ACT

PILOT EXECUTIVE SUMMARY REPORT

ADEME

Agence de l'Environnement et de la Maîtrise de l'Energie

CDP

DRIVING SUSTAINABLE ECONOMIES

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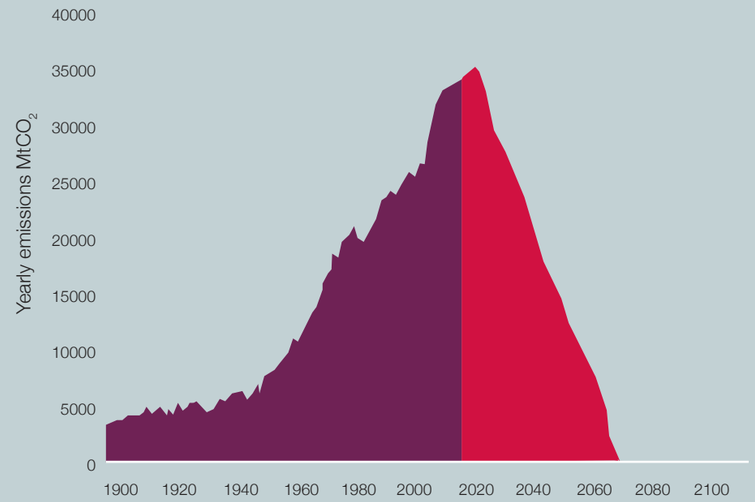
ABOUT THIS REPORT

This is an executive summary of findings from the ACT pilot project, including an introduction to the project and its approach, findings from the development of three sector-specific methodologies, and an indication of the next steps for ACT. For more information on both the project process and results, please refer to the detailed report available [online]. The ACT framework and the three pilot methodologies are also freely available online, alongside comments received during consultation and the report of the quality assurance process on the pilot project.

CO2 emissions have increased by 1000% during the last century. It is critical that we reverse this pattern.

FIGURE A **WORLD EMISSIONS PATHWAY UNDER A 2° MITIGATION SCENARIO**



KEY **ACT FINDINGS**

Leading companies are ready for an advanced approach.

Action now is critical due to lock-in effects.

Shared accountability is critical to address value chain emissions.

Transition planning is critical to orderly low-carbon transition.

The ACT (Assessing low-Carbon Transition) initiative assesses how ready an organization is to transition to this new low-carbon world using a future-oriented, sector specific methodology.

It is the natural next step to bring accountability to the growing number of actions that organizations are taking to tackle climate change.

ACT has the backing of companies, investors and government departments. Since the launch of the pilot project methodologies have been developed and tested with three trial sectors - retail, auto manufacturers and electric utilities.

Executive Summary Report
Introduction

Climate change will have a transformative effect on the economy. As the dominant force in the global economy, corporations will have to choose what role they play in low-carbon transition.

With rising global emissions and more international consensus to tackle the problem than ever before, it is clear that efforts to mitigate climate change will transform the global economy. There will be winners and losers from these transformations, both among companies and from those who invest in them. While many large companies readily state that they will continue to profit in the low-carbon economy, robust ways to check to what extent companies are truly ready for the transition have been lacking. This is the gap that the Assessing low-Carbon Transition (ACT) methodologies seek to fill.

THE ACT PILOT PROJECT

ADEME and CDP partnered with 2DII, EIB and ClimateCHECK for the ACT pilot project, which from launch at COP21 in Paris developed three methodologies to assess alignment with low-carbon transition in the Electric Utilities, Auto Manufacturing and Retail sectors. The methodologies were developed in consultation with companies and experts in these sectors, and pilot companies reported against the methodologies and received an ACT pilot assessment and rating in confidence. Feedback received during the course of the pilot influenced the development of the methodologies and will be fed in to future methodology development.

ACT methodologies are sector specific, because the contributions different sectors make to global emissions differ greatly, and different actions will be required of different sectors as they play their part in the transition to the low-carbon economy. The three sectors chosen for the pilot typify a range of challenges companies will face during the transition to the low-carbon economy. The approaches developed for these sectors during the pilot will be applicable to other sector methodologies in future.

THE METHODOLOGY DEVELOPMENT PROCESS

A key concern of the ACT pilot project was ensuring that the process for methodology development was robust and replicable and led to the development of credible methodologies. The ACT project is led by CDP, an NGO; and ADEME, a state agency, partnering with commercial organizations in a collaborative, consultative approach to methodology development. The project governance and methodology development process were designed to be open, transparent and responsive. This ensures that the methodologies meet the needs of users applying them and companies reporting against them. Making reference to reliable third party data sources and research also helped achieve this goal. The “ACT Framework” was developed to guide work on the three initial sector methodologies, and will also be used to guide future methodology development, thus ensuring consistency of approach in the future.

In addition to the project partners guiding methodology development and outlining its principles and framework, the ACT methodologies had input from a range of stakeholders via the Technical Working Groups, Advisory Group and public consultation. Feedback received from these sources influenced the initial direction of the methodologies and consultation feedback was taken into account in both the final published versions and the suggestions for future methodology development.

The quality assurance process carried out by ClimateCHECK over the methodology development further enhanced robustness. It informed the methodology production through an iterative feedback process, and also highlighted directions for future developments of the methodologies to ensure that they achieve their stated goals.

The ACT framework
Assessing low-Carbon Transition

No-one knows what will happen in the future, but what we know about the present and recent past allows us to make predictions about it with varying degrees of certainty. Since the 2050 horizon ACT uses is relatively distant in terms of company operations, predictions become more uncertain as we near this date, but are not impossible to make. Creating a systematic framework allows us to take a consistent approach to assessing the future.

As a starting point the ACT methodology developers posed five guiding questions about company alignment with low carbon transition to 2050. The five questions became the basis of a framework to steer the development of the ACT methodologies (see framework diagram at right of page).

By relating these five questions to the information available on a company's investments, actions, and strategy, a set of indicators were developed for each sector to benchmark a state of alignment with low-carbon transition, and measure how far away companies are from that state. The complete set of ACT indicators is listed in each sector methodology, along with the rationale for their inclusion, guidance on how to report against them and details of how they will be assessed.

The framework remains the same for development of each methodology, but indicators are a mix of sector-specific and common elements, and the weighting given to each indicator varies across the sectors. This reflects that different sectors have different sources of emissions, and different actions to take to transition to the low-carbon economy. A table summarizing the indicators in each sector methodology is available in the appendix of this report. Companies reporting against these indicators can be assessed against the benchmark to produce an ACT rating.

1

What is the company planning to do?

Has the company committed to a low-carbon future vision?

Are its emissions reduction targets ambitious enough to get there?

How quickly is it planning to act?

2

How is the company planning to get there?

Does the company have a transition plan to achieve its low-carbon vision?

Will it drive the evolution of the business?

3

What is the company doing at present?

Does current company strategy lead to a decrease in emissions in the short-term?

Are investment decisions today made with the long-term future in mind?

4

What has the company done in the recent past?

How do the business decisions made in the past influence company emissions trajectory?

5

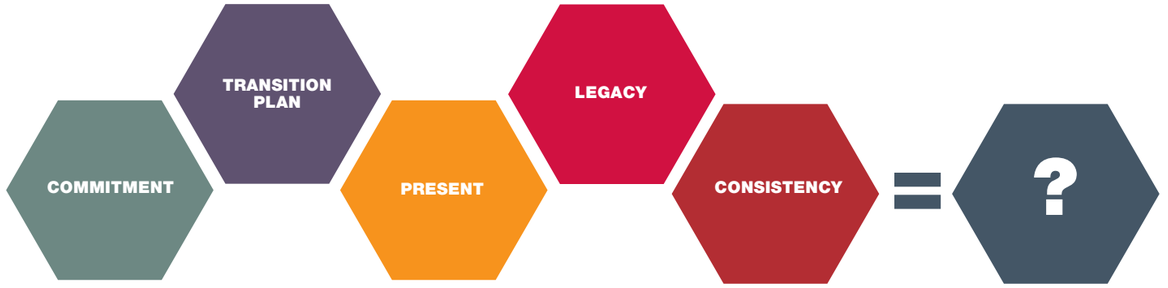
How do all of these plans and actions fit together?

Is the business strategy consistent with emissions reduction targets?

Do any business activities undermine the company's ability to reach a low-carbon future?

?

The ACT rating is based on the responses to the 5 questions



ACT rating

The ACT rating combines quantitative and qualitative information on a company's past, present and projected future to reveal its alignment with the low-carbon transition

The ACT rating consists of three elements:
1. A Performance Rating, represented as a number from 1 up to 20
2. An Assessment Rating, represented as a letter from A down to E
3. A Trend Rating, represented as +, improving; -, worsening; or =, stable.

Each responding company in the ACT pilot project received not only an ACT rating but a commentary on their performance across the three aspects of the rating. This gave a nuanced picture of the company's strengths and weaknesses. Detailed information on the ACT rating is available in the ACT methodologies.

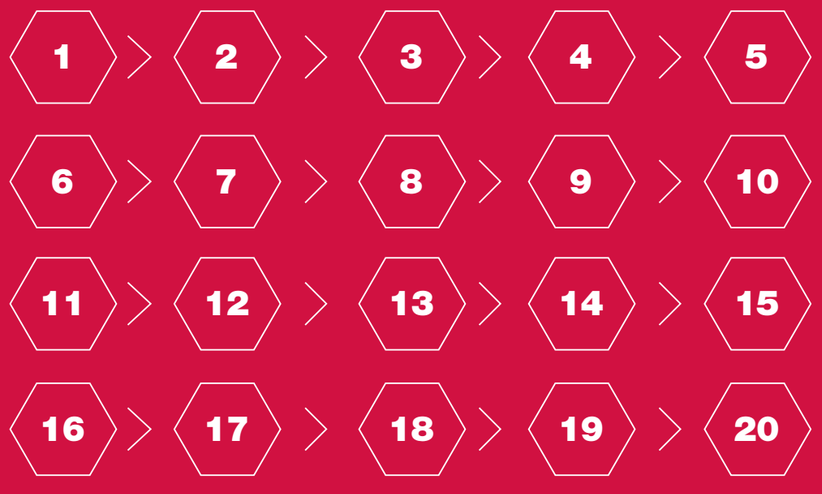
THE HIGHEST AVAILABLE ACT RATING IS 20A+

- **A performance rating of 20: the company received high scores in its assessment against the methodology indicators.**
- **An assessment rating of A: the information reported by the company and available from public sources was consistent and showed that the company is well aligned to transition to the low-carbon economy**
- **A trend rating of +: the information provided shows the company will be better placed to transition to the low-carbon economy in future.**

ACT PILOT ASSESSMENTS

A number of the ACT pilot companies reported against the ACT pilot methodologies and went through the ACT assessment process, receiving a confidential ACT rating and feedback on their performance. Since pilot reporting was confidential, individual company results will not be made public. Although the number of reporting companies was not a large enough sample to draw conclusions on the performance of these sectors as a whole, it enabled a thorough trial of the methodologies and assessment process. This report reveals observations on the aggregate performance of the responding companies from the assessments.

PERFORMANCE RATING
Represented as a number from 1 up to 20



ASSESSMENT RATING
Represented as a letter from A down to E

TREND RATING
+ Improving trend – Worsening trend = Stable trend

1

Electric utilities

DIMENSION	COMMITMENT	TRANSITION PLAN	PRESENT	LEGACY	CONSISTENCY
ALIGNED STATE	The company's science-based targets have a time horizon that is longer than the expected retirement age of the majority of the asset portfolio.	The company's transition plan lays out the asset investment strategy in multiple five year steps to shift the generation portfolio to low-carbon technologies.	The investment strategy for new generation capacity and R&D places clear focus on renewable energy. The company's current generation portfolio leaves enough room in the carbon budget for a flexible investment strategy.	The company has demonstrated a trend of lowering its emissions intensity of generation over the past five years, in alignment with the speed of emissions reductions required in the short-term future, through deliberate investment decisions and the optimal use of low emissions capacity.	The company's targets, transition plan, present action and past legacy shows a consistent willingness to achieve the goal of low-carbon transition. There are also no secondary activities, such as coal mining, that clash with the goals of the low-carbon transition, and there are no management incentives in place that promote further utilization of fossil fuels.

According to IPCC estimates, the Electric Utilities sector is one of the major contributors to climate change, representing around 25% of annual global emissions. The International Energy Agency produces an annual Energy Technology Perspectives (IEA ETP) report which analyses what new technology developments are required per sector in order to achieve a 2° degree climate scenario. IEA ETP 2015 concludes that the Electric Utilities sector needs to reduce emissions by 91% by 2050 compared to 2010 levels, which means reducing global average emissions for a kWh of electricity by over 95% across the same period. Adding to this challenge, energy demand is expected to increase by 87% over the same timescale. The key to decarbonising this sector lies in the rapid deployment of low-carbon electricity generation technologies. There is an urgency for this deployment; the decarbonisation of the electric utilities sector is vital for the decarbonisation of many other sectors, through low-carbon electrification of transport and industry.

To assess companies in the electric utilities sector, the ACT methodology considers in detail each company's asset portfolio and what that might mean for the future of the company. For each aspect of the ACT framework, a summary of what alignment with low-carbon transition looks like for the Electric Utilities sector is given in the table. The indicators in the ACT Electric Utilities methodology measure progress towards this benchmark. Please refer to the appendix for a complete indicator overview.

Electric Utilities

ACT ELECTRIC UTILITIES PERFORMANCE RESULTS

The ACT Electric Utilities sector pilot reveals the pilot companies to be ahead of the curve on climate change strategy and planning for a low-carbon future. Nonetheless, actual performance in terms of transforming their generation portfolio away from fossil generation is lagging behind this picture, with some utilities at risk of not staying within their carbon budget without additional action.

LEADING PRACTICE

SSE

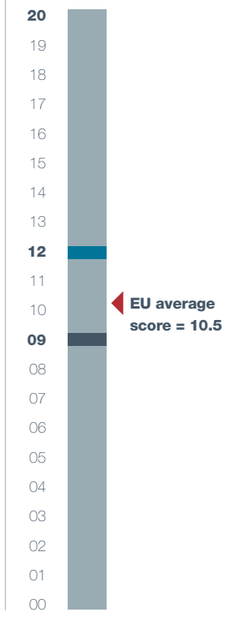
LEGACY

SSE has demonstrated excellence by significantly reducing emissions over the past few years, attaining a maximum score in ACT for its trend in past emissions intensity. The company's core carbon target proposes a 50% reduction in the carbon intensity of the electricity it generates by 2020, based on 2006 levels. SSE is on track to meet this target, and is currently ahead of schedule having significantly reduced intensity to 397 gCO2/kWh in 2015/16 from nearly 600 a few years earlier.

This performance is a result of its well-established energy strategy which includes continued investment in renewable generation. Over the past decade, SSE has made large investments, most notably in wind energy, and the company has spoken openly about its intent to move away from coal towards a generation portfolio focussed on renewables and gas. SSE currently has the largest renewable energy capacity in the UK at 3,275MW, and invested over £291m in renewable energy in 2015/16. The company's recent investment patterns, and the considerable size of renewable energy in the current portfolio, show strong credibility towards successfully implementing a strategy based on low-carbon energy sources.

FIGURE B
PERFORMANCE SCORE
Here, we profile significant indicators for the Electric Utilities Sector and comment on the information reported against it in the ACT pilot. Please see the overview table on page 40 for the specific indicators of each module.

This bar shows the average, minimum and maximum performance score of the Electric Utilities sector pilot companies.

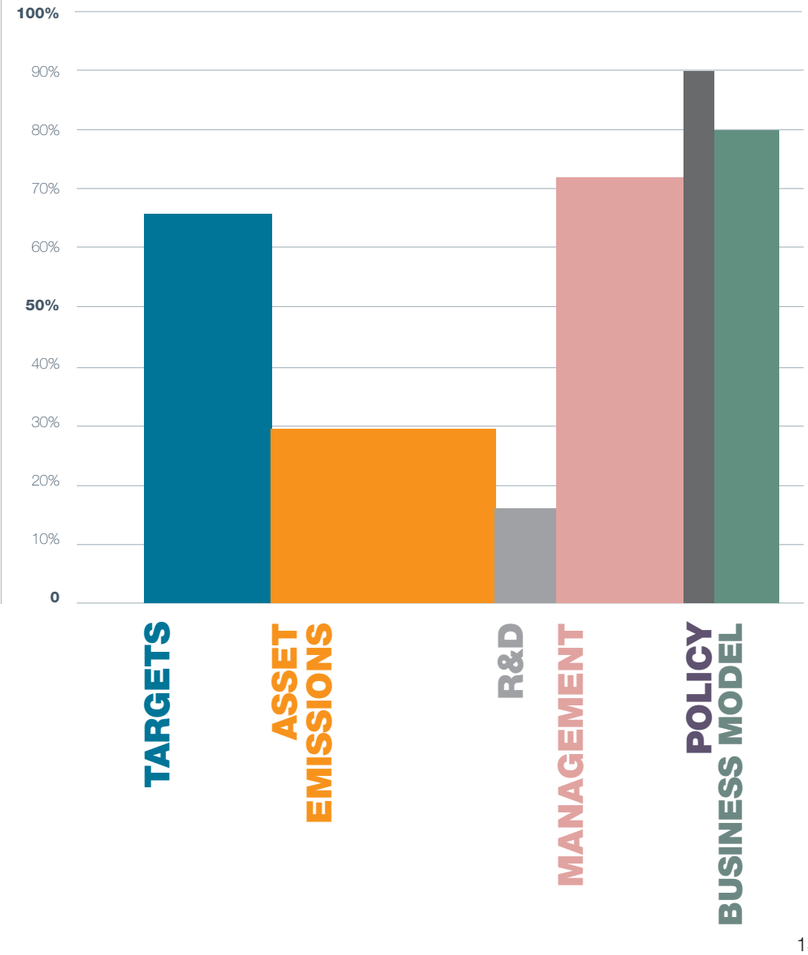


ACT PERFORMANCE RESULTS FOR THE EU SECTOR

Figure C shows the average overall performance score of the EU sector sample. Figure B shows the sample average, minimum and maximum scores across the six modules of the ACT Electric Utilities methodologies that the performance score is built from.

FIGURE C **MODULE SCORE AVERAGES FOR ELECTRIC UTILITIES COMPANIES**
The height of the bar represents the average score on this module. The width of the bar represents the weight of this module in the performance rating. Please see the appendix for details of indicators within each module.

X= Modules with weights (total 100%) Y= Score %

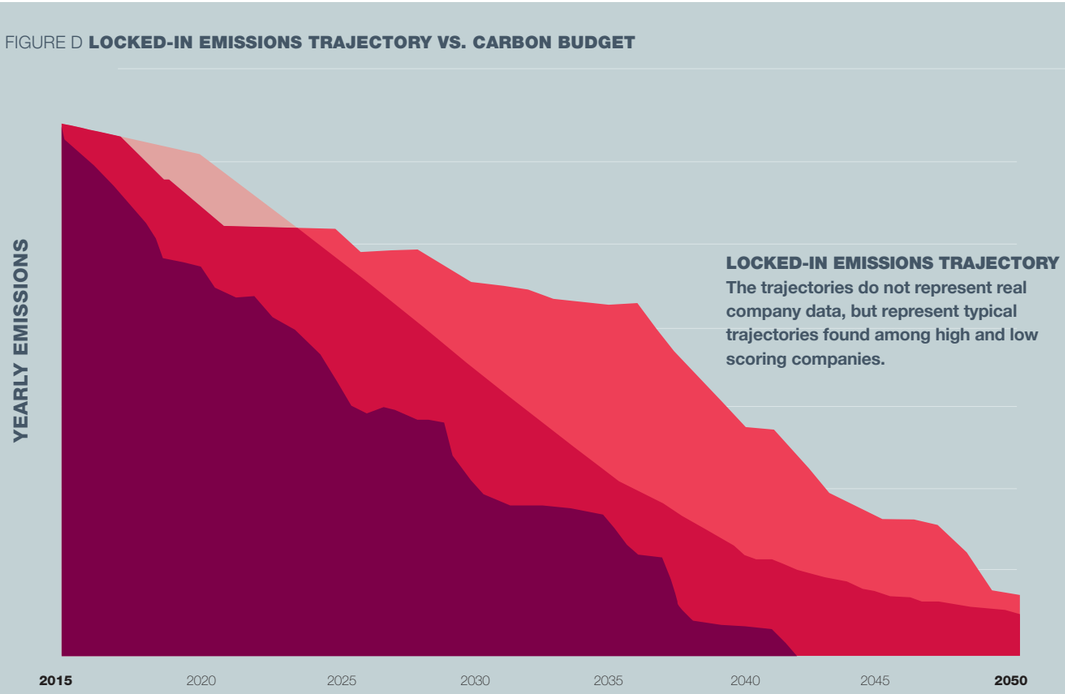


Electric Utilities

SECTOR SPOTLIGHT
ELECTRIC UTILITY EMISSIONS LOCK-IN

ACT's indicators measure the emissions of an Electric Utility's current asset portfolio and benchmark them against a low-carbon scenario. One of the most heavily weighted indicators measures the degree of carbon emissions "locked-in" through the remaining lifetime of the portfolio and how this compares to the company's specific carbon budget.

FIGURE D **LOCKED-IN EMISSIONS TRAJECTORY VS. CARBON BUDGET**



Global carbon emissions between now and 2050 can be quantified into sector-specific carbon budgets that detail the absolute amount of emissions that can still be emitted by a sector during that time, if global warming is to be limited to below 2° as specified in the Paris agreement. Using the Sectoral Decarbonization Approach (SDA), ACT has developed quantitative assessment models that derive a company-specific carbon budget. This budget is the allowance of CO2 remaining to the company for the next 34 years.

A power plant owned by an electric utility that is built in 1980 has a certain expected lifetime, or its technical lifetime. For example, if this is a coal power plant, this could be 53 years. This power plant is then expected to generate energy and create value for the company up until 2033. The future generation between 2016 and 2033 will have a predictable quantity of emissions associated with it, depending on the active generation that this plant is used for.

As part of the ACT pilot, technical lifetimes and expected emissions were calculated for all power plants within the portfolios of all pilot companies. This information was used to calculate the locked-in emissions trajectory of each Electric Utility. In a "Business as Usual" scenario, these emissions would be unavoidable. However, if this results in more emissions than the company is assigned through its 2° aligned carbon budget, then there is a problem, which could result in having to close down power generation plants before their technical lifetime is complete in order to stay within the carbon budget. In carbon terms, these plants are stranded assets, which could also imply a financial loss to the company.

To assess company performance, a lock-in ratio is computed by comparing the locked-in emissions trajectory with the carbon budget. This ratio is set to 1 or larger if all of the company's carbon budget is already locked-in via the existing asset portfolio. Figure D shows the range of lock-in ratios for the ACT pilot companies: After decommissioning, it is assumed that all assets are replaced with zero-carbon generation capacity which does not further add to the yearly emissions.

Companies with a lock-in ratio larger than 1 may have to close down thermal assets before the end of their technical lifetime in order to stay within the boundaries of a low-carbon future. Conversely, companies with a lock-in ratio significantly lower than 1 have some more flexibility in the way they can transform their portfolio up until 2050, which is rewarded in the ACT assessment. Regardless of current emissions lock-in, maintaining business as usual levels of emissions would mean that almost all of the ACT pilot companies would exceed their 2050 carbon budget within 5 to 15 years.

An encouraging development is that many companies within the sample have committed not to build any more new coal-fired power stations. As the single most emissions intensive form of electricity generation, this decision makes it more credible that these companies will stay within their carbon budget and will be able to deal with any carbon budget exceedance that currently exists[2].

2 As per emissions factors from IPCC AR5 Synthesis report.

The pilot companies in the Electric Utilities sector show strong performance on strategy-related indicators that include emission reduction targets, management, policy engagement and future business model, but weaker performance overall on operational indicators that deal with current and future emissions, and R&D investment decisions. This means that at the strategic level, the companies assessed show strong alignment with the requirements of low-carbon transition.

However, this has not yet been translated into tangible results that show a rapid shift away from fossil fuel based energy production.

To change this and align with the intent of the company strategies, it is imperative that the sector takes action right now, and no longer postpones important investment choices. This is paramount to the success of the transition in this sector, for two main reasons:

1

Firstly, the EU sector needs to decarbonise in order to enable a transition in many other energy-intensive sectors. For example, the manufacturing industry needs to rely on a large, stable supply of renewable energy in order to reduce emissions embedded into its products, and decarbonisation of the transport sector is predicted by climate scenarios to depend on electrification.

2

Secondly, choices made today have a profound impact on the long-term future. Any new fossil fuel fired power plant is expected to generate energy for multiple decades into the future, locking-in high amounts of emissions. While many utilities in the ACT sample do not have room in their carbon budget for many extra decades of fossil emissions, some have already exceeded their carbon budget on their current portfolio. However, adding more renewable energy capacity will bring the companies closer to the possibility of reaching a low-carbon future state.

ELECTRIC UTILITIES CONCLUSION

ACTION NOW IS CRITICAL DUE TO LOCK-IN EFFECTS

In order for Electric Utility companies to weather the challenges of the transition to a low-carbon economy, they need to diversify and invest in low-carbon technologies. Strong transition plans are needed that encompass a long-term vision, and lay out a step-by-step trajectory to replace fossil-dominated generation capacity with renewable energy. Given long lead times to both shift strategy and make low-carbon investments, action needs to start right now in order to ensure that all pilot companies are on the pathway to the low carbon economy in 5, 10 and ultimately 33 years from now.

ACT's future-oriented approach has lead it to explore the potential implications of the company's current portfolio, which revealed stark differences likely to appear in future between companies that may look very similar today. The ACT approach allows for an accurate assessment of the companies' readiness for the transition that adds more value than limited information on their current emissions can do.

LEADING PRACTICE

ENEL

COMMITMENT

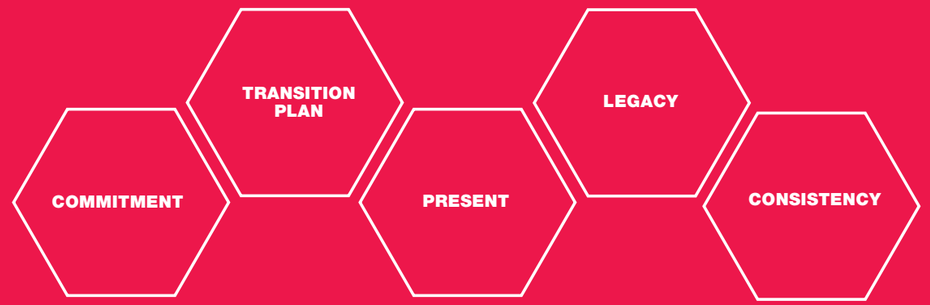
Of the companies included in our pilot study, Enel is the one of two companies that has committed to emissions reductions that are verified by the Science Based Targets initiative. These corporate targets are only approved if they meet a strict criterion that scientists agree are in line with the transition to the low-carbon economy. Despite the majority of the world's largest 500 companies reporting to CDP disclosing that they had set emission reduction goals, very few reach the scale required to properly address the threat of climate change. One such commitment is the long-term decarbonisation of its energy mix by 2050, with intermediate targets being set to achieve this. By 2020, Enel has committed to reduce CO2 emissions by 25% per kWh, from a 2007 base year, which includes the decommissioning of 13 GW of thermal plants in Italy. These targets are consistent with the level of decarbonisation required to limit climate change to the 2-degree benchmark. Enel's science-based targets transition to a more efficient and renewably powered low-carbon economy, and are also compatible with long-term economic growth, by driving innovation, reducing costs and thus enhancing profitability.

Enel's targets are outlined in their 2017-2019 strategic plan. These cement their commitment to achieve decarbonisation of the mix by 2050, and set an increase in their renewable capacity of >8 GW. This plan outlines their business model development that challenges a 'business-as-usual' approach. Enel plans to greatly expand their renewables business line and the increase in the capacity in the period is expected to allow the company's generation mix to reach close to 60% from emission-free sources by 2019. Significant investments are also planned for grid digitalization as a lever to drive further expansion of electricity generation based on renewables.

Enel is consequently leading the transition to a low-carbon economy within the energy industry, whilst gaining a competitive advantage in the process.

2

Auto



ALIGNED STATE	The company has science-based targets for operational and fleet emissions, which have a time horizon that covers at least 80% of the full lifetime emissions of the vehicle fleet.	The company's strategic planning details the sales targets for low-carbon vehicles up to the point where they become the dominant technology sold.	Current investment strategy in new production capacity and R&D places clear focus on low-carbon drivetrain technologies and related research.	A trend is evident of lowering emissions intensity of the vehicle fleet over the past five years that is in alignment with the emissions reductions required in the short-term, through deliberate product development decisions.	The company's targets, transition plan, present action and past legacy shows a consistent willingness to achieve the goals of low-carbon transition. The company does not lobby against vehicle emissions regulations and in fact supports more stringent standards with better measurement methods.

According to IPCC estimates, the transport sector represents almost 14% of all emissions from fossil fuels, and is therefore a significant contributor to climate change. Transport by car constitutes the dominant mode of passenger transportation globally, and emissions from the use of light-duty vehicles need to reduce by 58% between 2010 and 2050, which translates to a reduction of 76% in emissions per kilometre driven[3]. This will come from both reduction of vehicle emissions and shifting passenger journeys away from personal car travel. Decarbonization of the auto sector will not only require technology changes in drivetrain and energy sources, but a reshaping of the global infrastructure that supports vehicle refuelling. Due to the complex and highly integrated supply chains of auto manufacturers, close collaboration with the supply chain will be necessary for this technology shift. Business models will also need to evolve to take advantage of new travel preferences like car-sharing and use of public transportation which will get a boost from low-carbon transition.

For the Auto sector, ACT has taken a detailed look at the company's fleet of vehicles sold over the past five years and developed indicators measuring change from a fleet dominated by internal combustion engines to low-carbon alternatives. This is alongside measurements of engagement with suppliers and customers, plus assessing commitment to developing new business models.

For each aspect of the ACT framework, a summary of what alignment with low-carbon transition looks like for the Auto manufacturing sector is given in the diagram on the left.

3 Energy Technology Perspectives 2015 – International Energy Agency (IEA)

Auto

ACT AUTO PERFORMANCE SCORE ANALYSIS

The ACT pilot on the Auto manufacturing sector reveals a mixed picture of leaders and laggards among the sample. This is expressed both in variable performance on emissions and sales of vehicles, as well as in the divergence of maturity in climate change strategies.

Figure E shows the average overall performance score of the Auto sector sample. Figure F shows the sample average, minimum and maximum scores across the 8 modules of ACT Auto manufacturing that the performance score is built from. Please see the overview table on page 40 for insight on the specific indicators per module.

A key observation on Auto Manufacturers' performance is the variability in management scores. While the Electric Utility sample quite consistently showed high management scores, this is not the case for the Auto sector. The concepts of 2^0 scenario testing and subsequent transition planning on short, medium and longer timescales has not yet been equally adopted by the companies in the sample. Fleet emissions indicators are the most heavily weighted in the assessment, but ACT also seeks a clear strategic focus on reducing fleet emissions via strategy-related indicators on management and business model; as well as customer, supplier and policymaker engagement.

It is citical that the sector as a whole adopts transition planning on timescales up to 15 years into the future. This is because cars sold today will be on the road emitting CO2 for this many years. To therefore make any meaningful commitment to low-carbon transition these are the timescales on which strategic plans will need to be developed.

ACT sample companies only have detailed commitments and plans on a shorter timescale, around 5 years into the future. These are often drafted in the background of more ambitious 2050 goals that commit to total or near-total decarbonization of the fleet by this far-away date. However, the most important changes in order to reach these goals need to be made in the intermediate period, between 2025 and 2035. This is when the speed of transition is the quickest. The absolute emissions from road vehicles can no longer increase after 2030, and therefore during this time, all car companies need to pivot their business model to one dominated by sales of low-carbon vehicles.

To measure the progress that car companies make today towards reaching that pivot point within 15 years, ACT employs several indicators that relate to fleet emissions. ACT also measures the company's relative participation in the global low-carbon vehicle market, which is measured using the low-carbon vehicle sales to market-share indicator.

FIGURE E
PERFORMANCE SCORE
This bar shows the average, minimum and maximum performance score of the Auto sector pilot companies.

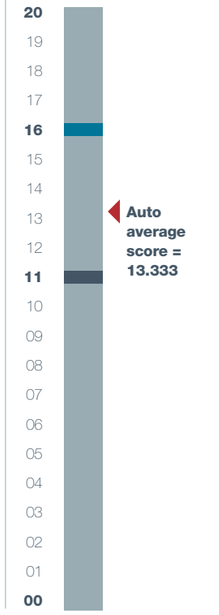
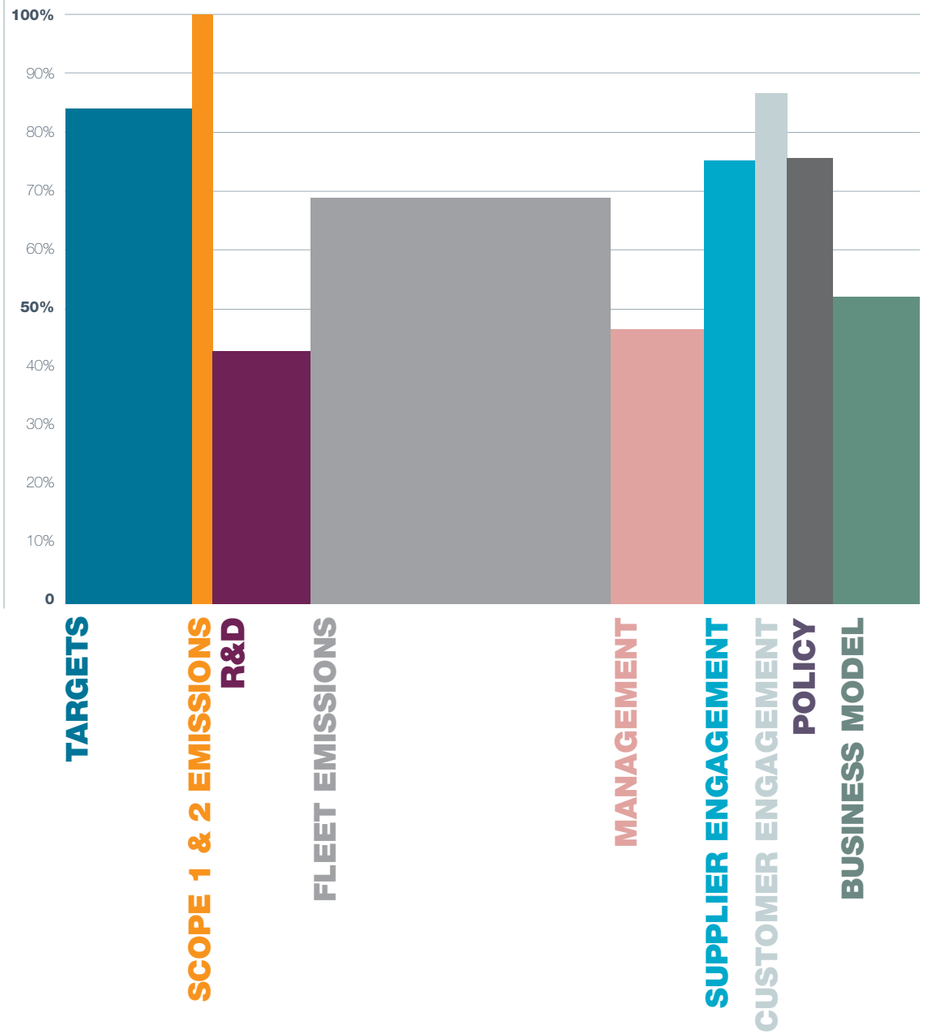


FIGURE F **MODULE SCORE AVERAGES FOR AUTO SECTOR COMPANIES**
The height of the bar represents the average score on this module. The width of the bar represents the weight of this module in the performance rating. Please see the appendix for details of indicators within each module.

X= Modules with weights (total 100%) Y= Score %

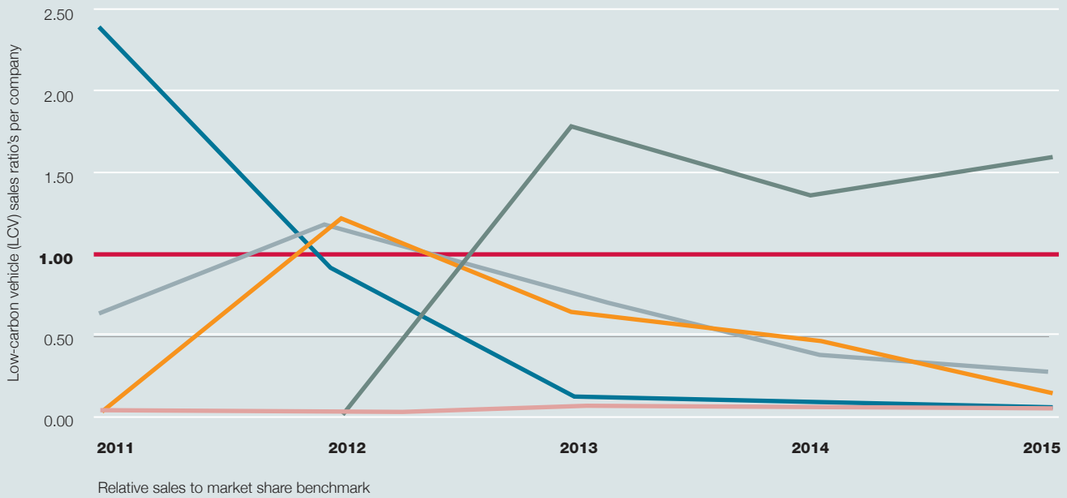


Auto

SECTOR SPOTLIGHT
LOW-CARBON VEHICLE SALES TO MARKET SHARE RATIO

A direct indication of whether auto manufacturers are moving towards the low-carbon economy is to compare the company's sales of low-carbon vehicles to its global market share.

FIGURE G **LOW-CARBON VEHICLE SALES TO MARKET SHARE**



The low-carbon vehicle sales ratio is computed by dividing the percentage of low-carbon vehicles sold by the company by its percentage of global market share of all vehicle sales. The benchmark is that the proportion of global low-carbon vehicle sales is the same as its global market share, which is expressed in the chart as a sales ratio of 1.00. If a company has reached this level, it means that its share of the low-carbon vehicle market is at least as high as its share of the total vehicle market.

A low-carbon vehicle (LCV) is defined as one which has a drivetrain that could potentially run for a significant amount of time without the use of fossil fuels. This commonly includes battery electric vehicles (BEV), plug-in hybrids (PHEV), and Hydrogen Electric Vehicles (HEV). It is important to note that this does not include traditional hybrids without plug-in technology.

Every year, the global market for LCVs grows, from 90,000 vehicles in 2011 to 450,000 in 2015, which means that leading companies have to grow their LCV sales proportionally in order to maintain their leadership status. Of the ACT pilot companies, most have been able to meet this benchmark at least at some point in the last five years, but at the last measurement point in 2015, only one company was selling as much as the benchmark required.

The IEA ETP models that the benchmark is based on require fast growth in the short-term future, with almost 6.7 million LCV sales needed in the year 2020. Observing the sales data, early market leaders have not been able to maintain performance and started lagging behind as the market grew. As low-carbon drivetrain technology is still immature, early iterations of the technology are quickly pushed out of the market by newer vehicles that provide greater performance at lower costs. It will take a continued commitment by auto manufacturers to rapidly develop new models in order to keep up with the technology development required for low-carbon transition.

LEADING PRACTICE

Toyota

TRANSITION PLAN

In the ACT assessment, Toyota had one of the most comprehensive low-carbon transition plans in the ACT project pilot study. The two existing plans outline both short-term targets via their Sixth Environmental Action plan and long-term targets via the Toyota Environmental Challenge 2050, which are both publicly available online. To manage the success of these plans, both action plans have specific quantitative targets, which are ambitious but have realistic timescales set. A key part of Toyota's transition plan is their low-carbon vehicle pathway, which is vital to the transition planning of any auto company. One such target is the widespread adoption of Hydrogen Vehicle (HVs), by expanding the line-up and achieving further high-performance development towards the goal of annual sales of 1.5 million units and cumulative sales of 15 million units of hybrid vehicles by 2020. Additionally, Toyota's low-carbon transition plan extends to all tiers of their supply chain – from the production processes including water consumption targets and the reduction of VOC emissions; logistical efficiency targets; and the promotion of low-carbon vehicles for the downstream value chain. Of fundamental importance in their low-carbon transition plan are schemes to work closely with suppliers, such as their Toyota Green Purchasing Guidelines.

Toyota has positioned the environment as a key management issue and has formed activities around this through a promotional structure for global environment management. This has enabled the company to effectively incorporate climate change targets into their business model. Furthermore, the consideration of potential 'shocks' or stressors of their low-carbon transition has been included into their business plans, by assessing the risks and opportunities related to climate change and water issues in the supply chain.

Auto

AUTO SECTOR CONCLUSION

The ACT methodology for auto manufacturers has focused on fleet emissions and the company's strategic plans. Together they show whether the company is on the right track and changing fast enough to drastically reduce fleet emissions in the coming decades. Assessing the low-carbon transition for this sector has placed all companies, regardless of size, present situation or legacy of choices, on the same playing field. This allowed for a holistic insight into how companies are doing with respect to mitigating climate change.

IEA ETP 2015 states that the desired below-2° climate scenario needs there to be 80 million low-carbon vehicles on the road by 2025. In order to make this this ambitious goal a reality, all automakers will need to take immediate action to grow their technology, production capacity and market adoption. The auto sector is also vulnerable to emissions lock-in effects. New models developed today are expected to stay on the road for many years into the future, and each new car sold with an internal combustion engine commits the world to many years of emissions from that vehicle.

To solve the emissions lock-in problem, transition planning is required. For the auto sector, this is in essence the creation of roadmaps for the production and sale of annually increasing volumes of low-carbon vehicles, which include all the necessary strategic choices and investments to make the deployment of new technologies a reality. The existence of such a strategic plan within a company provides the highest level of certainty for ACT assessments, and for investors, that ambitious climate goals for the company, and the transport sector as a whole, can be reached.

LEADING PRACTICE

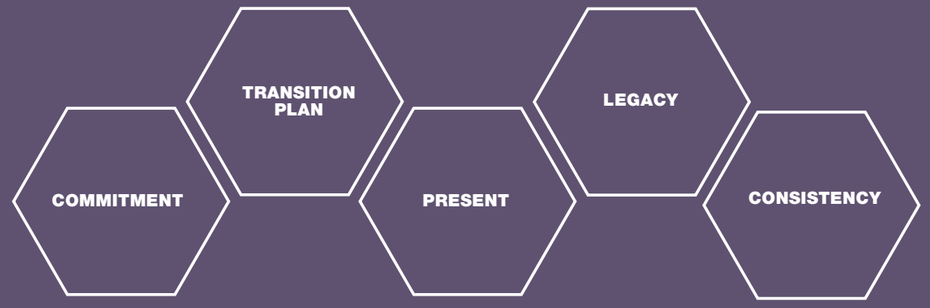
Renault

Of all the pilot companies, Renault shows great consistency throughout its climate performance. Renault has set science-based targets to reduce its scope 1, 2 and 3 emissions, resulting in a perfect score for its target ambition and target horizons. These strong science-based targets extend to 2022 and encompass a 2050 vision. Renault's 2022 target aims for a 31% intensity reduction in emissions across scope 1, 2 and 3 emissions categories in tCO2 per vehicle produced (base year 2010). This has been developed with a proposed 2050 vision that aims for an 88% intensity reduction (base year 2000). Additionally, Renault's significant historic target ambition and company performance has ensured that no horizon gap exists for their scope 3 target setting.

In terms of low-carbon vehicle sales, Renault is a market leader and has experienced rapidly increased low-carbon vehicle sales in the past few years. This has amounted to beyond its market share weighted benchmark – that is, a measure of a company's growth in sales of low-carbon vehicles as compared with annual growth rate required in the sector under a 2-degree scenario. This puts Renault as having no low-carbon vehicle sales gap, being far above the required benchmark. Of their low-carbon vehicle sales, Renault has cemented itself as the leader in electric vehicle sales in Europe, having sold far more electric vehicles than would be expected of the company as per global market share.

3

Retail



ALIGNED STATE	The company's emission reduction targets have a clear inclusion of indirect emissions from their products, which is the priority commitment for the company. The company also shares these commitments with its important value chain partners in order to drive systemic change.	Informed by an extensive carbon hotspotting analysis, the company understands where in the value chain the majority of its embedded emissions are. Furthermore, the company's strategic planning has a clear focus on driving change within these product production systems to systematically reduce emissions.	Current strategies and actions reduce operational emissions, and also leverage the company's strong market position to drive change across the value chain.	Clear evidence of reducing operational emissions, and a strong track record of successful intervention in the value chain that highlights the company's ability to enact change outside of its direct emissions.	The company's targets, transition plan, present and past actions show a consistent willingness to achieve the goals of the transition. The company operates as the connection between customer and supplier engagement to address all relevant chain emissions and take its place in the circular economy.

The retail sector represents the central interface in the economy where the products of manufacturing reach their ultimate consumers. The majority of emissions attributable to the retail sector are not emitted through a company's own operations, but rather from throughout the value chain. A low-carbon transition towards a 2-degree alignment by 2050 will require a transformation not only of the retail sector, but of its whole value chain, from upstream production to downstream use and disposal of products. Their position at the interface of supply chain and consumer means that retailers are uniquely placed to influence behaviour that can reduce emissions both upstream and downstream in the value chain. Retailers can aggregate a large number of consumer signals to send messages to their suppliers about the need to reduce emissions, or they can make choices which cause reductions in the emissions of their individual customers. The potential total reductions are huge.

For the retail sector, ACT has taken a detailed look at the company's value chain emission reduction strategies and what those might mean for the future of the company. The diagram at the left of the page shows a summary of what alignment with low-carbon transition looks like for the Retail sector, within the ACT framework.

Retail

ACT PERFORMANCE SCORE ANALYSIS

The ACT Retail sector assessment revealed that while companies have begun to recognise the importance of reducing emissions in the value chain for low-carbon transition, reductions in these emissions are not yet being delivered at scale. While promising approaches to help suppliers and consumers reduce emissions in the production or use of products are being trialled, action needs to increase in scale and pace to achieve the huge potential emissions reductions that could be catalysed by the retail sector globally. Including value-chain emissions reductions in strategic planning and building on the sectors' responsiveness to trends could help see this potential realised.

ACT PERFORMANCE RESULTS FOR THE RETAIL SECTOR

The pilot companies for the Retail sector show a strong performance for their scope 1 and 2 emissions reductions and their policy engagement, but this is not carried over to their sold product performance and future business model results. This indicates that although the pilot companies are excelling on reducing their operational emissions, for example from transport or refrigerant leakages in the case of food retailers, they are struggling to translate this expertise to reduce their value chain emissions. Retailers will be a critical actor in the development of a circular, low-carbon economy as they can exert influence throughout the length of complex supply chains, and shifting customer choices and behaviour. Companies need to do more to take on this role, from which they stand to gain not only carbon reduction benefits, but also increased financial value.

Effectively reducing emissions in the value chain means going beyond collaboration to work on a basis of shared accountability. All stakeholders must recognise the need to work together and hold each other accountable for taking action to reduce emissions. Whereas collaboration may lead to opportunities that are "win-win" for both parties being pursued, a shared accountability approach also allows development of "win-neutral" and even "win-lose" emissions reductions opportunities by including alternative compensation models.

For the retail sector to decarbonize future retail business models will need to better integrate targets to reduce the embedded emissions of their products. Retail companies must take a shared accountability approach in their emissions reductions strategies by working and engaging with suppliers and customers in their value chain to achieve these targets.

FIGURE H
PERFORMANCE SCORE
This bar shows the average, minimum and maximum performance score of the Retail sector pilot companies.

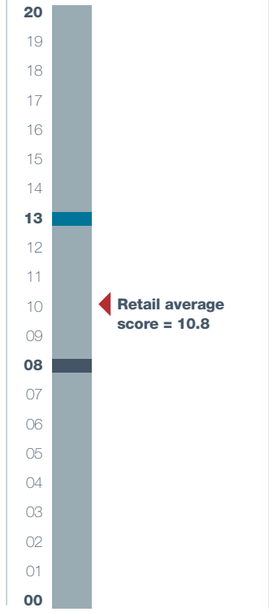
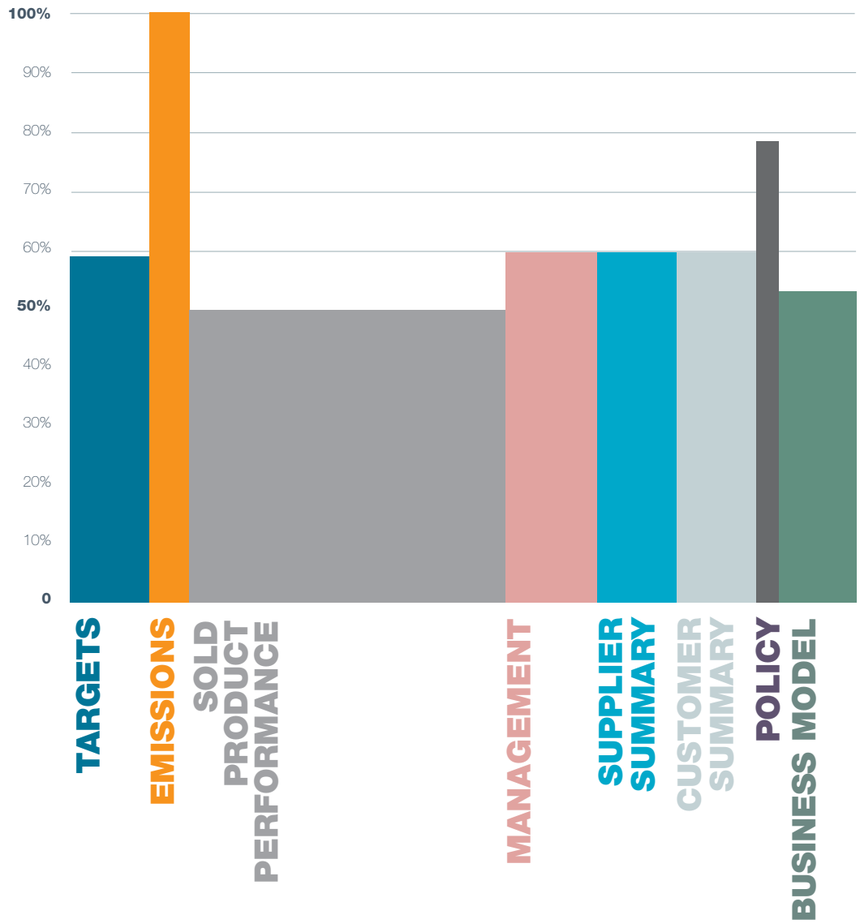


FIGURE I **MODULES SCORE AVERAGES FOR RETAIL SECTOR COMPANIES**
The height of the bar represents the average score on this module. The width of the bar represents the weight of this module in the performance rating. Please see the appendix for details of indicators within each module.

X= Modules with weights (total 100%) Y= Score %



Retail

SECTOR SPOTLIGHT
DEPTH OF FIELD

Addressing emissions reductions in the product value chain is challenging. Difficulties in measuring value chain emissions cause the traditional measure – manage – reduce model of emission reductions to break down. ACT therefore focusses on the final step of this model, assessing actions companies are implementing to reduce sold product emissions. These emissions reduction initiatives are named "interventions" in the ACT methodology.

The vast majority of emissions produced from the retail sector do not come from retailers' own operations, but rather from various processes in the value chain. A retailer will sell products composed of raw materials that are manufactured and processed, transported between the source, factories and distribution centres, and delivered to the retail store or direct to the customer. For many products, this value chain is global and highly complex. As a result of this complexity the embedded emissions of the products retailers sell far outweigh any emissions a retailer may produce operationally. Although the potential to reduce emissions in the upstream and downstream part of the value chain is huge, so is the task of working with all the different actors involved effectively.

Obtaining emissions data for value chains is often difficult; because of their complexity and reach calculations must address questions of how to trace materials and account for carbon emissions resulting from thousands of economic transactions. ACT consequently chooses to assess the 'interventions' that retailers take to reduce value chain emissions. This avoids waiting for completion of a difficult measurement stage, and instead focuses the assessment on current action. Interventions are often collaborative in their approach, and involve strategies where companies exercise their market position and influence to reduce GHG emissions from the value chain.

Methods do exist to reliably estimate value chain emissions, especially for the upstream part of the supply chain. Environmental Input-Output (EIO) modelling combines a model of economic relationships in the economy with data on the carbon emissions from each industrial sector, and allows estimation of upstream emissions. The ACT retail methodology assessed interventions targeting the product categories which are emissions "hot-spots". In order to assist companies which had not completed an extensive carbon hotspotting exercise, a simple tool based on EIO data to assess the supply-side emissions contributions of various product categories was developed. (Customer use and disposal may constitute a significant proportion of emissions from a product. However, measurement systems for these phases are not as mature for all products and were excluded from the scope of this tool.)

SUPPLY CHAIN INTERVENTIONS

Supply-side interventions are illustrated by Figure J. Each intervention provided by a company is assigned a score between 1 and 5, and the frequency of each score is displayed against how far each intervention reaches down the supply chain. Supply side engagement ranges from tier 1 to tier 3: Tier 1 represents direct buyer and seller engagement, which includes logistics partners; tier 3 is the deepest down the supply chain, which extends to the source; and tier 2 includes all stakeholders which are between tier 3 and tier 1, including manufacturers.

FIGURE K **RETAIL SCORE FREQUENCY AGAINST SUPPLY CHAIN TIER TARGETED**

SCORE	TIER 1	TIER 2	TIER 3
4	1	2	4
3	1	1	7
2	1	1	0
1	0	0	0

FIGURE J **RETAIL SUPPLY CHAIN**

Scoring of interventions assesses the degree to which the intervention has achieved its likely potential for emissions reduction. The diagram shows that despite many interventions targeting tier 1 and 2 suppliers, those interventions scoring well are more likely to target tier 3. This reflects that, firstly, while tier 1 and 2 interventions can be realised by engagement with one or a small number of suppliers with which a relationship already exists, tier 3 interventions may require new relationships with a large number of entities to be formed. Targeting a larger number of organisations brings a larger amount of emissions into the scope of the intervention, and a greater potential to reduce these emissions.

Secondly, products based on agricultural commodities are often carbon hot-spots for the retailers assessed, and so were prioritised for reporting. Effectively reducing agricultural emissions requires going beyond direct collaboration with a small number of suppliers to work with a disparate range of producers, often via third-party organisations and alongside peer companies in industry coalitions. Some ACT pilot companies are effectively addressing the significant emissions from agriculture via shared accountability mechanisms.

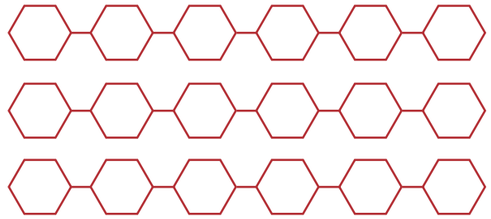
Retail

RETAIL SECTOR CONCLUSION

SHARED ACCOUNTABILITY IS KEY TO TRANSITION TO A LOW-CARBON ECONOMY

The complexity of the retail sector's value chain presents a significant challenge to achieving a complete view of a company's emissions impact. The ACT assessment therefore considers both qualitative and quantitative information to gain insight into the low-carbon alignment of the sector. The pilot particularly emphasised the analysis of sold product performance. This has enabled a practical, action oriented assessment of the retail sector that has circumvented some of the often encountered barriers of value chain emissions accounting.

The concept of shared accountability is critical for the retail sector to decarbonise because of its complex, dynamic and highly interdependent supply chains.



A transformation of the whole retail sector value chain is required to reach 2-degrees target.

The concept of shared accountability is critical for the retail sector to decarbonise because of its complex, dynamic and highly interdependent supply chains, and need for effective collaboration across many different tiers of supplier. Collaboration enables companies to learn and share knowledge to address climate change risks and cut emissions. Shared accountability goes beyond this to seek solutions even where there are asymmetric incentives to reduce emissions.

Within the ACT pilot companies both awareness of, and acceptance of responsibility for value chain emissions is increasing, with some retailers setting science based targets to address value chain emissions. Effective interventions are already being carried out that will bear fruit in reducing value chain emissions in the future. Such interventions contain a strong local focus and have a track record of achievement, and enable pilot companies to leverage their market position and influence in their value chains in order to achieve GHG reduction targets.

LEADING PRACTICE

Decathlon

Decathlon has notably strong action underway for reducing emissions. Decathlon's strategies incorporate reductions of direct emissions, and in particular indirect emissions reductions into its business model, thus improving sold product performance. Notably, the company places emphasis on using recycled material in the production of some own-brand products, as well as optimising energy use in production through the choice of production methods. Decathlon has a strong consumer focus integrated into its business plan, which enables customers to make low-carbon choices. Of particular note are initiatives such as repair services to extend the life-cycle of products; eco-design; and the "Trocathlon" initiative – a bi-annual event and online exchange service whereby consumers are able to sell second-hand sports equipment free of charge. Decathlon uses an extensive carbon hotspotting method, which is repeated and updated as more products are added each year. Hotspotting informs their eco-design, and is used to shift consumers' purchasing patterns.

Decathlon has recognised that the majority of its emissions come from its products, which it has recently quantified by taking part in the Product Environmental Footprint (PEF) pilot study. Using the results from this, and its association with the PEF initiative, Decathlon has ascertained that 74% of its emissions come from the upstream value chain. One of Decathlon's strongest upstream interventions involves targeting dyeing of products, working with a subcontractor to develop a new dry dyeing process that uses considerably less energy and water.

Conclusions

1. IMMEDIATE ACTION IS REQUIRED DUE TO LOCK-IN EFFECTS

There is an immense journey still to be taken to decarbonize value chains that are predominantly powered by fossil fuels. It will take time to transition to an economy based on decarbonized energy sources.

As the economy continues on a “business as usual” trajectory, inertia to maintain the current modus operandi increases while the time remaining for a successful transition to the low-carbon economy grows shorter. This increases both the scale and the speed of decarbonisation required, making the transition increasingly difficult the longer action is delayed. The challenge is therefore to activate companies in all economic sectors to recognize the necessity of immediate action. Companies have to be able to evaluate their position with respect to the low-carbon economy in a way that is not only connected to today’s emissions, but also to all relevant choices made in the past and the present that have an effect on the possibility of reaching a future without dangerous climate change.

2. TRANSITION PLANNING IS AN ESSENTIAL TOOL

To have confidence that companies will actually reach this low-carbon future, the path ahead needs to be scouted. This requires companies to set out their route, identify milestones and plan important turning points. This is transition planning, and it is a necessary evolution in strategic environmental planning.

This is not about how the current business model can continue to exist while reducing climate impact; instead, it is about how the business model can be transformed. Using low-carbon scenario analysis and deep knowledge of the company’s impact inside its own operations and in its value chain, transition plans can set out actions needed in order to minimize climate impact while retaining value.

3. SHARED ACCOUNTABILITY IS NEEDED

In order to decarbonize the entire value chain within and across sectors, it is not enough for a company to look inward and be accountable for the transition only within its own operations. Many dependencies exist within sectors and some sectors have most of their emissions embedded in their products.

A successful and aligned transition requires shared accountability, which is the means by which stakeholders within a system can go beyond collaboration to hold each other accountable for progress made together. This is most relevant for sectors such as retail, with complex supply chains whereby actors have to rely on each other to make the necessary changes to products to reduce emissions fast enough.

4. LEADING COMPANIES ARE READY

ACT methodology development aimed to recalibrate assessments of company climate performance towards a new benchmark, fully aligned with the requirements of the low-carbon economy. The examples given here show that leading companies are already achieving this ambitious level of alignment in certain areas.

Although none of the companies assessed have proved to be aligned with all of the requirements of low-carbon transition, the fact that these examples of excellence already exist shows that the steps necessary for transition to the low-carbon economy are achievable in practice. The challenge now for every company is to reach a consistent level of excellence across all the areas of the ACT assessment. The examples spotlighted prove that leading companies across different sectors are ready for the transition to a low-carbon economy. In many cases, these transitions are already underway, with companies starting to change their business models and strategic plans towards a 2^0 alignment.

Next steps - Potential users and use cases

While all the outputs of ACT could be used in a variety of ways by those interested in corporate responses to climate change, some examples of potential uses are set out here:

Those operating programs to incentivize companies to reduce their GHG emissions, whether on a voluntary or regulatory basis, can implement ACT assessment methodologies to assess companies. ACT assessments can determine which companies in key sectors are taking effective action to transition to the low carbon economy. Assessment results could be used to recognize leading companies, or recognition could be given for participation in an assessment program.

Analysts could use the detailed results of company assessments when engaging with companies on their preparedness for transition to the low-carbon economy. For example, benchmark levels for a company to achieve could be developed; or areas of strength or concern identified in the course of the assessment could be followed up on. Once widespread coverage of companies in a sector or investment universe has been achieved, ACT assessment results could inform asset allocation decisions, or be incorporated into investment analysis. Rating agencies could also use ACT methodologies to provide a climate performance element to their own decisions.

Data gathering for an ACT assessment and preparing to report against the ACT methodologies can give companies a framework for action to transition to the low-carbon economy. It can also help prepare responses to investors engaging with companies on their preparedness for low-carbon transition. Finally, public ACT ratings could be used by companies to benchmark themselves against their peers and communicate their progress to internal and external stakeholders.

ACT – The future

ACT 2.0

To build on the success of the ACT pilot project, new partners have been brought on board, and 16 organizations signed the "ACT declaration" over the course of COP22 committing to further the broader aims of ACT. Various pieces of work are planned or under development for ACT 2.0. The project will be structured on a modular basis with work packages including country and sector road testing; and capacity building; going ahead semi-autonomously to allow rapid deployment.

The ultimate goal is to enable ACT assessments at a truly global scale and embed the ACT approach as next practice within the GHG management and measurement ecosystem. In order to successfully achieve this ambition the governance structure, data infrastructure and business model of the project will be thoroughly researched, developed and market-tested over the next 36 months.

The ACT pilot project confirmed that taking a more rigorous approach to company assessments of climate action is technically feasible to develop, and that leading companies are both prepared for such an assessment approach and can find value in it. However, the pilot also revealed challenges to the development and implementation of ACT assessment methodologies. There will also be additional challenges that the ACT approach faces if it is to achieve its goal of catalyzing positive climate action at scale.

DETAILS OF CONFIRMED NEXT STEP PROJECTS

The ACT pilot companies were distributed globally but mainly located in the largest global economies. Achieving scale will also depend on bringing the project to smaller and developing economies, although such contexts will bring a different set of challenges for project implementation.

The next phase of the ACT project is actively seeking to address these challenges by running "road tests" of the methodology in different contexts.

France: 30 selected SME and mid-cap companies, from the existing ACT sectors plus Construction and Food & Beverage will participate in a road-test of adapted versions of the methodologies during 2017.

Central and Eastern Europe: SME and mid-cap companies will participate in a road-test of methodologies supported by a significant capacity-building infrastructure to build knowledge of GHG management techniques.

In addition to these confirmed initiatives, the project team is identifying other opportunities to scale up and implement the ACT methodologies and is keen to welcome new partners to the project.

Full articulation with other initiatives

Table of comparison

ACT development is not occurring in a vacuum and there are a variety of related approaches being developed to tackle the issue of advanced corporate climate action. ACT project partners are themselves involved in a number of these initiatives. These have informed ACT in two main ways:

Firstly by offering specific methodological approaches which have been incorporated, or supplying specific data for assessments.

Secondly, the general knowledge and experience gained from the development and implementation of these allied initiatives was used by the ACT methodology development team to make ACT methodology development more effective.

INITIATIVE	ORGANISATIONS LEADING	DESCRIPTION	KEY OUTPUTS	INTENDED USERS	ARTICULATION WITH ACT
ASSESSING LOW-CARBON TRANSITION	ADEME, CDP	ACT develops sector-specific methodologies to assess company alignment with low-carbon transition and produce a rating reflecting the results. The Pilot project produced confidential ratings for 12 companies across the Electric Utility, Auto and Retail sectors.	Sector-specific methodologies, and individual company ratings of alignment with low-carbon transition.	Rating agencies, investor analysts, program operators, companies	N/A
SCIENCE BASED TARGETS INITIATIVE (SBTI)	CDP, WRI, WWF, UNGC	The SBTi seeks to develop and disseminate best practice in setting corporate GHG reduction targets to ensure that company targets are in line with the requirements of climate science.	New methodologies by which companies can set science-based targets; clearing house of third-party methods for target setting and associated tools; validation of company targets	Companies seeking to set science based targets	SBT's Sectoral Decarbonisation Approach methodology forms the basis of developing company emissions benchmarks in the ACT methodology.
SEI METRICS	2DII, Frankfurt School of Finance, University of Zurich, Cired, Kepler-Chevreux, Climate Bonds Initiative, CDP, WWF Germany, and WWF EPO	Key features of the SEI Metrics approach include being a portfolio-level analysis involve the use of bottom-up, physical asset level databases for key sectors and their matching to financial securities (a global universe of listed equities and corporate bonds). The portfolio-level focus of the project led to the use of bottom-up asset-level data that with universal coverage rather than data obtained from corporate disclosure such as the CDP survey.	Portfolio assessment tool measuring the alignment of listed equity and corporate bonds portfolios with climate goals, and associated potential capital misallocation under various decarbonisation pathways.	Investment analysts and portfolio managers	Overlap of asset level source data for assessments. Knowledge sharing by project partners on data issues.
CDP SCORING	CDP	CDP produces over 7,000 scores annually, based on the information disclosed by companies to its Climate Change, Water and Forests programs in response to CDP questionnaires. CDP scoring partners apply the CDP scoring methodologies to produce scores which are made available to the public	Annual company scores for climate change, water and forests performance.	Companies, investors, general public	Insights from CDP scoring methodologies and information disclosed to CDP was used in ACT methodology development and ratings.
CDP INVESTOR RESEARCH	CDP	CDP investor research provides new insight on the climate-related risks facing large emitting sectors, which may have an impact on the valuation or value creation potential of these companies.	Regular research reports and rankings of large companies in the biggest emitting sectors	Investment analysts, portfolio managers, asset owners.	Insights and experience of the CDP investor research team informed ACT methodology development.

Indicator table

	ELECTRIC UTILITIES	WEIGHT	AUTO	WEIGHT	RETAIL	WEIGHT
TARGETS	1.1 Alignment of future emission reduction targets 1.2 Time horizon of targets 1.3 Achievement of previous targets	20	1.1 Alignment of Scope 1+2 emissions targets with 2-degree scenario. 1.2 Alignment of Scope 3 emissions targets with 2-degree scenario 1.3 Time horizon of Scope 3 targets 1.4 Historic target ambition and company performance	15	1.1 Alignment of Scope 1+2 emission reduction target with low-carbon scenario 1.2 Alignment of Scope 3 emissions target with low-carbon mitigation scenario 1.3 Achievement of previous targets	10
MATERIAL INVESTMENT	2.1 Trend in future emissions intensity 2.2 Emissions lock-in 2.3 Trend in past emissions intensity	35	2.1 Alignment of past Scope 1+2 emissions performance with 2-degree scenario	2	2.1 Alignment of past Scope 1+2 emissions with 2-degree mitigation scenario	5
INTANGIBLE INVESTMENT	3.1 R&D in Climate Change mitigation technologies	10	3.1 Low-carbon R&D intensity as a percentage of total investments	12		0
SOLID PRODUCT PERFORMANCE		0	4.1 Fleet emissions pathway 4.2 Fleet emissions lock-in 4.3 Low-carbon vehicle share 4.4 Conventional ICE vehicle efficiency performance	35	3.1 Product-specific interventions on a maturity matrix	40
MANAGEMENT	5.1 Climate change management incentives 5.4 Climate change oversight capability 5.3 Oversight of climate change issues 5.5 Low carbon transition plan 5.6 2' scenario testing 5.2 No fossil fuel incentives	20	5.4 Climate change management incentives 5.2 Climate change oversight capability 5.1 Oversight of climate change issues 5.3 Low carbon transition plan 5.5 2' scenario testing	11	4.3 Climate change management incentives 4.2 Climate change oversight capability 4.1 Oversight of climate change issues 4.6 Low carbon transition plan 4.4 Waste reduction strategy 4.5 Product carbon hotspotting	12
SUPPLIER ENGAGEMENT		0	6.1 Engagement with suppliers	6	5.1 Strategy to influence suppliers to reduce GHG impacts 5.2 Activities to influence suppliers to reduce GHG impacts	10
CLIENT ENGAGEMENT		0	7.1 Efforts to promote sales of more efficient vehicles	4	6.1 Strategy to influence consumer behaviour to reduce GHG impacts 6.2 Activities to influence consumer behaviour to reduce GHG impacts	10
POLICY ENGAGEMENT	6.1 Position on significant climate policies 6.2 Trade associations supported have no negative climate positions 6.3 Company policy on engagement with trade associations	5	8.3 Position on significant climate policies 8.2 Trade associations supported have no negative climate positions 8.1 Company policy on engagement with trade associations	5	7.1 Position on significant climate policies 7.2 Trade associations supported have no negative climate positions 7.3 Company policy on engagement with trade associations	3
BUSINESS MODEL	7.1 Integration of low-carbon economy in current and future business model	10	9.1 Business activities that reduce barriers to market penetration of low-carbon vehicles 9.2 Business activities that contribute to low-carbon optimization of personal mobility 9.3 Business activities to facilitate modal transport shift	10	8.1 Business activities for advanced low-carbon retailing	10

Leading partner: ADEME

The French Environment and Energy Management Agency (ADEME) is a public agency under the joint authority of the Ministry of Environment, Energy and the Sea, and the Ministry for National Education, Higher Education and Research. The agency is active in the implementation of public policy in the areas of the environment, energy and sustainable development.

ADEME provides expertise and advisory services to businesses, local authorities and communities, government bodies and the public at large, to enable them to establish and consolidate their environmental action. As part of this work the agency helps finance projects, from research to implementation, in the areas of waste management, soil conservation, energy efficiency and renewable energy, air quality and noise abatement. www.ademe.fr

Leading partner: CDP

CDP works to transform the way the world does business to prevent dangerous climate change and protect our natural resources. It has pioneered the only global natural capital disclosure system where over 4,500 companies, representing over 50% of the market capitalization of the world's largest 30 stock exchanges, and 110 cities from 80 countries, report, share and take action on vital environmental information. www.cdp.net

Verification partner: ClimateCHECK

ClimateCHECK are experts on assurance and standards for climate, cleantech and sustainability. To support the transition to Standards 2.0, ClimateCHECK developed the Collaborase online platform engaging over 5000 of experts from around the world in next generation standards systems. ClimateCHECK also co-founded the GHG Management Institute as the world leader for training and capacity building on GHG MRV with over 7000 of members in over 150 countries. www.climate-check.com

Partner: 2DI

The 2° Investing Initiative is a multi-stakeholder think tank working to align the financial sector with 2°C climate goals. Its research and engagement activities seek to:

- Align investment processes of financial institutions with 2°C climate scenarios;
- Develop the metrics and tools to measure the climate performance of financial institutions;
- Mobilize regulatory and policy incentives to shift capital to energy transition financing.

The association was founded in 2012 in Paris and represents three legal entities based in New York, Berlin, and Paris and one office in London, with projects in Europe, China and the United States. 2degrees-investing.org

Partner: EIB

As the EU bank, the EIB provides long-term finance for sound, sustainable investment projects in support of EU policy goals in Europe and beyond. Owned by the 28 EU Member States, the EIB is the largest multilateral lender and borrower in the world. The Bank has over 3000 staff who can build on over 50 years of experience in project financing. The EIB is headquartered in Luxembourg and has a network of over 40 local offices. www.eib.org

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