Climate and Energy Benchmark

Methodology report automotive industry

July 2019

World Benchmarking Alliance

WBA and CDP form strategic partnership to further decarbonize the economy and ensure a climate resilient future

World Benchmarking Alliance (WBA) is partnering with CDP, the disclosure non-profit, and Assessing Low Carbon Transition ('ACT' - developed with the French government), to accelerate a global decarbonisation and energy transformation. The Climate and Energy Benchmark will rank companies against the energy and climate transformation required to meet the Paris Agreement engaging with the companies themselves, looking at current plans, the action pathway and past and present performance to assess future alignment and action. This report presents the scope, industry and companies for inclusion in our first benchmark - the Automotive Benchmark which we expect to drive increased transparency and further corporate accountability.

Overview

"The automotive industry is facing unprecedented change if our world is to meet the ambitions of the Paris Agreement. Only disruptive shifts such as phasing out of the internal combustion engine in the next decade will put us on a pathway to emission-free mobility."

Vicky Sins
Lead Climate and Energy Benchmark

The World Benchmarking Alliance (WBA) is developing a range of benchmarks to assess the progress of 2,000 companies across seven systems transformation needed to achieve the UN's Sustainable Development Goals (SDGs) and accelerate sustainable business beyond 2030.

The private sector has a crucial role to play in advancing the SDGs but there needs to be real change in the way that business impact is measured. Through free, publicly available benchmarks, WBA sees a future where companies, investors, policymakers, civil society and individuals are empowered with data to take action and encourage more sustainable business practice across all sectors.

Decarbonising the economy: The Climate and Energy Benchmark

Climate change represents the single biggest threat to development. Without urgent action, the world will experience more extreme weather events, sea level rise, and impacts on biodiversity, ecosystems, and our oceans. This will have a disproportionate effect on the poorest and most vulnerable populations in the world for decades to come. A major decarbonisation and energy transformation is still needed to align with global efforts to prevent the worst impacts of climate change and reach the ultimate end game – The Paris Agreement - to limit global warming to well below 2 degrees. This is the accountability mechanism – the Climate and Energy benchmark will measure corporate progress against the Paris Agreement. Private sector engagement alongside governments and civil society is critical to meeting this ultimate end game.

The Automotive Industry

The transportation sector, which includes Automotive, represents about one quarter of all emissions from fossil fuels and challenges in terms of climate mitigation. Decarbonisation of the transport sector is one of the major transitions in any low-carbon scenario. The majority of global passenger travel is made using passenger cars or buses, which emit higher average CO^2 per passenger-kilometre than other ground transport, such as railway travel. With car-ownership and travel expected to increase, the future technology pathway of the auto manufacturing sector is paramount towards enabling a low-carbon transition. The automotive industry is important to deliver on the ambitions to decarbonize the sector. WBA believes that there is momentum for climate action within the auto industry. This benchmark and the methodology can set an important example for other industries within the transportation sector to deliver on their decarbonization strategies.

Reducing emissions

80% of the emissions in a car's lifetime are created during fleet emissions - the combustion of fossil fuels. The main focus of the methodology and benchmark will therefore be on how auto manufacturers intend to reduce their fleet emissions between now and 2050. Besides the reduction of fleet emissions through technology, such as electrification, the transition of the transport sector will also imply a rethinking of the way cars are used in society. Using the methodology to set climate action goals within the company's strategy is important. Car companies are challenged to present their views on the intensification of car-usage, and how they see their role evolve in scenarios that imply a different use-case of cars, such as a move away from private ownership to car-sharing.

Aligned state for a company in the auto sector

The general approach of ACT is based on the Sectoral Decarbonization Approach (SDA) in order to compare a company's alignment with a 2-degree world, the application of which is described in the ACT Methodological Framework document.

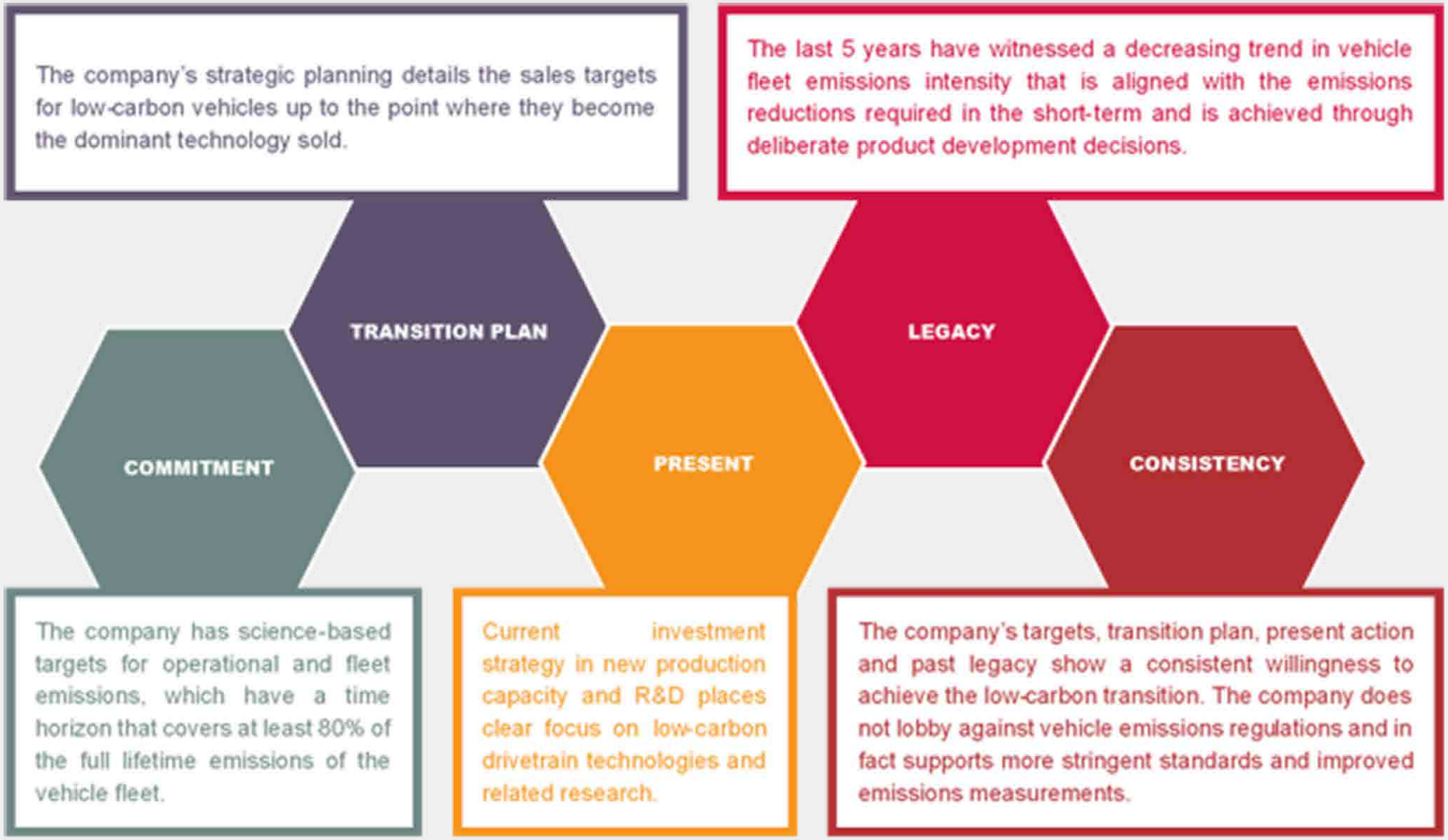

Figure 1: Aligned state for a company in the auto sector, CDP Worldwide & ADEME 2019

ACT Methodology and Assessment criteria

WBA will translate this methodology into the publication of various benchmarks in high emitting sectors, starting with the Automotive industry. Our goal is to drive action by companies, investors, policy makers and other stakeholders. It encourages businesses to move to a well below 2-degrees compatible pathway in terms of their climate strategy, business model, investments, operations and GHG emissions management.

For the auto manufacturing industry, particular emphasis will be placed on fleet greenhouse gas (GHG) emissions. The methodology considers such factors as: fuel efficiency of internal combustion engine (ICE) cars, technological changes towards advanced low-carbon vehicles, as well as other technological pathways for reducing on-road emissions compared to those from test-conditions. This information will feed simplified assessment models that aim to quantify the implications of, for example, a particular technology choice and the rate of efficiency improvements in the fleet. In addition to business model considerations, other qualitative indicators included are the company's stance on climate change regulations and engagement within the supply chain.

Although scenarios predict that modal transportation shifts will be vital to decarbonization of the transport sector, these changes lie outside the boundary of company activities chosen for the ACT assessment. However, auto manufacturers' business models may react to these modal shifts, for example by beginning to manufacture vehicles for mass transportation, and this will be considered relevant for the assessment. Business models may also diversify to include activities which aim to reduce barriers to uptake of advanced low-carbon vehicles, for example developing charging infrastructure for electric vehicles, and this will be included in assessment indicators.

Public consultation was an important step in the development of the ACT methodology. ACT sought the views and opinions of a wide range of stakeholders including companies, NGOs, academics and other relevant experts. WBA will continue to embrace multi-stakeholder dialogue and consultation throughout the benchmark development process. This will ensure the benchmarks are based on the best available science, build on or integrate with existing standards and frameworks, and support multi-stakeholder action.

Auto companies – Scope setting

The definition of the sample is to be data-driven, reproducible and avoid complexity. It focuses on impact: climate impact – related to the size of production and emissions of vehicles – or market impact – related with the portion of the market, the value of the company and its capacity to disrupt the market trends.

"We need to think and act in systems to drive transformative change and identify the 'keystone companies' that can help put the world on a more sustainable path. WBA will identify and rank the world's most influential companies in terms of their impact on the SDGs. This transparency and insight in performance will support accountability; and given the influence these keystone companies have over their employees, suppliers, customers and communities, this could lead to real and transformative change."

Gerbrand Haverkamp
Executive Director, World Benchmarking Alliance

We used the following methodology to identify the keystone companies:

1. Target the most impactful companies using for example, the CDP Investor Research Autos report for publicly listed companies and high production privately owned companies.

2. Research and data gathering: in terms of corporate structures – companies that are subsidiaries or have been merged or incorporated into others in recent years have been taken into consideration. The emphasis is put on light duty vehicles. Data is gathered on vehicle production, market capitalization and revenue.*

3. Analysis: all companies are then ranked through an 'impact index' that equally weights vehicle production, market capitalization and revenue. The first twenty five companies in the 'impact index' are considered in scope as a keystone company with direct impact on the transformation of the sector.

*Sometimes data is not publicly available on one specific indicator, in which case the company gets a zero mark in the ranking for that specific indicator.

Auto companies – Scope setting

Keystone companies that will form part of the Automotive Benchmark are:

1	Toyota Motor Corporation	Japan	East Asia
2	Volkswagen AG	Germany	Europe
3	General Motors Company	USA	North America
4	Saic Motor Corporation	China	East Asia
5	Ford Motor Company	USA	North America
6	Honda Motor Company	Japan	East Asia
7	Daimler AG	Germany	Europe
8	Hyundai Motor Co	South Korea	East Asia
9	Nissan Motor Co., Ltd.	Japan	East Asia
10	Mitsubishi Motors Corporation	Japan	East Asia
11	BMW AG	Germany	Europe
12	Fiat Chrysler Automobiles NV	Italy	Europe
13	Dongfeng Motor Group	China	East Asia
14	Renault	France	Europe
15	Groupe PSA	France	Europe
16	FAW Car Company Limited-A	China	East Asia
17	Suzuki Motor Corporation	Japan	East Asia
18	BAIC Motor Corporation Ltd	China	East Asia
19	Guangzhou Automobile Group Co. Ltd	China	East Asia
20	Chongqing Changan Automobile Company Limited	China	East Asia
21	Geely Automobile Holdings	China	East Asia
22	SUBARU CORPORATION	Japan	East Asia
23	Tesla Motors, Inc.	USA	North America
24	Mazda Motor Corporation	Japan	East Asia
25	Tata Motors	India	India