is created by wind is it's a much more predictable cost to the ratepayer and if you think of it in real dollar terms, it's actually, in most cases, decreasing in cost over time because we don't escalate the price at inflation. It's usually slightly less than inflation or not at all.

Nate: I didn't realize that. I do remember seeing those [Lazard 00:45:44] reports and I know that over the years, yeah, prices, or at least at leveled cost of energy for wind in Texas is in the mid-teens.

Mike: Yeah.

Nate: Just in terms of price per megawatt hour. I'll have to go back and double check this and I might even edit this part out just because I don't want to sound like an idiot, but I think \$3 gas was something like a \$40 to \$50 megawatt hour cost.

Mike: No, no. No. \$3. Think of it. The new turbines, gas turbines, are at a 7000, 7500 heat rate. So you're going to be down to three cents or something. 30 bucks, 40 bucks.

Nate: Okay. But does that exclude the fixed cost ... Is that just variable cost?

Mike: No. Three or four cents includes capital costs.

Nate: Oh, it does? Okay. Okay. Well, thanks for correcting me. I'll just leave that in there so that Mike is the pro and Nate Abercrombie looks like the goofball.

Nate: So I'm curious to hear what tax reform does to your business? Does it change anything for you, how you're thinking about things?

Mike: Yeah, it does some. You're talking about the new tax rates and a little bit of the utilization of the tax benefits and so on?

Nate: Yes, sir.

Mike: It's actually been positive [inaudible 00:47:04] us, ironically. If you look at our assets, it couldn't have been a better timing. If you look at most of our assets have burned through the tax loss periods. So we're flipped over and over the next year or two, we'll be flipping most of our projects into taxable income, we'll be in a taxable position at that point. Therefore, all the ones where we have tax investors in now, we actually have an improvement in our economics that we flip earlier or we get a higher percentage of the cash flow sooner. The way most tax credit deals are done is that you give all the tax benefits to the institutional tax investor plus a 20% of the cash flows and then after 10 years, it flips down to 5% of the cash flows going to the institutional investor and 95 to the sponsor.

Mike: And because it's a lower tax rate, and we are now ... If we were doing a new project today, it actually hurts us in that the tax investor doesn't as efficiently use the tax benefits. It takes longer to use them up, if you will. But on our older projects or existing projects, we're flipping into a taxable income situation where the tax investors now with a lower tax rate actually pay less taxes and therefore get their returns faster and we flip a little faster.

Mike: So ironically, we're in a weird place where actually analyzing our numbers currently that the accountants may actually take a step up in valuations because the assets have improved in value as a result of the tax bill.

Nate: Oh. Wow. I didn't realize that. So the existing business Pattern Energy, publicly traded entity, cash flow profile, actually looks better long term. But the outlook, maybe, doesn't look as strong just based on the fact that future projects could be negatively impacted by the lower tax rate. Is that ...

Mike: Yeah. But let's take these in two steps. The existing projects actually do better, as you say, over time. We'll see better, more cash being allocated to us sooner. Secondly, what we do get in is taxed at a lower rate. So it has two benefits. For new projects, we'll structure around the new tax rate. It won't be as efficient. It probably just means that we have to put in a little more capital than we used to. The sponsors will put in just a little more capital so that the tax investors put in a less capital that balances the reduced tax rate. Then it's just a matter of adjusting the power of purchase agreement or expenses or other things to get the returns that the equity investors need, the sponsor need.

Mike: So in the long run, we'll probably have a very minimum adverse effect on new projects. It just won't be as efficient on the tax side.

Nate: I see. Okay. Okay. That makes a lot more sense. So could we talk about capital allocation, your philosophy? I know you recently stopped growing the dividend and part of that was due to the fact that you just felt like the market wasn't rewarding your company for the dividend that you were paying, so you cut the dividend growth until things just change?

Mike: Yeah. We can't give you an outlook of what we're going to be doing in the future because our board is very sensitive to setting the dividend policy and they feel very strongly that it's a poor prerogative, not management, to set the dividend policy. Having said that, we have no intention of cutting our dividend in any way. We believe, still, in the dividend model of our business, that we have stable cash flows and we should be distributing a large portion of it out to our investors. So that is our intentions. We just, as you said, we stopped the growth of our dividend because market was not rewarding us for growth. So we'll have to look at that. We're going to work on demonstrating to the market that we have a strategy for getting down our payout ratio, being able to sustain our dividend, and grow at, say, 2% to 4% without raising any more capital and laying out a good reasoning around if we have access to reasonable price capital, we can grow in the high single digits, low double-digit type of growth, again, under that case.

Mike: But our first priority is to really tighten our belts a little bit and demonstrate that we don't need to raise capital to continue to invest in our business, preserve our capital in a reasonable way, and grow at a more modest level without a lot of dividend growth or capital rate.

Nate: Yeah. No, that's encouraging to hear. Have you talked about what the appropriate or what the long-term payout ratio is for Pattern?

Mike: Well, we've always said 80% is a really good number. Takes 20% and reinvest it in our business. Over time, I think I'd like to see it even higher than that. Excuse me. Higher reinvested in our business. I'd love to get our dividends up to a level where we could maybe be at 70% and have a little more capital to reinvest in our business. Ironically, we have, from the very beginning to now, several investors who keep saying we oughta be investing as much as we can in our business because our growth opportunities and the returns that we might be able to do, particularly now that we're in the development side too, is higher than what we get in some of, certainly acquisitions in the public markets that if you have to compete for those.

Mike: So we are anticipating being able to move to our 80% over the next couple years. 80% payout ratio. Then hopefully we can continue that trend and get it down to maybe 70% someday.

Nate: Yeah. Okay. That's really helpful. I think one of the other things that maybe investors, especially somebody who's not familiar with the renewables business, which is a lot of people, how they work and how they're funded, they look at your business and they say "Wow, leverage is really high." Could you just walk us through why is leverage as high as it is in the renewable space? And could you talk about the protections that Pattern Energy, the public entity has? What the risk is there on the debt side?

Mike: Yeah. Yeah. I think there are several things about the debt that is misunderstood. We don't have high leverage in our business. In fact, we have relatively low leverage. Particularly United States, 'cause wherever

we have PTC transactions, we use tax equity and there's no debt on any of our projects that have tax equity. So that's about as low as leverage as you can get.

Nate: Yeah.

Mike: On our projects, if you look at our average, I think we've publicly said that our debt service coverage ratio, which is a test of your ability at the project level [inaudible 00:54:36] that payments where 80 plus percent of our debt is is that it's project debt. So we've talked about our coverage ratio that if you look at what the banks and everybody do at a P50, it's about a 1.7. Most lenders will lend at 1.3, 1.4x coverage ratio, depending on the project.

Mike: So we don't feel like we have very much leverage in our business, in particular, but I think generally, in our market, it's not all that leveraged. Two things I would say is one, people forget that this is a largely amortizing debt. So for all of our projects, we raise debt at the project level and it amortizes generally about a year ahead of the end of the power purchase agreement. So we basically have no debt at the end of the economic term that we have. And then at that point, we have free cash flow with no debt on the project. So that's a big consideration. A lot of times when people compare on leverage, they don't look at whether it's corporate leverage that doesn't amortize to speak of, against project leverage. When you're a company like ours where the majority of the debt is project amortizing debt and it amortizes over the contracted PPA period, you're really in a, it's a different economic risk profile than if you're carrying forward corporate debt.

Nate: Yeah.

Mike: The last thing I'd say is most project debt is analyzed on a P99 or a P50 coverage ratio where the projects can make dents on the debt even in the case of a P99 or a P90, which is everybody's expectation, that 90%, 99% of the time, you're going to be at higher cash flows than those. So it's kind of like the worst case. One in 100 case you may hit those debt service coverage rates. You may just make enough to make the debt payment. So when you think of it in those terms and you maybe, in our case, 1.7 in our average expected, 50% of the time you're over, 50% of the time you're under, you have a 70% cushion over what your debt service is, which is not a very risky or highly leveraged business.

Nate: Yeah. Yeah. And those are really important points to make.

Mike: And then at the corporate level, most of us are three or four times corporate leverage. That's pretty common for most industries.

Nate: Okay. Could you talk about metrics? I was hoping you could help address some questions that I've heard from some investors regarding EBITDA. The question primarily relates to the appropriateness of using an EB to EBITDA multiple in thinking about the value or the attractiveness of Pattern Energy shares or the value of the business. Obviously, with all of the dynamics going on with respect to taxes and tax incentives, Pattern's EBITDA may come across as a little bit confusing for investors. I was just hoping that you could describe some of the complications with using Pattern's EBITDA when coming up with certain multiples and just whether or not you could provide guidance in terms of what the appropriate metrics are. Is EBITDA the most appropriate?

- Mike: Yeah, I think you have to, in our industry, be very careful about the EB, EBITDA multiple because it's quite different than most industries. The primary reason is really around the capital structure, the fact that we use tax monetization of our PTCs, that's one. The second is we have hedges, interest rate hedges and other things, that can really distort these numbers quite a bit. So if you think of income ... If you just take the straight EBITDA, you have to mark to market your hedges in many cases. So we've had situations where, on our income, we could see swings of 50% or 100% on our income because the swings in interest rate hedges.
- Mike: The hedges are mark-to-market. They're fully ... It's like when we do a project financing that eventually went dead and we have a variable rate debt that we swapped into fixed rate debt. We may have to mark that to market. We have cash flow to pay it, there's no real movement at all because we're not terminating the hedge, but the accounting rules require us to do it.
- Mike: So the first order is be very careful. That's why we use what's known as adjusted EBITDA because we try to take out some, if not most, of that mark to market bouncing around that doesn't have any real meaning. I'll give you really a good example. Our gulf wind project, the accountants made us mark to market our power [inaudible 00:59:46], but our assets, they left the same. So if you mark to market the power agreement, you can say "Well, you're in the money because this contract has it, but if it had been terminated, you'd be out of the [inaudible 00:59:59], so it flows through negatively through your P&L."
- Mike: What the irony is, is that with those hedge, we have positive results. But our asset up here [inaudible 01:00:14] mark to market with negative. My point is that they cancel each other because they're locked in. You shouldn't just mark them one side of the equation. So the first is, we gotta use adjusted EBITDA.
- Mike: The second element around understanding EBITDA is PTCs. You really have a hard time because PTCs are tax credit, which is below the line.
- Nate: Yeah.
- Mike: And in most cases aren't even in EBITDA. So what some companies actually do is gross out the tax credits and add it to revenues, essentially, and then gross up their EBITDA. So those are the two elements that cause the most misunderstanding around the use of EB, EBITDA. So we don't generally ... First of all, it's a very short-term analysis. Right? It's quarter to quarter, year to year, so that's not very indicative of value in our business.
- Mike: Second, and you have to really understand the mark to market provisions and why adjusted EBITDA may reflect a better number than just EBITDA. And third, with tax implications.
- Mike: The other metrics we think are better. We use really two. One is the CAFD multiple, because we're cash oriented people. If you just look at the cash against what's invested, we think that's a more realistic version. A cleaner, easier way to understand how much cash do you get.
- Nate: And what does CAF ...
- Mike: Cash Available for Distribution. So it's the cash after all of our project expenses, our overheads and everything, what cash is available to make dividends. To us, that's a more appropriate. Or to reinvest in our business. That cash available for distribution is a better metric. So cash available for distribution yield is a

good short-term metric. Longer term, a DCF analysis or total return analysis is more appropriate, because then it tells you how you are looking at the residual value of the assets and does it change over time.

Mike: These have intrinsic value that a lot of people miss. But while these metrics are really helpful around DCF in particular, the assumptions people make are the biggest drivers. Right? Long-term, have they made good judgments about the amount of wind and where are merchant prices going when they come off contract or if they're not fully contracted? What's happening to those? And how aggressive you are on those assumptions make a big difference in how much you think the residual value [inaudible 01:03:08] rather than the EB to EBITDA or a cash available for distribution multiple. When you get beyond those short-term measures, what's the value of this business over time? The assumptions are going to drive your analysis more than anything. So you just have to understand what those mean and how they affect your business.

Nate: And what is your assumption, if you don't mind me asking, on the residual? I mean, I know that every asset's going to be different, depending upon where you are geographically and what power price expectations are 10 years from now, but do you have an internal list of assumptions that you use when you think about residual?

Mike: We do, but we don't publicize them or tell people. I can tell you, just my own personal attitude towards these things. I'm a believer that over time ... If you look back over the 50 years ... I did this a couple of years ago. Over the last 30 or 40 years, I think electricity prices, wholesale electric prices went flat around three cents. I think that's across the country, that's what's going to happen and real terms are going to stay at three cents or less. Then secondly, I looked at what we've been able to do in the technologies and say we're going to keep seeing ability to reduce costs over time. So it just feels like flat or decreasing over time is my personal view of where we're going to go. We're going to keep driving the costs of renewables down, so the real costs are going to be better and better.

Mike: So that's generally, I think you're going to see in some cases, there's going to be regional differences to that. There's going to be places where there's not as much land available or what have you or there's an urgent need because they shut down a power plant or there's building costs that are very expensive and so on. There's going to be regional impacts to that assumption. But I'm very optimistic that our market is really pretty extraordinary and that we're going to keep seeing costs coming down over time.

Nate: Yeah. So point is, it's not at zero.

Mike: Oh no. In fact, we had one investor said "I'd invest in you guys just for the residual [inaudible 01:05:19]."

Nate: Wow. Wow. Wow. So I'd like to take this opportunity to let you describe the announcement last, I guess it was midway through last year, the new partnership that you have with PSP Investments.

Mike: Yeah, it's a great arrangement we were able to do with PSP Investments. They're a very knowledgeable and experienced investor, so we're really pleased that they came into our business. The extraordinary thing is they came across the entire platform. They're invested in the development business, they're invested in the operating company, PEGI, the public company, and they're also going to jointly invest in assets with us. So that's a very unique investor and situation that [inaudible 01:06:03] that we're able to work together to accomplish that.

Mike: The goal is really to demonstrate that we have an independent party who's seeing and looking across all of our platforms and seeing value across our activities. In addition, it gives us flexibility that we have a built in investor that if capital markets are constrained, then our ability to raise capital for PEGI to invest long term in an asset, we can turn to PSP to be our partner and we're probably going to be moving to that concept for the next year or so more and more where we take small ... It used to be where we preferred to own 100% of an asset. We brought PSP in to take up 30% and we've done a couple deals at 50%. We could see ourselves even going higher than that if we have limitations, if the capital markets are disrupted and we have limited access to capital to raise at reasonable prices that would just increase their ownership and decreases PEGI's. So it's an approach to our business that is very attractive. It gives us a lot of flexibility in how and when we have to raise capital as opposed to being solely dependent on the public markets, we can turn to the private markets to raise capital more efficiently.

Mike: So it's a great partnership.

Nate: That's helpful to know. Yeah. Sounds very supportive. And environmental and social governance, index funds are becoming a big deal and ESG types of funds are growing pretty significantly. Are you guys a big part of that index?

Mike: That's a great question. We laugh because we've always assumed that if we're a 100% renewable company, of course we must score great at ESG and therefore all the ESG investors start investing in us. Then Sara started digging into it and we realized that no, they actually have measures that they need to be able to say and certain steps you have to take, like you may have to have a sustainability plan. You have to publish your carbon savings and your footprint, and this sort of thing. So we've been spending a lot of time, recently, really delving into it. The thing about ESG is it can be very complicated. There are a lot of different measures, metrics, that people use to measure ESG. So we're trying to identify the best ones.

Mike: We think we're going to see our ESG metrics rating very high. For example, we recently won an award for women on boards and we think we have lots of value that we create in the ESG areas for investors in that. We just need to figure out what are the best measures for us to be able to do that are most efficient for us to calculate, but also efficiently in the sense of investors really use those metrics to be able to say "Hey, we're going to invest in this company because it meets three out of the five or four out of the five ESG metrics that we use to make a determination."

Mike: So we're very actively pursuing that right now. We like the idea that there's a growing number of investors. It started in our mind in Europe, grew in Canada and other places, and now it's catching on more and more in the United States. We think that's going to be a great help to us.

Nate: Yeah. It was funny. I did a really quick search before this, on Bloomberg, on ESG rankings, and one of your comps is Duke Energy and they actually rank, whereas you don't rank. So Duke Energy, one of the largest coal fired producers in the United States ...

Mike: That's a great example. [crosstalk 01:09:43].

Nate: Yeah. So I know you have to go, but I just have one last question and if you could just provide our listeners with a funny story or funny question that you received at a conference that you've been to where you spoke to investors.

Mike: Well, the one that comes to my mind right away is, since we're talking about wind is, early on, just a couple quarters after we went public, there was a down quarter for all of the wind companies. And there was this negative reaction in the US markets. We were on the phone with a Canadian investor, and they kept saying "What's going on in the US? Don't they understand that this is wind? Wind blows, sometimes it's not as much as other times. It's the average that matters in the long term. Why are they reacting?" And it was our real introduction to the idea of being a US listed company and how short term investors in the US think about this and how much work we really have to do to educate investors as to wind and why they don't need to worry quarter to quarter, month to month, on the fact that wind is [inaudible 01:10:48].

Mike: So that's probably the thing that got us educated very quickly to being public.

Nate: Yeah, that's funny. Yeah. Well, Mike, thank you so very much for taking the time to speak with Investing with the Buyside. It was a pleasure, and good luck out there.

Mike: Great. Thank you. Appreciate it.

Nate: Thank you very much for tuning into Investing with the Buyside. I hope you enjoyed the conversation and that you learned something new and interesting. If you have any comments or suggestions you'd like to share, please contact us at info@investingwiththebuyside.com or visit the contact us page on the website, investingwiththebuyside.com. If you'd like to have a transcript of this interview, one will be available on the website soon. Also, if you enjoyed listening, please give the IWTB podcast some stars or a like on the podcast platform you use.

Nate: If you work for an institutional investor and you'd like to hear more interviews like these, please subscribe to the website. There's nothing more helpful in convincing a management team to agree to an interview than telling them which firms are listening.

Nate: Lastly, I would like to extend a profound and sincere thanks to Sara Webster at Pattern Energy. She facilitated a lot of this. She made it possible from the Pattern end. So sincere thanks.

Nate: I'll end it there and until next time, take care, from Investing with the Buyside.

End of interview

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Company: Pattern Energy Group
Ticker: PEGI
GICS Sector: Utilities
Date: 4/19/2018

Market Cap: \$1.7B
Cash & Equivalents: \$162M
Total Debt: \$2.4B
Enterprise Value: \$5.1B

Price: \$17.73
2018 P/E: 15x
2018 EV/EBITDA: 13x
2018 Div Yield: 9.5%

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