CARBON IMPACT QUARTERLY

EDITORIAL

Finance has a key role to play to foster a low carbon economy

La Française is convinced that the finance industry must play an essential role in the fight to limit global warming. We believe that climate risks can severely disrupt economic activity. And we also believe that climate change creates opportunities for companies that deliver or enable solutions to the climate emergency. If high emitting sectors like Oil & Gas, Steel or Cement will be challenged we should keep in mind that the move to a low carbon economy will impact every sector. But climate risks are likely to unfold in a "non-linear" way, i.e. there will be sudden economic shocks like extreme weather events rather than a steady transition. That will result in winners and losers in every sector, but we believe sectors highly exposed to carbon emissions will have more losers than winners. Tomorrow's winners are those that have already understood that a transition is needed and acted accordingly. Of course, we believe some sectors are especially interesting like renewable energy. But every sector needs to play its part and our role, facilitated by our expert research centre Inflection Point by La Française, is to analyse and assess the companies in order to invest in the winners in the transition to a low carbon economy.

La Française is at the forefront of climate finance to help investors and investee companies navigate the needed transition. The appointment of Laurent Jacquier-Laforge as Global Head of Sustainable Investing in September 2019 further evidences our determination to become an asset manager committed to the transition to a sustainable economy. La Française fully integrates the consequences of environmental and social risks into its investment management. Inflection Point provides the necessary data, methodology and research and is fully integrated into the investment management process.

This Quarterly Report is the first in a series of insights into the most prominent topics revolving around climate change in investment management. Those reports will be technical publications, predominantly addressing institutional investors and discussing our methodologies and approaches. This first Quarterly Report introduces our sustainable investment research centre and illustrates how the combination of fundamental research and quantitative capabilities optimises the quality of our ESG analysis.

We would like to share our inhouse expertise with you and decided to firstly address climate change through presenting our methodology designed to project companies' carbon emissions into 2030. This methodology lies at the heart of the investment process of our carbon impact strategies.

Laurent Jacquier-Laforge, Rolland Rott

CARBON IMPACT ANALYSIS

The Carbon Impact Analysis is focused on the transition risks and opportunities that companies face due to climate change. We have been using this analytical framework since 2015 and we recently updated it to fully reflect the recommendations of the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD). The Carbon Impact Analysis allows us to construct portfolios that are aligned with a low-carbon economy as envisaged in the Paris Agreement and it provides us with investment insights into the specific climate risks and opportunities of companies and how they are managed.

The Carbon Impact Analysis has three distinct components (Figure 1). A worked example for Italian integrated utility Enel SA is presented on pages 12 and 13 :

- Carbon Impact Assessment
- Low-carbon Trajectory (LCT) Methodology
- Engagement

The Carbon Impact Assessment is a deep dive into the climate change exposure of a company and its management of the respective risks and opportunities. The analytical framework follows the structure of the TCFD recommendations that are applicable to organisations across sectors and jurisdictions. It allows us to capture the information necessary to build up an assessment encompassing all climate-related information that could impact companies' financial returns. We can tailor this framework to the type of assets (equity, credit, sovereign) and to different investment processes.

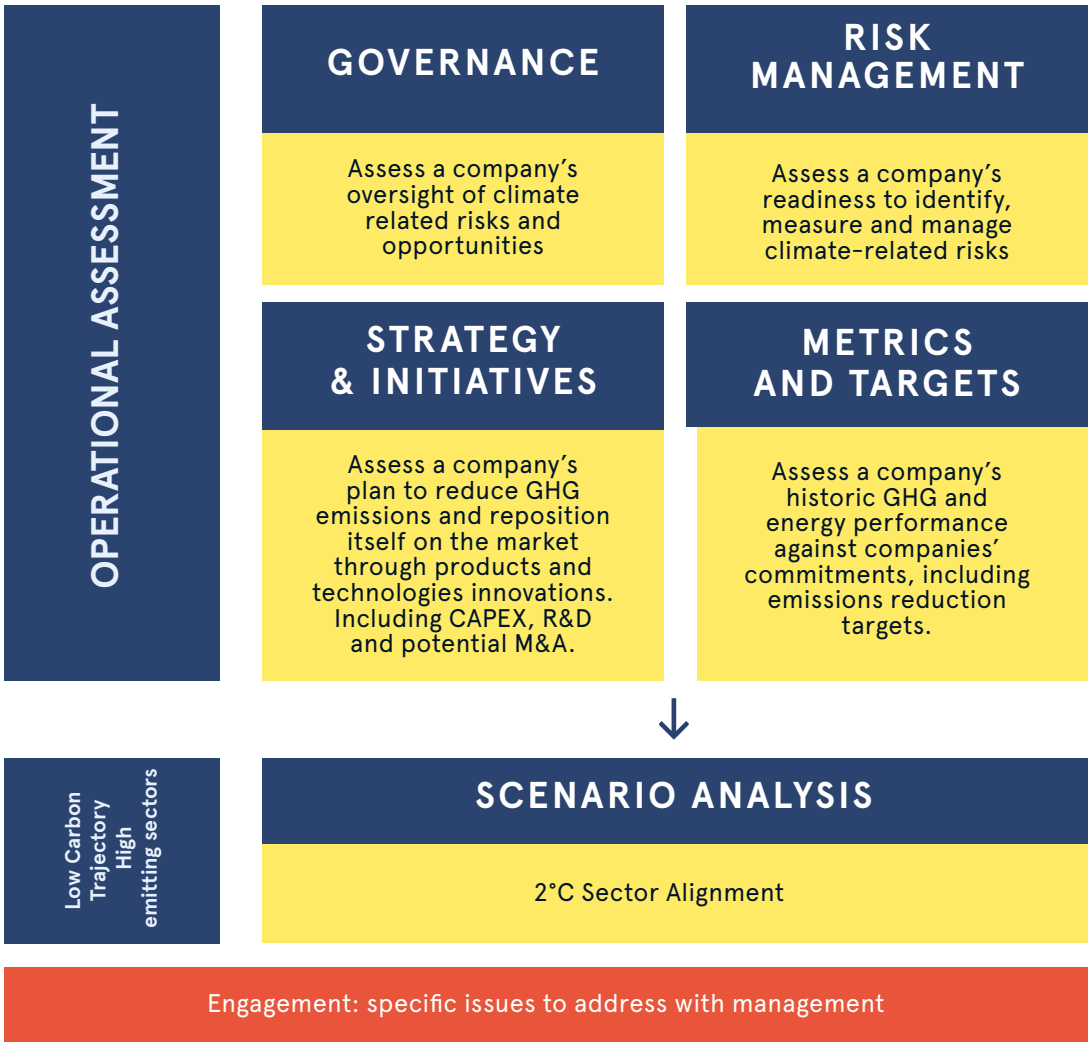
In this Quarterly Report we focus on the LCT Methodology, which draws on the insights of the Carbon Impact Assessment. The LCT Methodology is a modelling approach that allows us to determine whether a company in a high-emitting sector is in line with a given climate scenario. The LCT Methodology requires the selection of appropriate climate scenarios. We are using three climate scenarios as provided by the IEA, which are a common reference for this type of analysis (see next chapter).

We are engaging with many of our portfolio companies to hold them accountable. The engagement objectives are twofold: (1) Building a better understanding of a company's business and gather information required for the carbon impact analysis. (2) Influencing the Board to change if we see potential for improvement. For example, we participate in the ClimateAction 100+ collaborative engagement initiative, which allows us to maximise our influence as part of a broad-based investor group.

The Carbon Impact Analysis is a dynamic process (Figure 2). It allows us to capture past performance, current behaviour and – most importantly – it comprises our evidence-based trend analysis, the LCT Methodology. This forward-looking approach is a major improvement of our capability as an asset manager to assess climate change-related risks and opportunities in portfolio companies.

" THE CARBON IMPACT ASSESSMENT IS A DEEP DIVE INTO THE CLIMATE CHANGE EXPOSURE OF A COMPANY AND ITS MANAGEMENT OF THE RESPECTIVE RISKS AND OPPORTUNITIES. "

FIGURE 1: Carbon Impact Analytical Framework



Note: A worked example for Italian integrated utility Enel SA is presented on pages 12 and 13.

FIGURE 2: TIMELINE

SELECTING SCIENCE-BASED CLIMATE SCENARIOS

Before we assess the expected carbon performance of a company with our Low-carbon Trajectory (LCT) Methodology we need to select useful climate scenarios that serve as a benchmark. Our aim is to compare the strength of companies' estimated carbon trajectories against a set of clearly defined global warming scenarios.

In this context a scenario describes a hypothetical future and the pathway to that future. These future states are narratives created to identify potential risks and opportunities, test the impact of potential outcomes, and develop strategies that build resiliency and guide decision-making. Scenarios are often misinterpreted as being predictions or forecasts. However, the concept of scenarios is explicitly based on the premise that the future cannot be predicted. A key aspect of the `scenario analysis' approach, therefore, is to evaluate a variety of alternative outcomes. The Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD)'s Technical Supplement on Scenario Analysis provides a more in-depth discussion of this topic.

There are many institutions like the Intergovernmental Panel on Climate Change, the Potsdam Institute for Climate Impact Research or the International Energy Agency (IEA) that are developing the science driven climate scenarios. We have opted for the IEA as our preferred provider because the IEA scenarios can be accessed easily, and they are well-known in the industry.

We apply the following specific climate benchmarks in our LCT Methodology :

- **The Reference Technology Scenario (RTS)** provides a baseline scenario that considers existing energy and climate related reduction commitments by countries, including Nationally Determined Contributions pledged under the Paris Agreement. In this scenario, energy sector CO2 emissions do not peak until around 2060 and are 16% higher in 2060 compared with 2014. The average global temperature would increase to 2.7 degree Celsius, at which point it is unlikely to have stabilised and would continue to rise.

- **The 2°C Scenario (2DS)** has been the main climate scenario of the IEA for many years, and it has been widely used by policy makers and business stakeholders to assess their climate strategies.

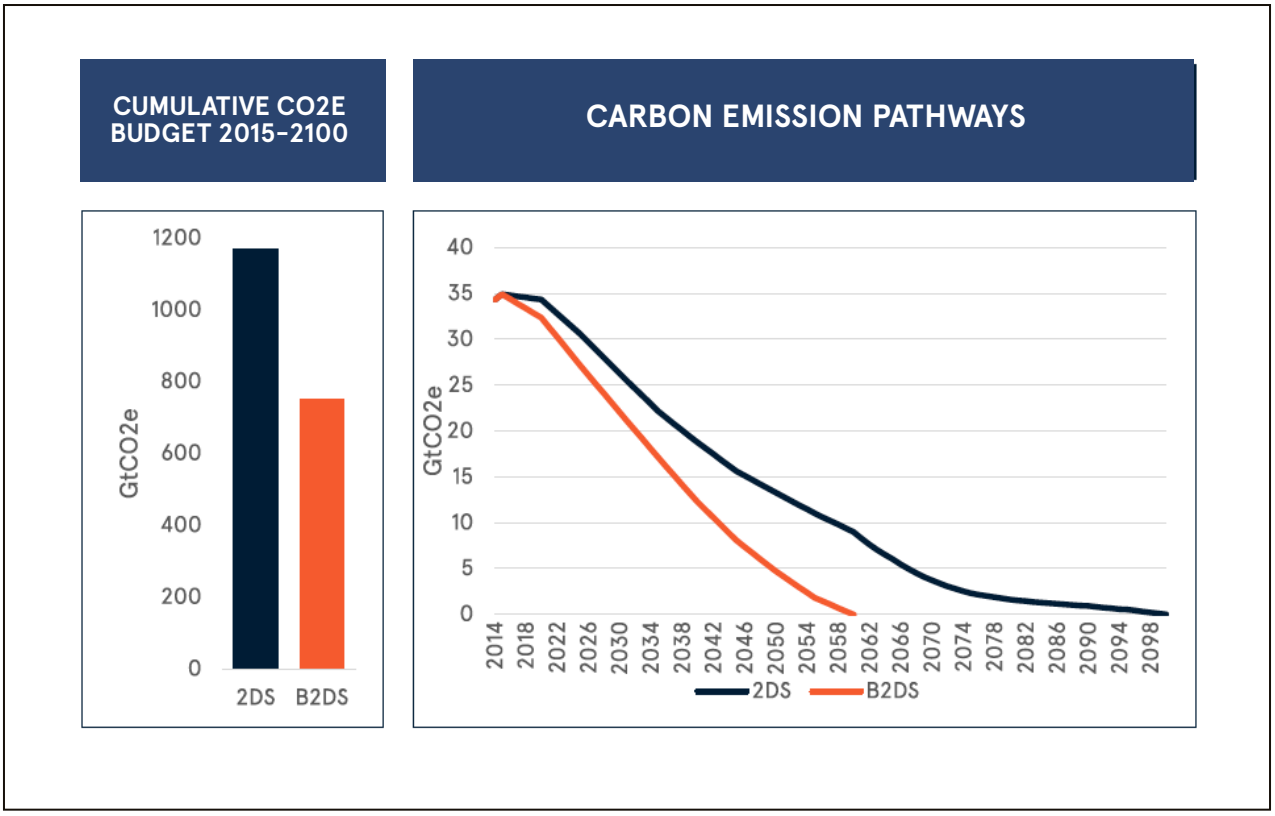
- **The Beyond 2°C Scenario (B2DS)** assumes the energy sector reaches carbon neutrality by 2060 to limit future temperature increases to 1.75°C by 2100 instead of 2°C under the 2DS.

The potential temperature increase under the RTS scenario is 2.7 degree Celsius by 2100. However, the other IEA scenarios, B2DS and 2DS, are built to reach a net zero carbon economy by 2060 and 2100 with the implied temperature increase of less than 1.75 degree Celsius and 2.0 degree Celsius, respectively, by 2100.

CARBON BUDGETS

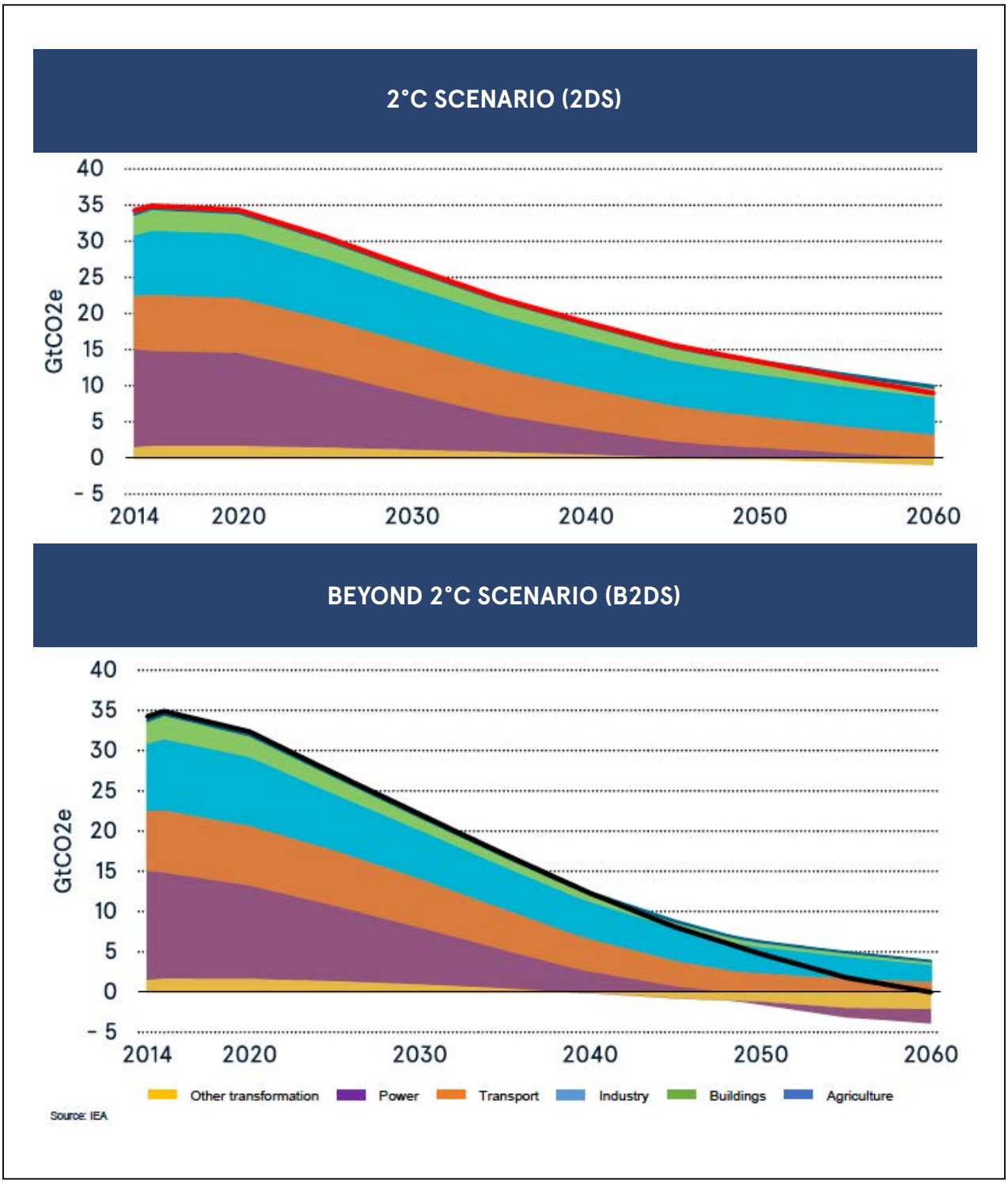
Each climate scenario is based on the idea of a carbon budget, i.e. the maximum volume of greenhouse gas emissions to be released in the atmosphere measured in gigatons. The left-hand-side of Figure 3 shows the remaining carbon budget under the 2DS and the B2DS, respectively. The right-hand-side illustrates the rate at which absolute emissions must decrease to net zero based on various technology assumptions.

FIGURE 3: IEA scenarios – Cumulative CO2e budget in the 2°C (2DS) and beyond 2°C (B2DS) scenarios.



The global carbon budget is allocated by the IEA to the global sectors of the economy (Figure 4, shown until 2060). The 2DS assumes net zero emissions in 2100. Therefore, in 2060 the global economy is still expected to emit circa 10 GT CO2e. The B2DS reaches net zero emissions in 2060. As can be seen from Figure 4. The B2DS assumes technologies that are able to produce "negative emissions" like carbon capture and storage. Consequently, the annual decrease in emissions is higher under the B2DS versus the 2DS.

FIGURE 4: Remaining C02e emissions in the 2°C scenario and beyond 2°C scenario by sector (2014-2060)



LOW-CARBON TRAJECTORY METHODOLOGY

Since COP21 and the Paris Agreement in 2015 the number of decarbonisation pathway initiatives has grown. Each of these investor initiatives has developed a model that applies a choice of climate science scenarios to analyse whether companies are in line with the Paris Agreement or similar climate science scenarios as described by the Intergovernmental Panel on Climate Change.

We have decided to build a proprietary decarbonisation pathway, the Low-carbon Trajectory model, to control the model design and the necessary assumptions. This is crucial as we are using the results in our investment process. The Low-carbon Trajectory Methodology is based on the work of the International Energy Agency (IEA). The agency's datasets provide us with the sectorial and regional activity and carbon emissions data for the period from 2014 to 2060 for the three scenarios introduced above, i.e. RTS, 2DS and B2DS.

SECTORIAL CARBON REDUCTION PATHWAYS

We model sector-specific pathways for each of the three IEA scenarios up to 2030. Opting for a 12-year period (from 2019 to 2030) seems a reasonable choice to combine the long-term nature of climate science spanning several decades into the future and the long-term planning of companies, which in practice often means five years. The following steps describe our modelling approach:

- **Step 1 (IEA carbon data) :** Understand which 'scope' is used in the emissions disclosure from the International Energy Agency.

Scope 1 and Scope 2 emissions are those directly linked to sources owned by the company and those generated by purchased electricity consumed by the company, respectively. Scope 3 emissions are indirect emissions from company supply chain and upstream or downstream activities, such as those from the goods a company purchases and use of the products it sells.

For instance, for the Transport sector the IEA covers Scope 1, 2 and 3 because more than 90% of total emissions are Scope 3, so just adding Scope 1 and Scope 2 would miss most emissions. In contrast, for energy-producing Utilities Scope 1 captures more than 90% of total emissions and therefore is the only scope that need to be covered.

- **Step 2 (IEA activity data) :** Identify precisely what type of activities are covered for each scenario, particularly focusing on the measurement unit. For instance, the Utility activity is measured in TWh of energy generated; in the Transport sector, the IEA uses pkm (passenger kilometres).

- **Step 3 :** Build up a sectorial ratio by dividing the emissions by the activity level – taking into account some proprietary assumptions and adjustments; for example, in the Automobile sector the IEA calculates well-to-wheel emissions whereas most car manufacturers report tank-to-wheel emissions (CF: Glossary or add explanation below).

" AT COMPANY LEVEL, WE MODEL TRAJECTORIES AND DETERMINE A CONFIDENCE CORRIDOR "

COMPANY SPECIFIC LOW-CARBON TRAJECTORIES

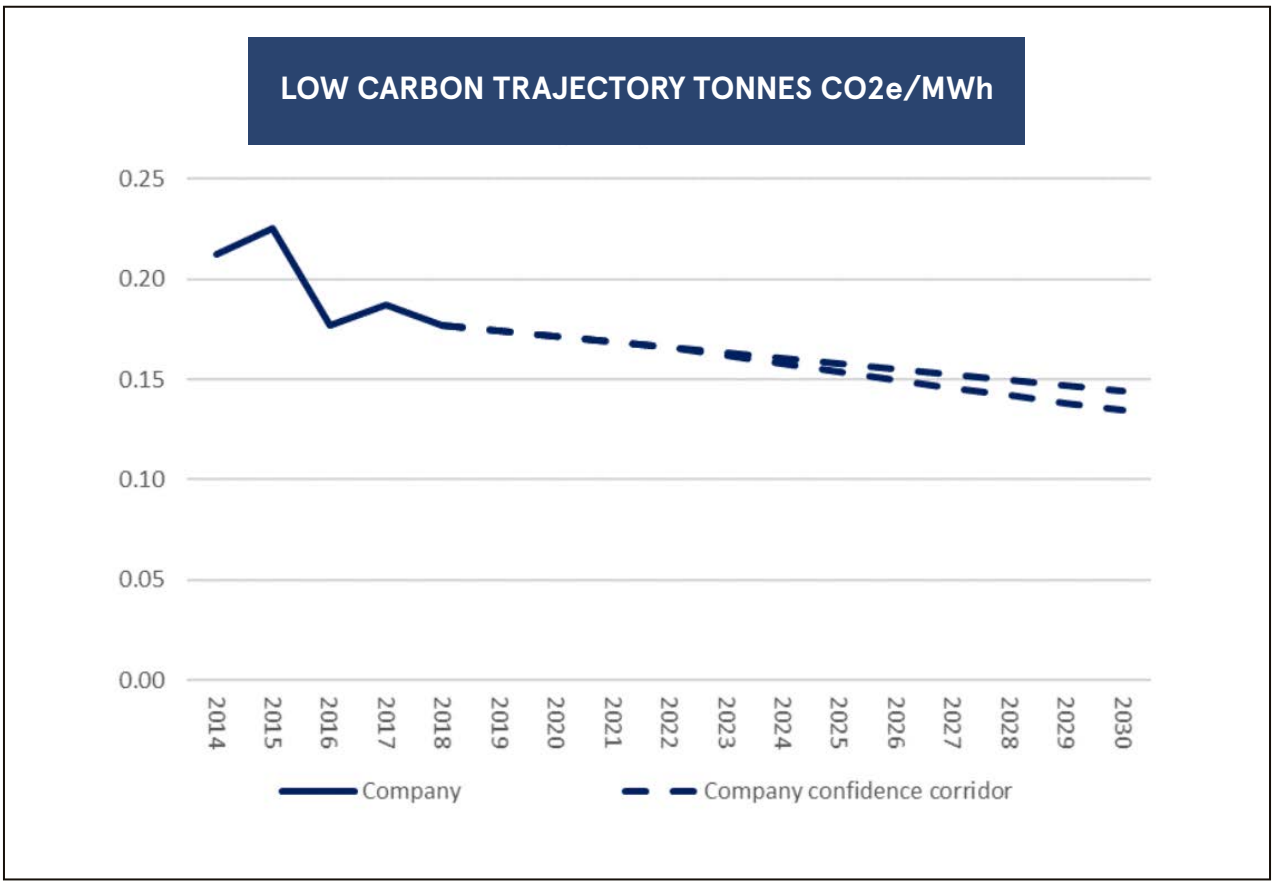
Once the IEA-based sector pathways have been set up for each of the three scenarios, we model Low-carbon Trajectories for companies, i.e. using the same sector-specific scope of emissions and the same type of activities for a given company:

- **Step 1 (past carbon intensity):** Use disclosed intensity metrics or – if not disclosed - calculate carbon intensity of production data from 2014 to 2018.

- **Step 2 (carbon intensity targets):** Identify existing intensity targets as reported by companies. If the company only discloses absolute targets the analyst converts that target into an intensity target using sector- or company-specific activity estimates. The results of steps 1 and 2 are shown in Figure 5 as the solid line.

- **Step 3:** Based on information gathered in the Carbon Impact Assessment (compare Figure 1) we apply alternative assumptions to determine a confidence corridor, which describes an area of potential outcomes (shown as dashed lines in Figure 5). The lower band is our optimistic decarbonisation scenario for the company while the upper band describes a less favourable trajectory acknowledging the inherent modelling uncertainty.

FIGURE 5: Low-carbon Trajectory graphical example

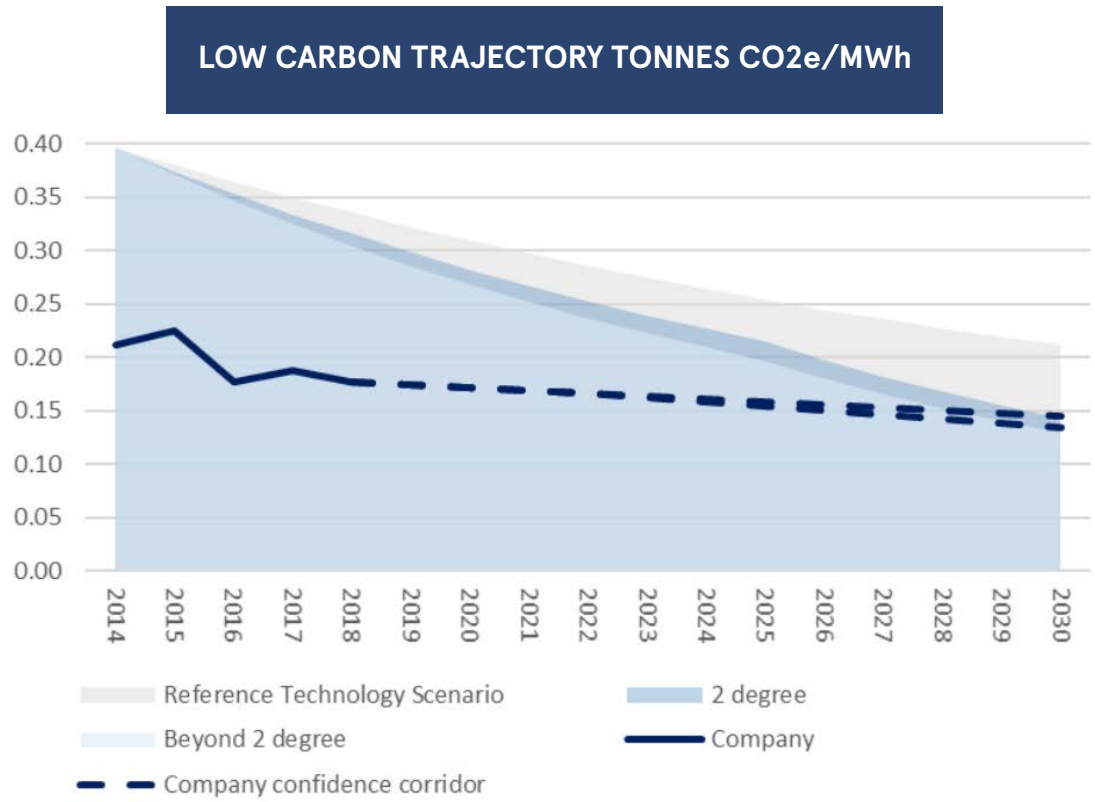


ASSESSMENT

Finally, we contrast the sector pathway with the company-specific trajectory (Figure 6). This allows us to determine, which warming scenario a company is currently aligned with. To determine this scenario, we compare for the period 2019 to 2030 the company's annual carbon intensity level with each scenario level. We then sum the differences to see whether the company beats each scenario. For instance, if the sum of annual differences is negative when comparing the company's carbon intensity with the 'Beyond 2.0 Degree Scenario' the company is "B2DS aligned" but if the sum was positive then it would not be aligned. We would then look at the comparison with '2.0 Degree Scenario' and if still not aligned we would finally compare with 'Reference Technology Scenario'.

In the example in Figure 6 we conclude that the company is aligned with B2DS (both bands beating the B2DS, therefore the 2DS).

FIGURE 6: Scenario analysis



Note: A worked example for Italian integrated utility Enel SA is presented on pages 12 and 13.

EVOLUTION OF THE LCT SECTOR COVERAGE

We are gradually expanding the sector coverage having started this work during Q4 2018. To date we have been focusing on the four highest emitting sectors that combined account for 68% of global energy-related CO2e emissions (Figure 7):

> Electric Utilities

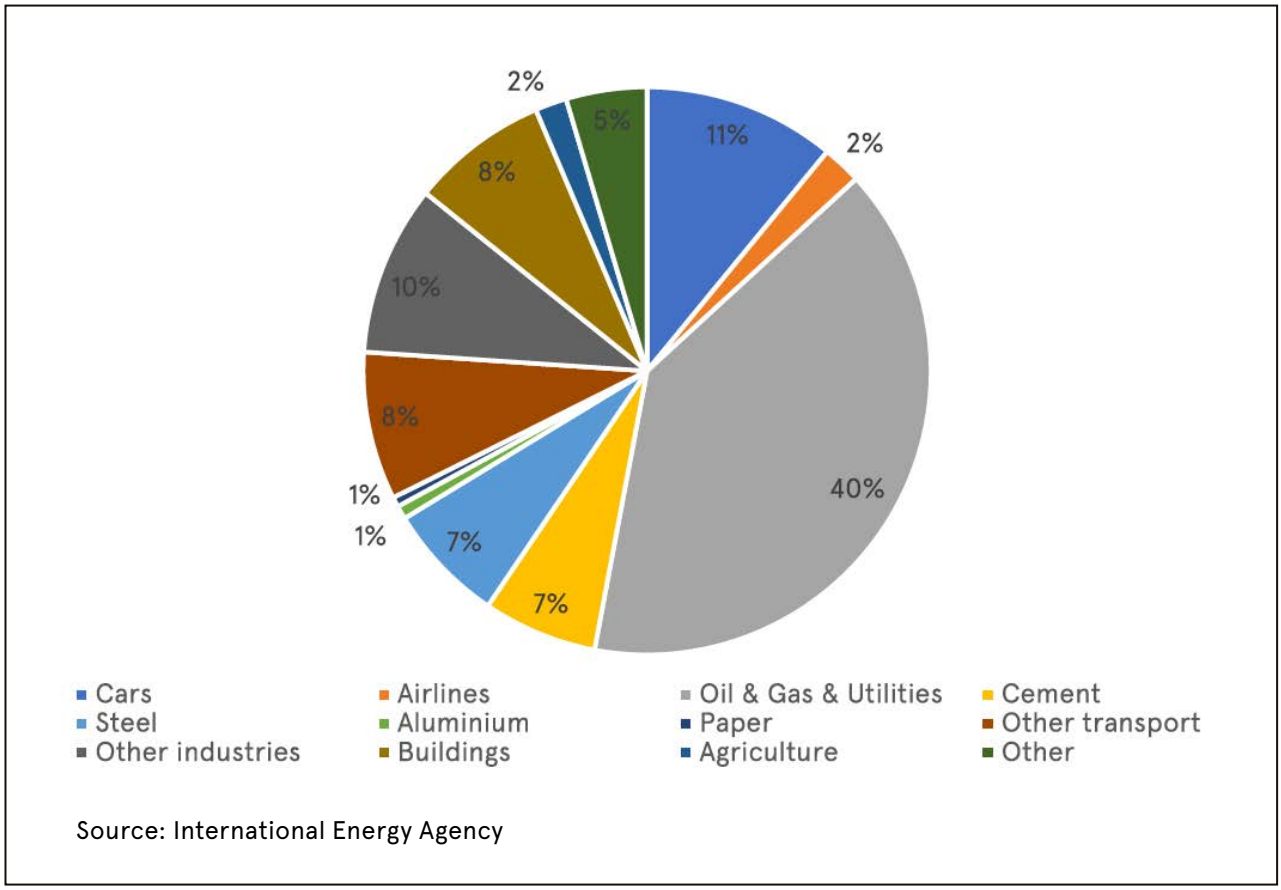
> Materials (cement, steel, aluminium and pulp & paper)

> Transport (airlines and passenger vehicles)

> Oil & Gas

We plan to cover at least four more sectors in 2020: Shipping, Railroads, Freight and Chemicals. This means we will cover 79% of all energy-related CO2e emissions.

FIGURE 7: Energy-related CO2e emissions sector breakdown



Source: International Energy Agency

EXAMPLE: ENEL SA (ITALY), INTEGRATED UTILITY

The Carbon Impact Assessment as summarised in Figure 8 crucially allows us to establish where we think Enel will be in 2030 with regards to its energy production mix (Figure 9). We rely heavily on the analysis of Strategy and Initiatives to derive those energy mix figures.

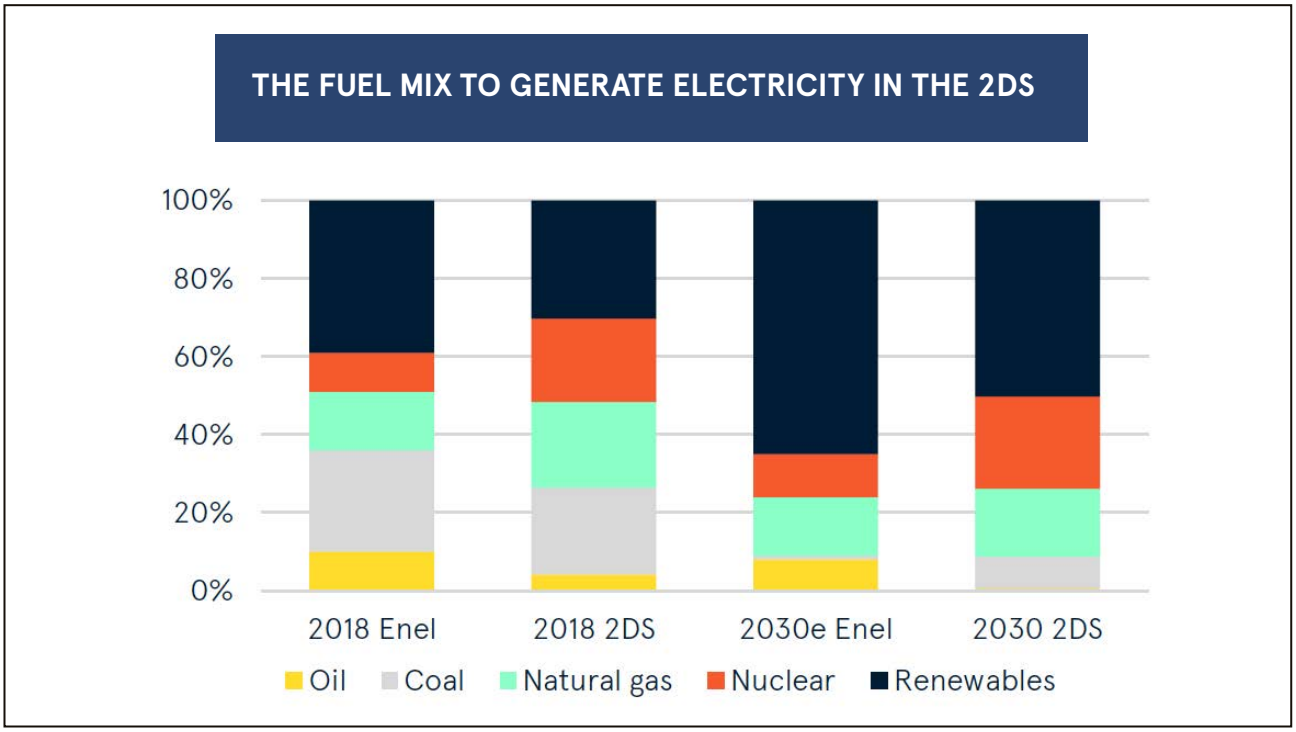
Figure 8: Carbon Impact Assessment and Engagement Topics

GOVERNANCE	RISK MANAGEMENT
The CEO's variable pay is linked to climate-related factors	The climate risk management process is robust:
TCFD supporter and member of WBCSD	Global risks are reviewed every six months Local risks are reviewed every month

STRATEGY & INITIATIVES	METRICS AND TARGETS
2018-2030 strategy:	Historical trend in line with their 2030 target.
Investment seen increasing by 14.8 billion (digitization of networks and renewable energies) 100% growth in capex dedicated to renewable energies (60% of total capex)	We are confident Enel will reach their target, as their strategy leans towards 70-75% of low carbon electricity generated in 2030.
From 51% renewable capacity in 2018 to 62% in 2021 Enel intends to install around 4GW of renewable capacity annually in the mid-term.	Enel is currently within the < 2°C trajectory based on our LCT analysis.
Carbon neutrality by 2050	
Initiatives:	
The Italian government is to phase out coal by 2025	
Enel has already closed 21 units (11GW – coal), cleared the land and sold the relevant assets	

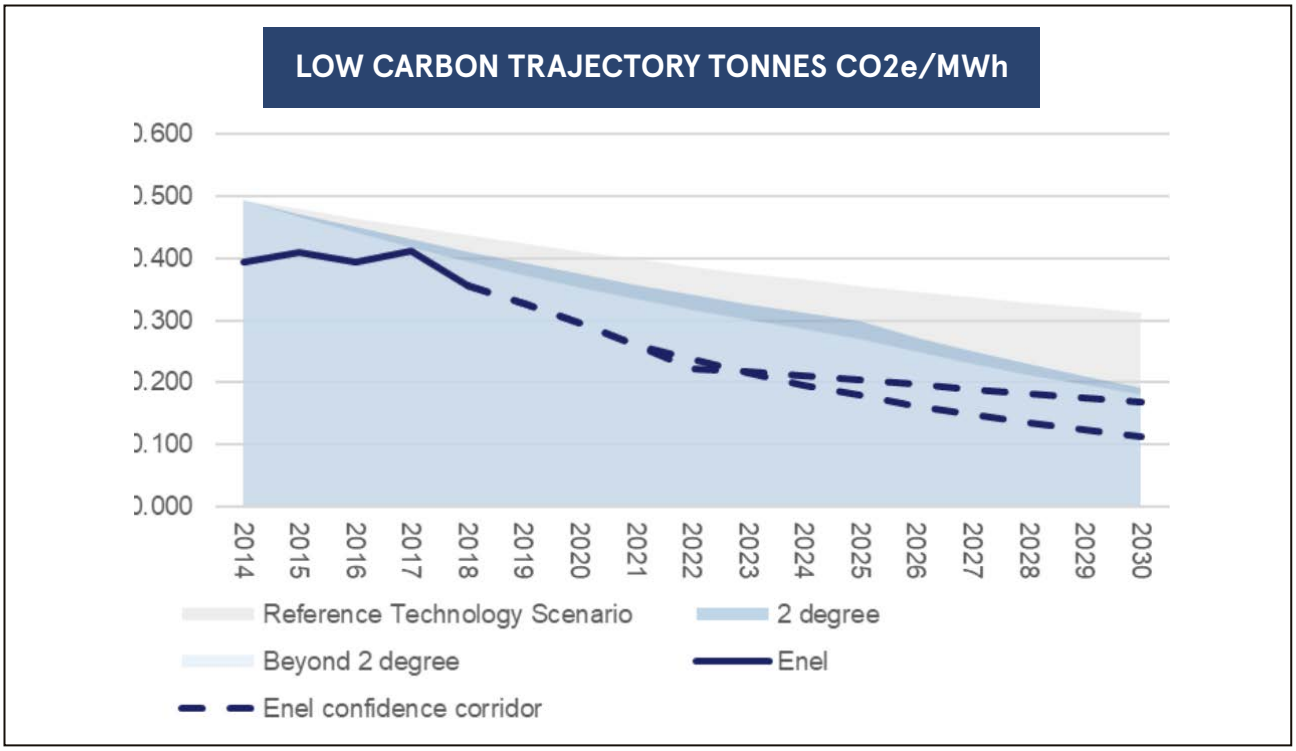
ENGAGEMENT TOPICS :	
	> They need to provide a clearer strategic plan post 2022. > We need a split in production between US and Mexico and between Brazil and the rest of Latam. This would allow us to tailor the pathway in more details. > More details should be provided on the split oil & gas and where they see oil going in their mix.

FIGURE 9: Energy mix



Then we derived the Low-carbon Trajectory for Enel (Figure 10) using our energy mix forecast as well as more global considerations such as technology developments (CCS/CCU) and the company track record to commit to previous emissions reduction targets. Based on the results in comparison with the three IEA climate benchmarks we conclude that Enel is aligned with the B2DS.

FIGURE 10: LCT analysis for Enel



GLOSSARY

TERMS	DEFINITION/MEANING
Carbon Capture and Storage	Trapping carbon dioxide produced throughout operations and storing it so it is not released into the atmosphere.
Global Warming	Increase in the overall temperature of the earth's atmosphere attributed to the greenhouse effect caused by increased levels of carbon dioxide, CFCs and other pollutants
Greenhouse Gas emissions	As defined by the GHG protocol: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulphur Hexafluoride and nitrogen trifluoride.
High emitting sectors	La Francaise identifies as high emitting all sectors relying heavily on energy consumption and production through their value chain: Power, Transport, Industry, Buildings and Agriculture. They account for more than 80% of global emissions.
IEA	International Energy Agency
Negative emissions	Emissions offset through technologies such as Carbon Capture and Storage.
Paris Agreement	We refer to the agreement resulting from the COP21 in 2015. To this date 187 partied have ratified.
Scope 1	Direct emissions from owned or controlled sources.
Scope 2	Indirect emissions from the generation of purchased energy.
Scope 3	All other indirect emissions, which occur in the value chain (upstream and downstream).
TCFD	This is the full vehicle value chain going from the commodity extraction to the discharge.
Well-to-wheel	This is the full vehicle value chain going from the commodity extraction to the discharge.

INFLECTION POINT – THE TEAM

Climate change is currently a focus area of our sustainable investment strategy at La Française. Therefore, we need to be able to properly understand what it means for our business. In anticipation of the growing trend towards sustainable investing we decided more than five years ago that this knowledge should be internalised rather than relying solely on third-party data providers or consultancies. **To build our own capabilities we have acquired Inflection Point, our sustainable investment research centre in 2014.** Today, the ESG and impact specialists are deeply embedded in products development, stocks selection and quant analysis with regards to our sustainable investment strategies working side by side with portfolio managers and sector analysts.

The team is composed of **four fundamental ESG analysts and two quantitative analysts** dedicated to developing robust ESG methodologies and investment insights as well as sharing their respective expertise across the Group. The team is led by Dr Roland Rott, CFA, an investment professional with over 18 years of experience, of which ten working within an active ownership investment fund – lastly as an Investment Partner.

Each fundamental ESG analyst is covering several sectors, which allows the analyst to research companies with a deep level of understanding. In addition, thematic preferences are the second dimension in defining the research areas. Such themes include the energy transition, urbanisation, biodiversity, human capital, cyber security and impact measurement. In our view, **the combination of sector allocations and thematic preferences facilitates ESG research quality and responsiveness to daily events across the investment universe.**

From left to right: Alex Parkinson, Roland Rott, Charles Fruitiere, Stephanie Lipman, Jimmy Barenco, Katherine Velasquez, Ludovic Thulliez

Inflection Point exploits the opportunities from harvesting non-financial data through developing dedicated quantitative capabilities. Both **our data analysts are crucial to innovate in a rapidly evolving ESG market.** Importantly, our data analysts have developed a quantitative model that attributes scores to companies based on their ESG characteristics. The capabilities include an estimation model to calculate carbon emissions and measures of environmental and social impact. Such data is used in investment appraisals, portfolio construction and client reporting.

Combining a fundamental and quantitative approach in ESG research allows the Inflection Point team to evaluate the ESG quality of more than 5,000 global companies and to create innovative solutions as a**n integrated and dynamic team**. For example, the team has just completed a sovereign debt quantitative model in close cooperation with the respective portfolio managers, which attributes scores to countries based on criteria concerning energy transition and climate change adaptation.

We understand that **voting and engagement has to be conducted in conjunction with the ESG analysis to exploit all benefits associated with sustainable investing.** Our analysts engage with companies on a regular basis in order to influence the way they operate and to provide guidance on what constitutes effective ESG disclosures. Inflection Point is active in collaborative engagement initiatives, cooperating with other asset managers to improve companies' environmental and social practices.

LA FRANÇAISE

INVESTING TOGETHER

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