

Infrastructure and utilities are at the epicentre of global efforts to reduce carbon emissions. Allocating capital appropriately within this space can effect meaningful change in working towards a two degree scenario<sup>1</sup>.

The First Sentier Responsible Listed Infrastructure strategy seeks to direct capital towards those companies that we believe are best placed to benefit from the transition to a low carbon economy.

This paper demonstrates with examples why comparing different companies' carbon footprints at any given point does not always tell the full story. Context is vital.

## Creating change

A slowdown in climate change can only be achieved if companies emitting the most carbon adjust the way they operate. The power generation and transport sectors, along with the infrastructure that supports them (i.e. energy pipelines), need to evolve their business models for a two degree scenario to be achievable.

The global listed infrastructure universe has around 65%<sup>2</sup> exposure to utilities and pipelines providing a unique opportunity for investors to make a meaningful impact in the fight against climate change.

The First State Sustainable Listed Infrastructure Fund (the Fund) seeks to direct capital towards companies that are taking measures to reduce carbon footprints. Our investment team lobbies companies – through both investment and ongoing engagement – to align practises and strategies with a low carbon future.

Whilst we expect the Fund's carbon footprint to trend downwards over time, interim peaks are a function of an investment process focused on delivering change. At times the Fund's carbon footprint may appear high; for example, if it were to invest in a company in the early stages of taking action to reduce emissions but is well positioned to do so quickly with good profit potential.

This paper seeks to address why we believe carbon footprinting – taken in isolation – is a sub-optimal way of measuring impact. In some cases this approach could even lead to adverse investment decisions from a sustainability stand point.

## Carbon footprint



Source: Getty Images.

<sup>1</sup> A scenario under which global warming does not exceed 2 degrees Celsius.

<sup>2</sup> Source: FTSE Global Core Infrastructure 50/50 Index

## Working through the value chain

Most carbon footprint methodologies take a straightforward perspective. They focus on direct emissions from owned or controlled sources, plus emissions from the generation of purchased energy.

This approach can lead to assets appearing carbon friendly, despite a close association with substantial emissions further along the value chain.

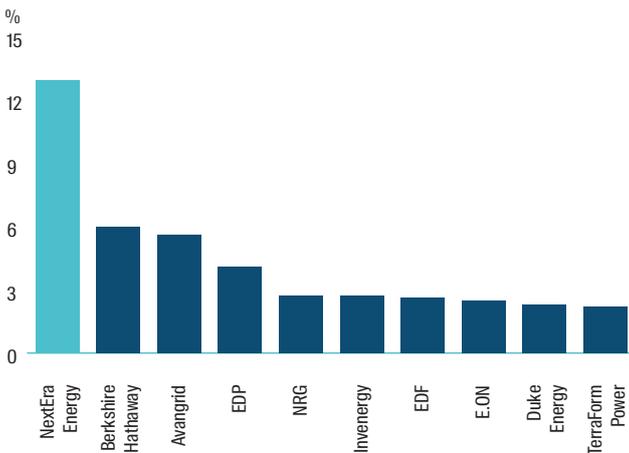
Our team believes it is more realistic to take a “lifecycle” approach to emissions. This point can be clearly demonstrated by comparing a utility with an oil pipeline company.

Enbridge Inc. is a North American energy infrastructure company which owns extensive crude oil and liquids pipeline networks. Enbridge’s assets are responsible for transporting 65% of all Canadian energy exports to the US.<sup>3</sup> The majority of Canadian oil production comes from tar sands.<sup>4</sup>

Tar sands can’t be drilled and pumped like regular oil fields. The oil must be mined or steamed out of the ground, before being heated and separated from the sand. Because of this energy intensive extraction process, the lifecycle emissions of tar sands are between 8% and 27% higher than those of conventional crude oil<sup>5</sup>.

NextEra Energy is a regulated utility in the US. Its assets include Florida Power & Light Company, a regulated electric utility business, and NextEra Energy Resources, a clean energy leader which is the largest wind operator in the US, with a growing portfolio of solar assets.

### Leading wind energy operators based on kW ownership in the US



Source: Statista; First Sentier Investors; 2016 data.

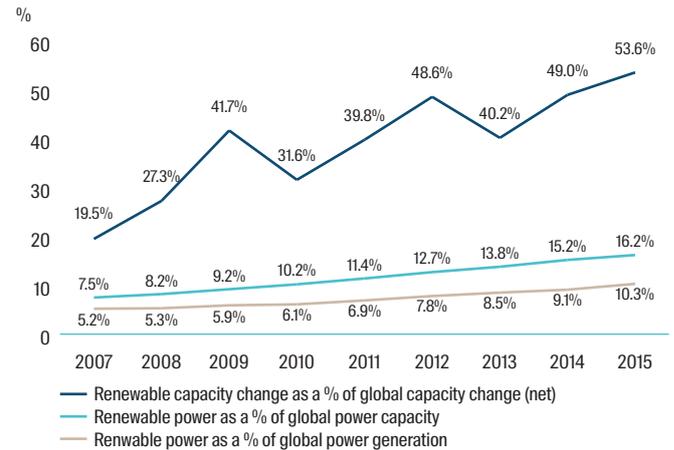
<sup>3</sup> Source: Natural Resources Canada

<sup>4</sup> Source: Natural Resources Canada

<sup>5</sup> Citizens’ Climate lobby

The following chart compares the carbon intensity of the two above-mentioned companies over time, taking a traditional (or “direct emissions”) approach.

### Carbon Intensity Scope 1+2 over time (metric tons/revenue)



Source: MSCI; FSI.

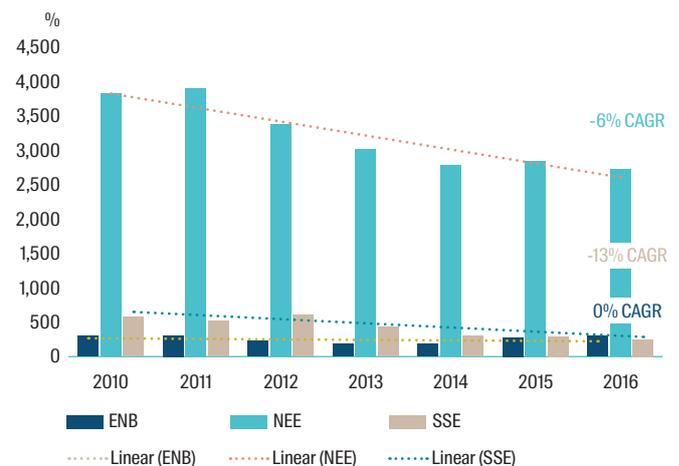
On this metric, Enbridge is clearly much less carbon intensive than NextEra. This is because the emissions associated with the fossil fuels transported by Enbridge are allocated to the transport sector and not to Enbridge itself. However in NextEra’s case, the emissions from power generation are allocated to the utility.

Whilst the above example takes two starkly different companies, a similar story appears for companies that are currently transitioning their power generation fleets.

UK electric utility SSE plc has historically owned coal-fired generation assets and electricity distribution grids. Over recent years it has steadily built up a capability in offshore wind generation. Its business model is successfully transitioning towards one with a lower carbon footprint. Between 2010 and 2016, its carbon intensity reduced by 13% CAGR<sup>6</sup>.

The strategy takes a forward looking view in its investment decisions in order to capture alpha generating opportunities such as this. Through our engagement with SSE we know that this trend will continue as the company moves to eliminate coal entirely from its generation fleet by 2025.

### Carbon Intensity Scope 1+2 over time (metric tons/revenue)



Source: MSCI; First Sentier Investors.

Using carbon intensity as the only form of analysis has the following flaws:

- It ignores change. Carbon emissions for NextEra fell by 6% CAGR over this period, reflecting its investments in wind technology and improved carbon efficiency. The corresponding change for Enbridge is zero.
- It ignores investment opportunities related to companies that are transforming such as SSE (outlined above).
- An investment premised solely on the metric of carbon intensity supports the use of oil verse other cleaner resources - thus having no impact on climate action.
- It ignores stranded asset risk. Following progress in clean energy generation, the disruption of the transport sector could represent the next global wave of decarbonisation. This implies a structural decline in demand for oil, and a risk that infrastructure associated with oil storage and transportation may no longer be able to earn an economic return.

### Canadian Tar Sands – How is this sustainable?



Source: Getty Images.

It is crucial to look beyond a single metric when looking at sustainability or decarbonisation, as this approach may not deliver the anticipated outcome.

Our team aims to invest in companies with the ability to make meaningful improvements over the long term. This is where true change comes from.

### Conclusion

The First Sentier Responsible Listed Infrastructure strategy wants to be part of the climate change solution. It seeks to direct capital towards companies that are significantly reducing their carbon footprint.

Infrastructure assets - notably utilities and energy infrastructure - are at the epicentre of global efforts to reduce carbon emissions.

We encourage people to consider the limitations of focusing on a single metrics like carbon footprinting, and instead consider a suite of factors that provide fuller context and deeper insights into the real risks and opportunities associated with climate change and decarbonisation.

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