Tortoise QuickTake Energy Podcast

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Welcome to the Tortoise QuickTake podcast. Thank you for joining us. Today, senior members of Tortoise provide a timely update on trending topics in the market.

Thank you for joining us today on the Tortoise QuickTake Podcast. I'm James Mick, managing director and energy portfolio manager with Tortoise.

Happy New Year to everyone as I get to kick off 2019 with the first Tortoise podcast of the year! Christmas this year was especially kind to equities. The stock market and energy stocks specifically were hit hard prior to the 25th and hit a low on Christmas Eve. Then, a rebound started on the 26th and the new year has continued with the energy recovery. Needless to say, there is a LONG way to go to recover what was lost over the last few months of 2018, but it is a good start and we are encouraged that our long-held belief of stock prices eventually catching up to fundamentals will play out. So thank you Santa!

We'll start things off with market performance for the week that was:

- On the commodity front, crude oil rebounded, increasing 5.8% due to lower OPEC production numbers, while
- Natural gas was down sharply on warmer weather, closing the week -7.8%
- Shifting to equities, the broader S&P Energy Select Sector Index® rose 5%
- Exploration and production companies, as measured by the Tortoise North American Oil & Gas Producers Index℠ also trended with crude oil, increasing 7.9%
- And finally MLPs snapped back to lead the list, as the Tortoise MLP Index® was higher by 8.9%

A few quick hit items before we focus in this week on electric vehicles.

- First, Energy Transfer placed in service its 350 mile natural gas liquids pipeline, Mariner East 2. ME2 delivers NGLs from the Marcellus Shale to export facilities at Marcus Hook, Pa, right outside of Philadelphia, where they can be exported.
- Second, owners of the Capline Pipeline system, a 1.2 million barrel per day oil pipeline delivering crude from St. James, La. north to Patoka, Ill., announced a binding open season to reverse the system. If successful, the pipeline would flow approximately 300,000 barrels per day of crude south, with an anticipated in-service date of 3Q 2020. Owners of Capline include Plains All American, BP and Marathon Petroleum.

As for my main topic this week, I wanted to touch on a column in a recent *Wall Street Journal* weekend edition regarding electric vehicles. Why might you ask devote time to EVs? Simple. While we are in the weeds with oil and gas, we don't have our heads in the sand regarding clean energy. Instead, we embrace what it represents and would rather to be at the forefront than trailing from behind, with Tortoise teams that invest across the energy spectrum, including renewables and energy transition.

As an example, we firmly believe coal will continue its decline as natural gas and renewables take share in electric generation.

That being said, we often hear of the generalist investor's fear of investing in energy because they have a belief oil and gas assets will become stranded, useless. The article even makes the statement, "most nations have put the internal combustion engine vehicle under a death sentence."

Let's set aside the very real raw material issues that are projected to face battery production and let's also set aside the questions of how much of an advantage there even is environmentally to an EV when you evaluate the impact of mining for those raw materials. So, setting those aside, we certainly aren't naïve enough to think that electric vehicles won't make a dent in the future of gasoline and diesel automobile sales. But in these instances, it's sometimes best to ground yourself in facts and stay away from hyperbole.

For example:

- The world produces and uses about 100 million barrels per day of liquids
- That consists of approximately 80% crude oil and 20% natural gas liquids
- According to the EIA, about 55% of the crude oil demand is for transportation, with 35% for industrial use and the remainder in other categories such as electricity
- Historically demand for crude oil has grown about one million barrels per day, per year on average and has actually grown 30 of the last 34 years, pretty good all things considered. And by the way, demand for energy broadly is up 33 of the last 34 years

As it relates to electric vehicles, there are somewhere in the range of 1 to 1.3 billion vehicles owned in the world, depending on which estimates you believe. EVs on the other hand, make up about 2-3 million of those vehicles, so a tiny base currently. The IEA, as quoted in the *Wall Street Journa*l article, believes there could be between 125 and 220 million EVs on the road by 2030. In order to calculate the potential impact, you have to make some assumptions.

So let's take a look:

- In 2030, let's assume that miles driven per year, per vehicle stays pretty constant and is similar to today's approximately 11,000 miles
- Also, let's assume miles per gallon improves somewhat to say 30 mpg, not a drastic step up from today's vehicles and likely conservative
- Finally, let's take the high end of the IEA range quoted from the article at 220 million EVs by 2030

The math is actually pretty easy. It equates to a crude oil displacement of roughly five million barrels per day.

Let's assume crude oil demand continues to grow at its historical rate of one million barrels per day. Given that, by 2030, demand would equate to about 110 to 112 million barrels per day. So taking off five million barrels per day from that number doesn't amount to much.

Does it potentially slow growth in the outer years? Sure, it might. But does it render pipelines, storage facilities, refineries and all the other components of the crude oil value chain worthless?

Hardly.

The facts simply don't back up the shock value that many want you to believe. Maybe something comes along and changes the game. But even the most aggressive EV forecasts are not even close.

And don't forget, crude oil is not simply transportation.

Bottom line, yes EVs are coming and yes they will have an impact. We are watching and watching closely. But the death of crude oil is greatly exaggerated. When in doubt, look at the facts, as it paints a different picture than the constant rhetoric in the news.

That will do it for today. Have a great week and hopefully we all have a wonderful 2019. We look forward to speaking with you again soon.

Thank you for joining us. And stay tuned for our next cast. Have topics you want covered or other feedback to share? Write us at info@tortoiseadvisors.com.

Source: Wall Street Journal article - *Think Electric Vehicles are Great Now? Just Wait…* by Dan Neil

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Producers = Tortoise North American Oil & Gas Producers Index℠
The Tortoise North American Oil & Gas Producers Index℠ is a float-adjusted, capitalization weighted index of North American energy companies primarily engaged in the production of crude oil, condensate, natural gas or natural gas liquids

(NGLs). The index includes exploration and production companies structured as corporations, limited liability companies and master limited partnerships but excludes United States royalty trusts.

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