The Mission Toward Carbon Transition

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Anu Rajakumar: Global energy demand continues to increase as populations grow. For example, carbon dioxide levels are now higher than at any time in the past 3.6 million years. Despite the economic slowdowns of the past two years, carbon dioxide emissions accrued a total of 36.3 gross tons in 2021, according to the International Energy Agency, which is the highest average annual concentration in the atmosphere to date. With the carbon transition already underway, investors are asking, where are the opportunities and where are the risks?

My name is Anu Rajakumar, and today I'm joined by two senior research analysts and portfolio managers from the Neuberger Berman Equity Research team, Ron Silvestri and Jim Tyre. Throughout our conversation, we'll dive deep into the carbon transition mega theme and the ways in which renewable and electric energy sources can continue to power our world. Ron, Jim, thanks for joining me on the show.

Ron Silvestri: Thank you very much. It's a pleasure.

Jim Tyre: Thanks for having us, Anu.

Anu: So to get us started, the carbon transition mega theme has opened doors to so many things across industries. Ron, can you help frame what that broader opportunity is for global infrastructure?

Ron: Certainly. Thank you, Anu. The trend, in my view, of decarbonization and a more climate-resilient future, is the most powerful mega trend I've witnessed in my 30 year investment career. Countries continue to focus on drastically reducing planet-warming, greenhouse gas emissions in the atmosphere, and as a result, there has been an absolute surge in sustainable infrastructure and renewable energy projects globally to help facilitate a more climate-resilient future.

Now, I believe this is the decade of climate action. We're at a major growth inflection point with a heightened emphasis on clean energy where I am seeing accelerating momentum. From a global perspective, over 120 countries have made carbon commitments. This compelling overall opportunity entails a massive 50 trillion investment in sustainable infrastructure through 2050.

Jim: And on top of that, I would just add that, in terms of electrification, which is one of the main sub-themes that we invest in, we've estimated that there's $14 trillion of needed investment in the electrical grid alone by 2050 to support transition goals. This should provide decades of runway of very strong growth for many companies throughout the value chain, in which we look to invest.

Anu: All right. Great. So, uh, you know, Ron, you just said, this is the decade of climate action. So I'm curious, how are renewables changing the overall energy landscape, and what's your expectation for renewable penetration in the longer term?

Ron: Sure, Anu. Renewables, in my view, are a game-changer and an ideal decarbonization solution. Renewable energy, like solar and wind, have become very low cost, which provides actually, a distinct advantage over higher-priced fossil fuels. Now, environmental policy has prompted coal plant closures and an increased reliance on cleaner natural gas, and of course, green renewable energy.

Now, company engagement remains a key component of our analysis. One recent example was with NextEra. Part of our engagement focused on increasing the level of renewable energy in the US power fuel mix and NextEra is the leader in renewable energy.

So based on frequent engagements the company actually assured us that their backlog, will continue to grow. They just increased it by 20% and they made the point that renewables in the fuel mix, are now 13% with an expectation of reaching close to 60% by 2035. So I think that really displays the power of constant engagement with companies, and in this case, a company that's taking real action to further renewable energy in our country.

Now, policy has been favorable for renewables globally, and renewables here in the US enjoy bipartisan, support. And I would mention the wind tax credit was actually first introduced in the early '90s, under, then President George Bush Sr. So we believe bipartisan support is a major catalyst for increased renewable penetration going forward and we also believe prospects are bright for the potential passage of a Build Back Better Bill, potentially this year which would add increased stimulus for green energy penetration here in the US.

Jim: And one other thing I would just add to that, Ron, is, you mentioned renewables, and natural gas playing a role going forward, and nuclear as well is another area of the power generation market that we look to invest in because we do believe the sun doesn't always shine, the wind doesn't always blow. There will always be a need for base load power generation, and as we phase out coal, there will be an enduring demand for natural gas and nuclear.

Anu: Great. Thank you very much both. And Ron particularly thank you for the comments about bipartisan support. I think that's often a misconception that folks have about some of this climate transition work happening. We talked about this being a multi-decade global opportunity. You know, we often read about electrification and the need for a more modern power grid. So Jim, how do you view the long-term potential, in this specific regard about electrification and the carbon transition benefits there?

Jim: Thanks, Anu. It's a tremendous opportunity, because this is really the biggest shift in the generation mix that this country and that this world will encounter. And, with the challenges brought on with renewable power generation, and delivering that power to market is going to require massive amounts of investment in the electrical grid. Just in terms of transmission and distribution investment alone, again, $14 trillion has been estimated to be needed by 2050.

There will be need for investment in duplicative infrastructure substations. And again, because of the changes in demand, for instance, presented by electrical vehicle charging, much of that will happen at night. The grid was designed to basically take a rest at night, but now, all of a sudden you're going to have more demand for electricity when the grid was not designed to handle that. So those type of examples just highlight the need for grid investment in the decades ahead.

Ron: I think Jim hit the ball out of the park there and I would agree with him. I think when it comes to reliable power, renewables are intermittent. That can be a risk at times, and I firmly believe there's room for natural gas, and nuclear as coal essentially is shuttered over time in the US and in other countries.

What I would say on the electrification theme, I think it's one of the most underappreciated themes, among investors currently, and I would say a build-out of a modern electric power super highway is a must. It's critical for electricity reliability, and of course to avoid blackouts, but also to accommodate this energy transition trend given the proliferation of climate-friendly solutions, such as renewables and electric vehicles.

Jim had mentioned the world needs $14 trillion in grid spending by 2050 to support carbon transition goals. And when I think about, as Wayne Gretzky once said, you know, skate to where the puck is going. When I look at where the puck is going. And I see more and more applications like electric vehicles. I think about a recent stat from the Edison Electric Institute. They just increased their EV forecast and they now see nearly 22 million EVs on the road, by 2030 here in the US. And that's up from only about 2 million today.

So the grid of yesteryear wasn't built for such a powerful green energy revolution. So I expect much more power grid investment, in the years to come. And I think the $14 trillion that Jim quoted is probably going to prove conservative.

Anu: Ron, you mentioned an electric power super highway. Explain to our listeners what that is.

Ron: So the electric power super highway is an ideal decarbonization solution because we need a much more modern grid to accommodate all of the additional resources, including intermittent renewables, including electric vehicles, et cetera. So modernizing this old grid is going to afford many companies that Jim and I invest in with decades of earnings growth visibility. I think that's vastly, vastly underappreciated by investors.

Anu: Great. Thank you very much both of you. Now let's just transition to talking a little bit about risks. How do you view the importance of energy security, particularly now with heightened geopolitical concerns that we're facing in Russia and Ukraine? How does that support the energy transition investment opportunity set?

Ron: Great question. So energy security, in my view, is a mega theme in itself. And to your point, geopolitics can be a risk, depending on, the country that you live in. I think the Ukraine invasion really places a spotlight on the critical importance of energy security and reliable energy supplies.

So Europe, as we know, is in the midst of a significant pivot away from Russia gas supplies, which have actually accounted for over 40% of Europe's gas needs. So Europe has been very dependent on Russia for their natural gas. Now, an interesting stat during 2022, over 70% of US LNG, liquified natural gas, has been shipped to Europe to help replace Russian, supply. So in my view, while there's risks to Europe and to gas supply, I would also say the US is advantageously positioned as we've rapidly become a reliable leader on the global LNG stage. So gas exports really helps solve for Europe's energy security dilemma, and a company like Cheniere is just an example of an exporter of liquified natural gas.

Jim: I would just highlight on that. I just read something where estimates from the German paper industry were that if Russian gas supply were interrupted totally, almost 90% of the industry would have to shut down almost overnight. And that doesn't sound like a big deal because nobody reads newspapers anymore. But when you think about Amazon not being able to ship goods to your house because they don't have the boxes made out of paper, then you can see how this becomes a bigger problem pretty quickly.

Anu: Wow. All right. Thanks very much, guys. Now, as we look to wrap up this episode, would love to get your thoughts, thinking ahead to the next five years, where do you see these trends evolving? And do you have any other thoughts that you'd like to leave our listeners with today?

Jim: Well, first, Anu, I would just like to emphasize that we view sustainable infrastructure as a long-term investible theme. We do think that the carbon transition is real, the energy transition is real, and while there will always be some element of cyclicality and geopolitics that affect the pace of adoption and investment, this is a long-term secular investment trend.

Ron: In my view, Anu, I agree with Jim 100%. I think for investors and all stakeholders, it's frankly, about not underestimating innovation. So there have been, numerous technological advancements globally to help drive a more climate-resilient future. They include advancements such as energy storage and green hydrogen, which can fuel power plants in a very climate friendly way. So this sort of represents the future of energy in my view.

And those solutions will help displace the continued retirement of dirtier coal generation over time. And the once you know, boring utility sector is actually in an amazing position to benefit and drive this energy transition over the long-term, uh, with exceptional earnings growth visibility, and while some of these, equities, especially clean tech equities can be quite volatile, I think utilities can provide a really solid low-beta balance to the more growthier names in the sector.

So when I think about utilities, I see excellent growth visibility, and I would mention Dominion Energy is just one example of a company with a really attractive, long-term clean energy growth strategy.

Anu: Perfect. Thank you very much, Ron. Now I do like to finish every episode with a bonus question. So, question for both of you today is what is one small thing that we can all actively do to contribute to a more sustainable future? Maybe, Jim, I'll start with you.

Jim: One thing that I get on my family all the time about is just turn the lights off when you leave the room. But honestly, I think it's in terms of watching what it is that we consume a little bit more carefully, I think we've just gotten used to it, at least in the US as a society, where we're used to having things ready at our fingertips. And we don't think about the cost of those things, and not just in terms of the actual price, but the environmental cost. So I've been more cognizant of each little step I take, particularly as it relates to electricity consumption, power consumption and trying to be a little bit sustainable on a daily basis.

Anu: Great. Thank you very much. And Ron, what about you?

Ron: I would agree with Jim. I think we could all do better, in that sense, including myself. I think for me, one thing we could all do, is essentially invest in the theme. Invest in clean energy companies. These companies need our support and by supporting these companies with real investment dollars, it really works to only further the theme and let's us play a role in shaping a more climate-resilient future going forward.

Anu: Well, this has been an interesting peek into the process and potential benefits of carbon transition. You know, Ron, as you said, this is a multi-decade global opportunity and listeners should not underestimate the innovation in this space. Looking forward to seeing how the transition continues. Ron, Jim, thank you for speaking with me today.

Ron: Our pleasure, Anu. Thank you.

Jim: Thanks again, Anu.

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