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DECARBONIZATION

LISTED INFRASTRUCTURE'S STARRING ROLE

Decarbonization is a global theme, impacting current and future generations. As carbon emissions continue to rise, governments around the world have acknowledged the dangers of runaway carbon emissions. Globally, countries are taking action, targeting net zero emissions by 2050.

- Reducing carbon emissions is a global imperative, listed infrastructure companies can have a direct impact on the decarbonization initiative through investments in existing and new infrastructure assets.
- Decarbonization extends beyond utilities changing their energy mix. We see an opportunity for infrastructure companies across the spectrum of sectors to contribute to reducing emissions.
- For investors, an allocation to listed infrastructure provides exposure to a long-term investment theme combining a positive environmental impact with attractive total return potential.

TACKLING SUSTAINABLE DEVELOPMENT GOALS

The market has rewarded stocks like Tesla that are developing technology that has the potential to reduce carbon through eventual large-scale adoption that disrupts current fossil fuel demand. Listed infrastructure companies, however, have the potential to affect more substantial change over a much shorter time horizon through replacement of existing ageing infrastructure and developing new infrastructure.

The United Nations has published Sustainable Development Goals that include goals related to clean water, clean energy, innovation in infrastructure, and sustainable cities. Listed infrastructure companies are tackling these goals, which require extensive investment not just in new infrastructure, but in the replacement of existing infrastructure currently owned by listed infrastructure companies. As a group, infrastructure companies have perhaps the greatest potential to participate with investment dollars that contribute towards Sustainable Development Goals.

Listed infrastructure companies provide investors the opportunity to achieve sustainable investment goals

CBRE CLARION SECURITIES

BROAD-BASED SUPPORT AND IMPROVED ECONOMICS REDUCES INVESTMENT RISK

Power generation accounts for more than 70% of global carbon emissions. Most power generation carbon emissions are from power plants that burn coal. Some of the biggest publicly-traded utilities are taking the lead in transitioning the power generation stack away from fossil fuels and into renewable sources, with natural gas as a logical transition fuel, given its lower carbon emissions than coal.

Low interest rates and technology improvements have made renewables competitive with other power generation sources. This is increasing without subsidies and despite massive declines in prices of natural gas and coal. The cost per megawatt hour of renewable power has kept pace with fossil fuel price declines. Big data, artificial intelligence, and renewable policies have spurred investment and driven disruptive changes. Also, politicians, regulators, and society at large want to see investment in renewables. Improvements in economics and clear visibility on returns from a supportive society have reduced the risk to renewable energy infrastructure investment.

All sectors play a role and contribute to the decarbonization initiative

UTILITIES ARE AT THE CENTER OF THE DECARBONIZATION INITIATIVE

Given the direct impact, utilities can have the most significant impact on reducing carbon emissions in the listed infrastructure universe. For example, Enel is one of the world's largest utilities with activities in Europe, the U.S., and Latin America. Starting in 2015, Enel intensified its focus on sustainability by directing capital towards developing renewables. Enel is now the world's largest player in renewables with 46GW of installed capacity across the technologies of solar, onshore wind, and hydro. This fleet produced 100TWh of renewable electricity in 2019, enough to supply the needs of 35 million homes.

Enel continues to be ambitious with its decarbonization targets. Enel reduced its coal-fired power production by 57% since 2012 and will reduce it by a further 74% by 2022 via coal plant closures already announced on its way towards virtually zero coal-fired power generation by 2030. At the same time, Enel will replace this generation by investing €4.2bn annually to deliver 4.7GW of new wind and solar generation capacity every year under its current business plan.

Emissions Target
NET-ZERO
Electricity generation by 2050
Enel, (ENEL-IT, Italy)

BEYOND UTILITIES ALL SECTORS PLAY A ROLE

Investors have more options than just a few technology companies when it comes to gaining exposure to the decarbonization theme. Listed infrastructure is one of the biggest, most direct ways to participate. However, there are opportunities for decarbonization across the other major infrastructure sectors (Midstream, Transportation, and Communications).

Midstream Energy: Cheniere Energy is a natural gas liquefaction and export company operating the largest portfolio of U.S. LNG export capacity at two facilities on the U.S. Gulf Coast. Cheniere is facilitating the transition to a lower-carbon world by providing cleaner-burning natural gas to countries that rely on higher emitting fuels, including coal and oil for power generation, industrial use, and even for residential consumption.

Since 2016, Cheniere has delivered LNG produced from the company's facilities to countries around the world, including less economically developed regions in countries like India, China, Mexico, Brazil, and Turkey. According to the company, its LNG exports have displaced 30-50 million tons of CO2, the equivalent of taking 6.5 million passenger cars off the road for one year. More broadly, the International Energy Agency (IEA) estimates that 500 million metric tons of CO2 emissions have been avoided from 2010 and 2018 from facilities worldwide that have switched from coal-fired to natural gas-fired power generation.

LNG Exports have displaced
30-50M
Tons of CO2
Cheniere Energy (LNG, U.S.)

BEYOND UTILITIES ALL SECTORS PLAY A ROLE

Communications: Equinix is a premier global data center company that operates a leading global platform of more than 200 data centers across 25 countries serving approximately 10,000 customers. These data centers represent some of the most critical nodes in the movement of data across the globe. However, servicing the data needs of their clients requires significant energy consumption as increasingly power-hungry equipment owned by their customers requires continuous operation.

In 2015, Equinix announced a goal of sourcing 100% renewable energy to power its data centers. By the end of 2018, the company had increased renewable energy to 92% of its power demand. Equinix offset nearly 1.7 million metric tons of carbon in 2018 alone - equivalent to more than 1.8 million pounds of burned coal.

Renewable Energy Utilization

92%

Increase from 29% in 2014
Equinix (EQIX, U.S.)

Transportation: Transurban operates toll roads in Australia and the U.S., upon which their customers traveled around 6 billion kilometers each year. In 2019, the company changed its Sustainability Strategy to better align with the Sustainable Development Goals. As a result, the company was recognized by several leading organizations (FTSE4Good member, DJ Sustainability Index member, MSCI AAA ESG rating, and GRESB ranking).

Transurban has taken steps to manage their energy use and impact on the environment. The company set targets to reduce energy consumption by 10% from 2013 to 2023 and cut their carbon emissions by 50% from 2016 to 2030. Investments in their assets include alternative ventilation in tunnels, which reduces carbon emissions as it reduces the need for fans that operate. Transurban is early in its efforts to reduce emissions, but there is a significant opportunity to impact its Sustainable Development Goals relatively quickly to the benefit of its owners.

Reduction Target

52%

2015 to 2030
Transurban (TCL, Australia)

ALIGNING ECONOMIC INTERESTS WITH CLIMATE ACTION

For investors, an allocation to listed infrastructure provides exposure to a long-term investment theme combining a positive environmental impact with attractive total return potential.

Decarbonization is but one of several attractive secular themes that will drive opportunities for investment in infrastructure assets. Companies across all sectors can play a critical role in transforming both existing and new assets to have a positive impact on climate change. The broad-based support for decarbonization initiatives combined with technology improvements and capital cost declines reduces investment risk and supports the predictability of returns

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