



**Energy Value Chain Update Call
Prepared Remarks
July 24, 2019**

Pam Kearney: Thank you welcome to the Tortoise Essential Assets Quarterly Conference Call. I'm Pam Kearney, Vice President of Investor and Public Relations at Tortoise. And I'm joined today by Portfolio Managers Rob Thummel and Nick Holmes and Managing Director Jeremy Goff.

Let me first share that some of the statements made during this call are not purely historical and may be forward-looking statements regarding our intentions, projections and strategies for the future. These statements are subject to various risks and uncertainties and actual outcomes and results may differ materially from our forward-looking statements. We do not update our forward-looking statements. This presentation is for information only and shall not constitute an offer to sell or a solicitation of an offer to buy any securities.

You may have noticed we've changed the name of this call. Going forward, this will be our essential assets quarterly call. For 17 years, many of you have known us as a market leader and pioneer in energy investing that helps fund the extensive U.S. energy infrastructure network that is indispensable to our economy and society while delivering predictable cash flows that have benefitted our investors. More recently, we have broadened our focus to other essential assets that we believe share those same characteristics. We define essential assets as energy infrastructure that heats and powers homes and businesses, sustainable infrastructure that lays the foundation for cleaner energy and social infrastructure that educates children, and provides affordable housing and care for seniors. We have a deep conviction that the essential nature of these assets make them particularly relevant in any market environment and fill an investment void where capital imbalance or structural constraints exist. These investments are also making a positive social and economic impact in our communities. And over the last few years, a key part of setting course with our essential assets strategy has been to add experienced investment professionals to our team, deepen and add adjacent capabilities across both essential assets and capital structures.

On March 27, 2019, we launched the Tortoise Essential Assets Income Term Fund (NYSE: TEAF), a representation of this evolution. The fund draws on our expertise across essential assets and provides a vehicle for owning a unique portfolio of both public securities and uncorrelated direct investments in energy infrastructure, sustainable infrastructure and social infrastructure in a fund that offers daily liquidity on the NYSE and a daily NAV.

So with that background, we'll begin with Rob Thummel for an energy sector update, followed by Nick Holmes who will discuss sustainable energy and Jeremy Goff will wrap up with a discussion about the social infrastructure sector. Rob?

Rob Thummel: Sure thanks. Let's start by taking a quick look back at performance during first half of the year. The energy sector got off to a hot start in the first quarter before cooling off a bit in the second quarter as trade talks between two of world's largest economies stalled, increasing uncertainty regarding global economic growth. The energy sector as measured by the S&P Energy Select Sector[®] Index rose by 13% during the first half of 2019. Energy infrastructure was the strongest performer across the energy sector with the Tortoise MLP Index[®] rising by 19% through June 30. The weakest performing sector across the energy value chain was the oil field services sector which increased by a little less than 1% as the sectors continue to be challenged by a declining U.S. rig count and excess capacity.

On the commodity front, oil prices have rebounded and were up 29% through June 30th. Currently, oil prices are in a tug of war between fundamental concerns that are pulling prices down and rising geopolitical risks that are pushing prices higher. The fundamental concerns are tied to the previously mentioned U.S. and China trade war that is likely to impede 2019 oil demand growth. Escalating

geopolitical tensions are associated with the actions of Iran near the Strait of Hormuz where approximately 20% of global oil supplies travel through. We expect U.S. oil prices to remain rangebound between \$55 to \$65 per barrel over the long-term. On the other hand, natural gas prices have declined by 24% through June 30th. This has surprised us given the relatively low inventory levels. Current natural gas prices are approaching 20-year lows for this time of year. So we do expect prices to rebound. Nevertheless, both commodities are trading at levels that should continue to promote steady long-term increases in global demand for energy.

Shifting to fundamentals, we view the energy sector as an essential asset. The U.S. role as a global supplier of low cost energy to the rest of the world is expected to accelerate as the U.S. steadily grows its production of natural gas, crude oil and natural gas liquids. In fact, the U.S. is months if not days away from becoming a net exporter of energy. We believe the U.S. energy sector is a compelling investment opportunity for all investors. Ultimately rising cash flow will drive value for investors in the energy sector.

For the oil and gas producing sector, stable commodity prices and capital discipline are essential as producers begin to demonstrate meaningful amounts of free cash flow. In the U.S., the Permian basin has become the dominant shale oil basin and is expected to be one of the few growth basins around the world in the years to come. The significance of the Permian was highlighted in the second quarter as a bidding war for Anadarko Petroleum ensued between Chevron and Occidental Petroleum as both companies looked to expand their asset footprints in the Permian as well as other regions. Based on Anadarko's June 30th share price, Occidental paid a 51% premium to Anadarko's stock price the day before the original deal was announced. We expect further consolidation amongst Permian producers could occur as they look to optimize free cash flow by lowering operating costs.

In the energy infrastructure or midstream sector, a multi-year transformation process is nearly complete. The result: Better balance sheets and simpler corporate structures. A strong backlog of growth projects underpins continued cash flow growth for this sector. As U.S. oil and gas production volumes increase, the need for essential infrastructure grows. Additional energy infrastructure to facilitate rising energy exports continues to be a central theme for the sector. Late in the second quarter, the EIA reported the highest ever weekly crude oil export amount averaging 3.8 million barrel per day for the week. However, we are probably just getting started as one of our portfolio companies estimates that by 2025, exports of U.S. crude oil could be 8 million barrels per day. Crude oil is not the only commodity expected to experience significant growth in exports. Liquefied natural gas or LNG exports are forecasted to rise significantly as well.

At Tortoise, we are concerned about global carbon dioxide emissions and agree that emissions need to decline. Using natural gas to displace coal in the generation of electricity is an effective way of reducing carbon emissions. Currently, China and India are heavy users of coal with 67% and 75% of electricity generation coming from coal. We expect large energy consumers like China and India to increase imports of LNG from the United States catapulting the U.S. into the position as the largest global supplier of LNG by 2025 according to the IEA.

Lastly, for the downstream portion of the energy value chain, refiners continue to wrestle with demand forecasts as well as concerns regarding refining margins as the input costs for various types of crude oil have been volatile. The outlook for utilities continues to be positive as low interest rates and rising uncertainty has caused investors to become defensive, helping the utility sector to maintain investor appeal. In addition, the longer-term outlook for electrification and increased demand for renewable energy is expected to be a positive for the utility sector as well.

Switching to valuation, the energy sector trades at a discount to the S&P 500 on a cash flow multiple or Enterprise Value to EBITDA basis. The 10-year Treasury yield hovers around 2%, Yield-oriented equity securities like energy infrastructure stocks look attractive as the Tortoise MLP Index[®] yields a little over 8%. Similar to the energy sector, energy infrastructure stocks trade a discount to historical cash flow multiples while private equity continues to pay higher cash flow multiples for energy infrastructure assets than the public companies are being valued at.

So, in conclusion, we believe the U.S. energy sector is a compelling investment opportunity for all investors. The fundamental backdrop for the sector is strongly supported by several emerging themes such as rising U.S. energy exports. We believe this backdrop can deliver cash flow growth and cash flow growth will drive value. The energy sector is in the beginning stages of building a mountain of free cash flow over the next several years. As cash flow increases, we believe that energy companies will be well-positioned to increase dividends, buyback shares and/or reduce debt. With that, let me turn it over to Nick Holmes to discuss our views on sustainable energy.

Nick Holmes: Thanks Rob. Global energy demand has increased in 35 out of the last 36 years. We expect energy demand to continue to increase in the future as populations grow and global GDP expands. However, we forecast significant changes in the supply sources to fill global demand. Natural gas and renewables will displace coal and nuclear as the supply sources used to generate electricity. As a result, we have a dedicated team sourcing renewable opportunities for our clients.

Our sustainable infrastructure team continues to forecast a robust growth outlook for the solar industry in the United States. Driven by continuously improving economics and a favorable regulatory policy outlook, we expect solar installations will continue to grow in the near and long-term. In fact, solar is expected to account for the greatest share of U.S. power additions over the next 10 years requiring more than \$100 billion of capital investment. In the more near-term, the EIA forecasts an additional 13 GWs of solar to be installed in 2019. That represents 25% year-over-year growth and the second highest annual installations on record. To put that number in context, at year-end 2018, the U.S. solar market had an installed base of approximately 65 GW. Our team continues to help finance the build out of solar in North America through equity investments in primarily utility scale projects.

On the wind front, installations continue to climb as well with an additional 39 GW of capacity currently under construction or in advanced development adding to the current installed base of just under 100 GW. Wind development is also being driven by favorable regulatory policy and an improving cost structure as costs have fallen by nearly 70% over the last 10 years. With those levels of cost declines, onshore wind is the lowest cost power source across many wind-rich states in the Midwest U.S. Our team expects robust growth in near-term investment in the wind sector due to the phased out reduction of federal tax incentives before leveling off in the 2020s. All-in we expect installed wind capacity to double in the U.S. over the next 10 years requiring more than \$90 billion of investment.

Our energy infrastructure and sustainable infrastructure portfolio teams remain excited about the investment opportunities in both public and private markets as the world transitions to a cleaner energy future through the use of natural gas and renewables in power generation. With that, I'll turn it over to you Jeremy.

Jeremy Goff: Thanks Nick. As one of the newer platforms under the Tortoise umbrella, I thought it would be helpful to take a few minutes to give a little background on what we're doing in social infrastructure from a high level, talk about some of the sectors we're investing in and how we're doing that and generally discuss some of the trends that we're seeing in those sectors and what's driving the opportunity set for us.

Generally speaking, we're investing in 4 different verticals. Those primary verticals are education, healthcare, housing and project finance.

On the education side, this is primarily comprised of charter schools, however we do see opportunities on the private school side, specifically as it pertains to those focused on special needs children and children on the spectrum. That continues to be a growing market as well.

On the healthcare side, we focus on seniors housing and care in this category. In regards to where it fits, it does bridge the healthcare and housing verticals. I think as you get into more specific levels of care in that sector you would see it fall into healthcare. In terms of independent living, we view that as more affordable multi-family housing.

This also include smaller healthcare facilities as well. We continue to expand into that market and continue to find some opportunities there.

In terms of housing, this is primarily going to include affordable multi-family housing in what I would call more tertiary markets or markets that are primarily outside of gateway cities and that even falls into the seniors housing bucket when you think about where the opportunity set is and we'll talk about that trend and where seniors are moving these days.

In terms of project finance, as Nick and Rob both eluded to, the increased focus on reducing carbon emissions continues to be pretty big priority. So there's obviously a social impact. So we're really focused on projects that are what we would call "greener" outcomes. So more traditional infrastructure investments in the areas of biomass, biofuels and other related areas in that area.

In terms of what the broader themes are in those various verticals and what's really driving the opportunity set, I would say the big one obviously is the fact that the capital markets, the function for these types of borrowers has systematically changed as a result of both the financial crisis and the Dodd-Frank legislation. What's changed there is very similar to what we've seen in the residential mortgage markets where loan-to-values, where historically regional and local banks would do somewhere in the range of 70-75% loan-to-value loans. They have really backed down and those standards have really dropped down to about 60-65%. And as a result, a lot of the smaller borrowers in the markets really don't have a place to go to fund their financing needs and so that's really driving a lot of opportunities in all of those verticals.

On the education side, education reform is clearly a hot topic. It's been in the news with regard to the debates that have been going on with the upcoming presidential election. We view this to be a positive movement that we believe will be persistent. If you think about the number of charter schools across the country, there are approximately 7000 charter schools today, serving roughly 3.5 million kids. When we look at it from a needs perspective, the number of children that need to be in charter schools outside of their school districts or within their school districts is roughly 8.5 million kids so there's a lot of demand there. In school districts in challenged demographics continue to over-capacity and are frankly in need of the relief that charter schools provide in that area. There has been a lot of positive legislation that's been passed over the last few months in places like Florida, Tennessee and Texas. And we continue to see that as a pretty robust opportunity set. Obviously the teacher strikes that have been going on around the country have been what the media has highlighted, but digging in, these are really localized issues. For us, we're focusing on areas where those issues don't exist or are not quite as prevalent.

Moving to healthcare and seniors housing, I think clearly the number of people that are going to be aging over 65 years of age in the coming decade is enormous. Historically what we've found is that the types of developments that have taken place are really focused more on resort-style senior living facilities and affordable solutions weren't really what were being targeted. So if you think about the average retirement fund that someone retires with today, they are living longer and they haven't saved quite as much as they thought they were going to, so the affordable route is one that makes more sense and it's where we're targeting our efforts. Those markets tend to be in areas outside of the traditional sunbelt. And are really focused on seniors staying close to family members; children and grandchildren. We're seeing a lot in the Midwest in other tertiary markets as well.

On the traditional affordable multi-family housing side, there is a lot of development going on outside of those gateway cities. And as cities move to regentrify their downtown areas and provide housing for folks like policemen, teachers, firefighters and folks like that, the affordability component of that is important and I think it's a growing market one one I think you'll see us participate in more in the coming future.

On the project finance side, greener solutions are obviously big and at the forefront. There's a number of ways to play that. We see solar being really attractive in the United States. That's not an area that we would typically participate, but more localized projects as I mentioned on the biomass and biofuel side in the wood pellet and agriculture pulp areas are a place of focus for us.

So, the next big question that comes to mind is “How do you participate in these markets?” and “How do you access the investments?” What we’re doing is primarily directly originating debt securities and typically that is done through a tax-exempt bond issuance, although we can do it through taxable issuance, and as Pam mentioned, we have TEAF the closed-end fund that has a sleeve we manage that is primarily taxable. So the opportunity set exists on both sides.

We are typically targeting higher-than-average coupons with short durations. The average tenor on our bonds is roughly five years with a duration of less than three. I think the important component of what we’ve done over the last three years is really build a team at Tortoise that can originate, structure, underwrite, surveil and ultimately exit these investments appropriately and provide a great stream of cash flow and some upside return on the other side.

We manage them through a number of different wrappers, SMAs, private funds. We have an interval fund as well as the closed end fund that all provide opportunity sets for us to deploy capital.

We continue to be very excited about these various verticals and what we can achieve for investors, The social impact is very important to what we are doing. Historically folks have viewed socially responsible investing as one that is absent of returns and I think these sectors prove it otherwise so we continue to be very excited and look forward to discussing this more with you all as we continue to grow.

Rob Thummel: Thank you Jeremy. We wanted to mention our recent announcement to acquire Advisory Research. This transaction is expected to close in the second half of 2019 and will bring together our midstream energy teams and our complementary investment philosophies. The Advisory Research team has as deep history in the midstream sector as we do, and we look forward to working with them. We expect our clients to notice very little change as we continue to manage our differentiated strategies.

Pam Kearney: Thank you all for joining us today. We invite you to visit our website at www.tortoiseadvisors.com and subscribe to our weekly Tortoise QuickTake podcast series and insight pieces as well. Good bye and thanks.

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