2024 Climate and Energy Benchmark

Automotive and Transportation Manufacturers FAQ

I. Climate & Energy Benchmark

Q. What is the WBA Climate and Energy Benchmark?

The World Benchmarking Alliance (WBA) Climate & Energy Benchmark ranks the most influential companies in high-emitting sectors by their low-carbon transition efficiency.

WBA* developed the Climate & Energy Benchmark to assess the highest corporate carbon emitters. The goal of the benchmark is to measure corporate progress against the Paris Agreement and a just transition.

The benchmark now covers 450 of the world's most influential, keystone companies in the high-emitting sectors of as automotive manufacturers, heavy industries, oil and gas, transport, and buildings. The benchmark covers both the climate performance of a company using industry-specific ACT methodologies (Accelerate Climate Transition), and a social assessment on core social and just transition indicators.

The following sectors have been assessed in the past three years:

- 2021 Automotive
- 2022 Transport
- 2023 Buildings
- 2023 Oil and gas
- 2023 Electric Utilities
- 2024 Heavy Industries

These assessments have been updated regularly and are free and accessible on the WBA website.

From 2021 – 2023 WBA worked in partnership with CDP** on the Climate and Energy Benchmark. CDP provided company's public climate questionnaires.

**WBA (World Benchmarking Alliance) is a not-for-profit organisation running a series of benchmarks that assess the world's most influential companies on their contributions to sustainable development goals (SDGs).*

***CDP is a not-for-profit international organisation that runs the global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts.*

Q. How to read the benchmark's score?

In the WBA Climate and Energy Benchmark rankings, a total score out of 100 is calculated from the ACT rating, the core social score and the just transition score.

ACT, core social and just transition scores account for 60%, 20% and 20% of the total score respectively. More information can be found in the Climate and Energy Benchmark methodology report. The ACT score refers to the company climate performance across three dimensions, with the highest possible rating being **20A+**:

- Performance score (ranging from 0 to 20): Indicates transition alignment measured with a range of quantitative and qualitative performance indicators.
- Narrative score (ranging from E to A): A rating based on a comprehensive review of the performance indicators data and public information summarising the company's overall strategic position.
- Trend score (+, =, -): A forward looking assessment of the likely near-term evolution of company's score: improving, staying the same or worsening.

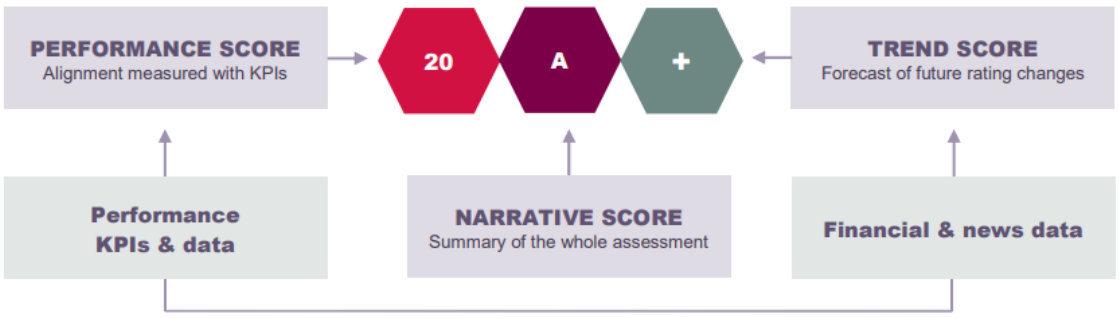

FIGURE 1. THE ACT SCORE: PERFORMANCE, NARRATIVE AND TREND

In the final WBA Benchmark rankings, a total score out of 60 is calculated from the ACT rating:

1. The performance score remains as it is i.e. out of 20
2. The narrative score is also weighted out of 20 with each letter receiving the following scores: A=20, B=15, C=10, D=5, E=0
3. The trend score is given the following scores '+' = 2, '=' = 1, '-' = 0
4. The scores are summed and then divided by the maximum possible score of 42, and normalised to give a score out of 60.

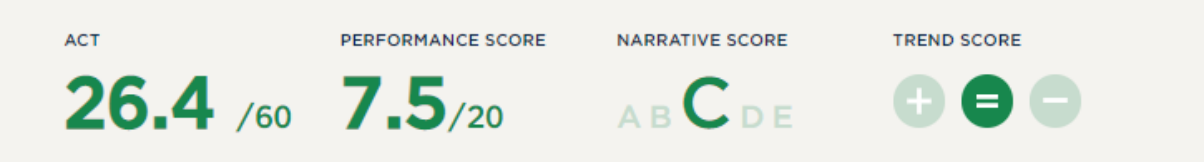

FIGURE 2. EXAMPLE OF THE ACT RATING SCORE

There are 18 core social indicators which are scored out of 20 and there are six just transition indicators which are scored out of 16. For the benchmark the just transition scores are normalised from out of 16 to out of 20, as the just transition score represents 20% of the total benchmark score.

FIGURE 3. EXAMPLE OF THE CORE SOCIAL AND JUST TRANSITION SCORE

The ACT rating score, core social score and just transition score are then added together to create the total benchmark ranking score out of 100. For an in-depth explanation of how these scores are calculated, please see the general methodology for the Climate and Energy Benchmarks.

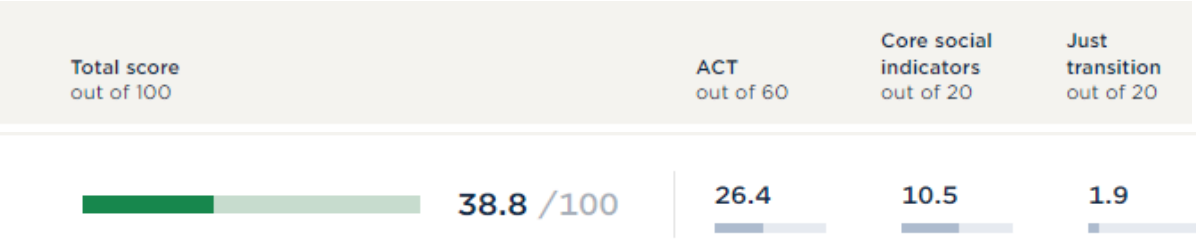

FIGURE 4. EXAMPLE OF THE WBA BENCHMARK FINAL SCORE

Q. What is considered a "Leading Practice"?

A company is considered to have leading practices if it scores or ranks highly for a specific indicator or module.

Leading Practices are areas of excellence by a company identified through the ACT methodology only and do not refer to external awards or commendations for the company's business/sustainability practices.

II. Scope

Q. What is the Automotive and Transportation Manufacturers Benchmark? How have the companies been selected?

The Automotive and Transportation Manufacturers Benchmark is a part of the WBA Climate & Energy Benchmark. The benchmark covers 44 of the world's most influential companies in the automotive and transportation manufacturers sector.

The benchmark identifies the companies whose actions are vital for wider, systemic transformation towards a low-carbon economy by providing required materials to accelerate renewable energy deployment, sustainable construction or the transportation needs of an interconnected world. These companies dominate global revenues within the automotive and transportation manufacturers sector, influence global governance processes and institutions and have a global footprint. The approach to selecting companies is described here: SDG2000 methodology | World Benchmarking Alliance. There is no opt-out principle as the benchmark serves as an accountability mechanism that measures corporate progress against the Paris Agreement and whether companies are contributing to a just transition.

When selecting which entity to assess within a company group (i.e., parent or subsidiary), we consider such factors as the entity's exposure to the WBA transformation in decarbonisation and energy, ownership and reporting structure, governance, and accountability. The starting point of the assessment will always be the keystone company (i.e., the parent company/holding company/entity for assessment).

For more information relating to WBA and the classification of keystone companies here. The ACT methodologies go into more detail about the indicators assessed and the time horizon under assessment

- ACT Automotive (used to assess automotive manufacturers): https://actinitiative.org//wp-content/uploads/documents/act-auto-full-methodology-v2.0.pdf
- ACT Generic (used to assess transportation manufacturers): https://actinitiative.org//wp-content/uploads/pdf/act_generic_methodology_v2.0.pdf

Q. What is the scope for the automotive and transportation manufacturers included in the benchmark?

For this benchmark, we will assess the automotive and transportation manufacturers sector considering two different ACT methodologies based on the scope of companies' activities:

1. The ACT Automotive methodology applies to companies involved in the design, assembly and sale of ready-to-use light duty vehicles (passenger cars and light commercial vehicles exhibiting a gross vehicle weight lower than 3.5 tonnes). Companies manufacturing vehicle parts but not assembling vehicles themselves are not included in the scope of the methodology.

2. The ACT Generic methodology will be used to assess transportation manufacturers, such as companies involved in the design, manufacture and sale of aircraft, ships, trains, and trucks and buses. The corresponding Nomenclature of Economic Activities (NACE) codes regarding the scope of activities considered are presented below.

Industry	**Activities included in the ACT methodology scope**
Automotive manufacturers	[29.10]: Manufacture of motor vehicles*
Transportation manufacturers	[29.10]: Manufacture of motor vehicles* [30.1]: Building of ships and boats [30.2]: Manufacturer of railway locomotives and rolling stock [30.3] Manufacture of air and spacecraft related machinery

* Light-duty vehicles (LDV) fall in the scope of the ACT Automotive methodology, while heavy-duty vehicles (HDV) do not, meaning that HDV manufacturers are assessed thanks to the ACT Generic methodology.

For each methodology, the scope of activities assessed is defined in a way that ensures that most of the sectoral emissions sources are covered. For more details about the sectoral activities and how they are taken into account in the assessments, please refer to the section 3 of the ACT Automotive and Generic methodologies.

- For more information on the benchmark scope please refer to the 2024 Automotive and Transportation Manufacturers Benchmark methodology report.

Q. Are 2024 assessment of automotive manufacturers comparable with previous ones?

Results from the previous Automotive Benchmark (2021) cannot be directly compared to those of the 2024 Automotive and Transportation Manufacturers Benchmark.

The last iteration of WBA's Automotive Benchmark, released in 2021, relied on the use of the ACT Automotive methodology v1.2 published one year earlier. The ACT initiative has deeply updated this methodology and released a v2.0 in June 2024, which has been used for these 2024 assessments.

The performance scoring of the ACT Automotive methodology now includes more indicators, among which some relate to the emissions and emissions reduction targets related to the upstream part of the companies' value chain. Some central indicators that are found in the majority of ACT assessment methodologies, e.g. the *Share of low-carbon CapEx*, have also been added. The narrative scoring has also been updated. For these reasons it is

not meaningful to strictly compare the 2021 and 2024 results of assessments of automotive manufacturers.

One can also note that the 2021 Automotive Benchmark did not include yet the social assessments which are part of the Climate and Energy Benchmark assessments since 2022, after WBA ran a pilot for its Just Transition methodology in 2021.

Just transition scores cannot be directly compared to those from the 2021 pilot assessment.

Many of the companies included in this benchmark were previously benchmarked on their efforts to ensure a just transition as part of our 2021 pilot just transition assessment. While the methodology remains unchanged since the pilot assessment, we have improved our understanding of how to accurately assess some elements in the methodology. This means that changes in company scores since then cannot be fully explained by changed company performance.

Q. How are we able to claim that in 2023, 8/10 vehicles sold globally are covered by our assessed companies?

The automotive manufacturers included in the benchmark accounted for 80% of global vehicle sales in 2023, manufacturing approximately 81 million vehicles.

Part of our assessment was collecting data on the number of automotives sold, this came directly from company reports. The 30 assessed automotive manufacturers reported their sales, which allowed us to estimate the total number of automotives sold. Additional considerations were taken to be able to compare our sample figure with global estimates. We took into consideration Joint Ventures (JV), in particular JV involving Chinese manufacturers. This was done to avoid double counting of reported sales by companies. The second consideration was adjusting for the definition of "vehicles sold" reported by companies. The companies we assess also consider other types (typically some light-duty trucks) of vehicles and in rare cases they provide a breakdown by type of vehicle. With this understanding, we look at global estimates of sold cars, vans, buses and trucks reported by the International Energy Agency (IEA) in its 2024 Global EV outlook to provide a global estimate that corresponds more closely to companies' reporting. This coverage of 8/10 vehicles sold globally remains an estimation building on public companies' disclosure, which appears credible considering the process described above. To further validate our estimates, we compared the values of emissions from vehicles used reported by the companies and the global emissions from passenger cars in 2023 and cars and vans in 2022 published by the IEA with similar results.

III. ACT methodologies

Q. What is the ACT methodology? How does it work?

ACT ('Accelerate Climate Transition') is a set of sector-specific methodologies for assessing companies' transition towards a low-carbon economy.

The ACT initiative was developed by ADEME (French Agency for Ecological Transition) and CDP to drive corporate climate action. Since 2022, WBA is hosting the initiative and is involved in the development and revision processes of ACT assessment methodologies, among others.

The assessment methodology evaluates past and expected emissions trends, levels of low-carbon investment and research and development, transition plans, engagement with suppliers, clients and policymakers and progress in developing low-carbon business models. Companies' emissions targets are assessed against a 1.5°C warming scenario.

Based on its past, present and planned work on reducing carbon emissions, each company receives a 'score' - an ACT rating showing how effectively the company is reducing emissions across all business areas.

Q: Are scope 3 emissions covered in the Automotive and Transportation Manufacturers Benchmark?

Yes, they are.

The coverage of emissions varies by sector. As mentioned in the ACT Framework: "ACT assessment methodologies provide an overview of the typical distribution of sectoral GHG emissions along the value chain. This highlights the main sources and types of sectoral GHGs and helps identify the priorities for companies between direct and indirect (upstream and downstream) GHG emissions categories, in line with the Relevance principle of the ACT assessment."

Thanks to the ACT Automotive and ACT Generic methodologies, relevant emissions for automotive and transportation manufacturers can be assessed along their respective value chain. Boundaries are defined for scope 1, 2 and 3 emissions. Regarding the companies assessed in the 2024 Automotive and Transportation Manufacturers Benchmark:

- Scope 3 upstream emissions are significant, particularly those associated with purchased materials such as steel, aluminium, batteries for electric vehicles, etc. Such emissions are assessed through either quantitative performance indicators such as trend in emissions, or qualitative ones dedicated to products interventions, as well as supplier engagement.
- Scope 3 downstream emissions, particularly those arising from the use of sold products, often are the most important contributor to companies' emissions since a large majority of aircraft, ships, trains, and trucks and buses still run on fossil fuels. Such emissions are assessed through either quantitative performance indicators such

as trend in emissions and locked-in emissions, or qualitative ones dedicated to client engagement.
- Please see section 4 "Boundaries" of the ACT Automotive and Generic methodologies for further details.

Q: Which scenarios are applied for the WBA Automotive and Transportation Manufacturers Benchmark 2024?

The 2024 Automotive and Transportation Manufacturers Benchmark used sectoral decarbonisation pathways aligned on a 1.5°C level of ambition. Pathways were sourced from established sources such as the International Council on Clean Transportation (ICCT), the International Transport Forum (ITF), and the Transition Pathway Initiative (TPI).

Auto and transportation manufacturers are assessed against various pathways covering the following sources of emissions (see above):

- Scope 3 downstream emissions – category 1: purchased goods and services
- Scope 1+2 emissions (manufacturing operations)
- Scope 3 downstream emissions – category 11: use of sold products

Whenever possible, sectoral pathways have been used to enable assessments based on the convergence of emissions intensities. When sectoral pathways are not available, a global pathway based on the contraction of absolute emissions is used (see next Q/A).

Scope 3 upstream emissions

The ACT Automotive methodology uses sectoral pathways related to the materials/products contributing the most to embedded emissions:

- aluminium, batteries, glass, plastics, steel -> tCO_2/tproduct
- Batteries -> gCO_2/kWh

Such sectoral pathways have not been identified for other transportation modes. In consequence, transportation manufacturers' (assessed thanks to ACT Generic) scope 3 upstream emissions are assessed using the contraction of absolute emissions (see next Q/A).

Scope 1+2 emissions

The ACT Automotive methodology provides a sectoral pathway to assess companies' emissions arising from their vehicle manufacturing process. It is based on tCO_2/vehicle metric. Such sectoral pathways have not been identified for other transportation modes. In consequence, transportation manufacturers' (assessed thanks to ACT Generic) scope 1+2 emissions are assessed using the contraction of absolute emissions (see next Q/A).

Scope 3 downstream emissions

The table below provides information about the pathways related to scope 3 downstream emissions, arising from the use of sold products.

Industry	Scope and metrics	Pathway name	Source for pathway
Automotives - Light-duty vehicles (LDV)	New vehicles gCO_2/km	1.5°C Degrees	Transition Pathway Initiative (TPI) - Carbon Performance assessment of automobile manufacturers: note on methodology
Trucks and buses - Heavy-duty vehicles (HDV)*	New vehicles $gCO_2/t.km$	/	International Council on Clean Transportation (ICCT) - The CO2 standards required for trucks and buses for Europe to meet its climate targets
Aircraft	Existing fleet $gCO_2/t.km$ and $gCO_2/p.km$	Reshape+	International Transport Forum (ITF) - Transport Outlook 2021
Train	Existing fleet $gCO_2/t.km$ and $gCO_2/p.km$	Idem	Idem
Ships	Existing fleet $gCO_2/t.km$	Idem	Idem

(*): The HDV dedicated pathway has been developed internally, using data from ICCT. It is based on ambition set for vehicles from Europe and US. The ICCT projection implied in the "Sustainable and smart mobility strategy" pathway of new HDV fleet emission intensities is used. The pathway is converted to % reduction necessary from 2020 until 2050 on a 5-year interval. Average HDV intensities in gCO2/ton.km for the year 2020 for European and US truck fleet is obtained from ICCT Working paper 2023-14 and ICCT White paper April 2023 respectively. The intensities from both regions are then averaged and the resulting value is multiplied by the needed reductions. The resulting pathway implies a reduction from 63.1 gCO2/ton.km in year 2020 to 27.8 gCO2/ton.km in 2030. By 2040 emissions intensities from new HDV fleet drop to virtually zero.

Note: the emissions resulting from the use of products sold should be assessed against pathways considering new products sold only (and not existing fleet, which also includes products previously sold and still being used). Such pathways could be found/developed for both light- and heavy-duty vehicles, covering road transportation, but not for other transportation modes. It is acknowledged that this is a limitation of this study.

Q: How are the company-specific benchmark pathways calculated for Automotive and Transportation Manufacturers companies?

The company-specific benchmark pathways are calculated mostly using the principles of the Sectoral Decarbonization Approach (SDA), based on the convergence of emissions intensities. When it is not possible to use the SDA, the Absolute Contraction Approach (ACA) serves as the second-best available option.

While using the SDA, the creation of a company-specific pathways involved two steps. First the allocation of a sector-specific pathway (see previous table) to a company. And second, the application of a mechanism that converges the company's emissions intensity in the reporting year to the sector-specific pathway value in 2050.

Independent of the sector, the company-specific pathways are constructed in such a way that companies starting from a lower intensity will have a shallower decarbonisation pathway than companies starting from a higher intensity. In this way, past action or inaction to reduce intensity is taken into consideration.

Q. What is the difference between absolute emission and emission intensity targets?

Companies can set two types of targets: to reduce absolute emissions or emissions intensity. Progress towards emissions intensity targets is achieved when companies reduce the emissions they produce per amount of product. Progress towards absolute emissions targets can be achieved via emissions intensity improvements or via activity level reductions.

Absolute emissions refer to the total quantity of emissions in absolute terms, e.g. 100 million tonnes of CO_2. Emissions intensity is the quantity of emissions per unit of activity i.e. amount of product or service provided. For the automotive and transportation manufacturers, various intensity-based metrics can be used to reflect the different sources of emissions along the companies' value chain:

- Purchased products – scope 3 upstream emissions: $tCO_2/t_{product}$ (tons of steel, aluminium, glass, polymers)
- Manufacturing operations – scope 1+2 emissions: tCO_2/vehicle
- Use of products – scope 3 downstream emissions: gCO_2/km (auto), gCO_2/passenger.km (people transportation), gCO_2/tonnes.km (freight transportation)

The ACT sectoral decarbonisation pathways are defined in terms of emissions intensities. When assessing the alignment of an absolute emissions target, the target is converted to an intensity metric for comparison with the company's benchmarked decarbonisation pathway (the conversion is done using the past and planned activity values for the base and target years – respectively 'from' and 'to' years of the target).

Q. How are future emissions intensities calculated for Automotive and Transportation Manufacturers companies?

ACT Automotive and ACT Generic methodologies assess both trend in past and future emission intensities and how they align with companies' low-carbon pathway.

Forecast emissions intensities provide useful information regarding the ability of assessed companies to align with their 1.5°C pathway in years following the reporting year. Such datapoints are however not usually found in companies' public disclosure. To enable the assessment of trend in future emissions intensities, these are estimated using the values reported by companies for years preceding the reporting year (up to five years before).

Q. What is meant by companies' carbon budget, and "locked-in" emissions?

ACT assessments compare the companies' "locked-in" emissions to their carbon budget for 2023 through to the following five years. For the Automotive and Transportation Manufacturers Benchmark, emissions arising from the use of sold products are considered, since they almost always are the highest contribution to companies' overall emissions along their value chain.

It is acknowledged that both emissions intensity and absolute emissions are important metrics to be tracked when assessing companies' contribution to a low-carbon transition. The ACT Automotive and Generic methodologies use sectoral decarbonisation pathways to assess both companies' targets and trends in emissions intensity. This creates common metrics to compare companies' performances.

- A company's locked-in emissions are a forecast of cumulative scope 3 downstream category 11 emissions (arising from sold products) between 2023 and 2028. The locked-in emissions are calculated by multiplying forecast emissions intensities and activity levels, considering:
    - gCO_2/km metric for auto manufacturers
    - gCO_2/p.km (passengers) and gCO_2/t.km (freight) for transportation manufacturers
- The carbon budget is calculated by using each company's 1.5°C emissions intensity benchmark pathway presented previously. The benchmark emissions intensities are applied to the projected activity levels per year to calculate the total carbon budget for 2023 to 2028.

Q. How does the methodology allow the use of carbon credits (carbon offsetting), in targets?

Carbon offsetting is excluded from the calculation of quantitative ACT indicators related to targets, material investments and sold product performance.

According to international standards such as ISO 14064-1, ISO 14067, European Product Environmental Footprint and Organization Environmental Footprint, WRI/WBCSD's GHG Protocol, carbon offsetting shall not be included in GHG quantification, but may be reported separately as "Additional Environmental Information". Carbon credits shall not be subtracted

from the GHG inventory to minimize the amount of GHG emissions. Therefore, carbon offsetting is excluded from the calculation of quantitative ACT indicators related to targets, material investments and sold product performance. Nevertheless, in the narrative scoring of the ACT assessment, these credits may be considered as additional information that helps to better understand the decarbonization strategy of a company.

IV. Data collection

Q. How is data on companies collected for the benchmark?

Data for the 2024 Automotive and Transportation Manufacturers Benchmark is collected from publicly available sources.

Data is collected from publicly available sources, including:

- Company financial and sustainability reports.
- Company websites and other publicly available materials, such as lobbying report, code of business conduct, etc.
- Responses to the CDP questionnaire as long as publicly available.
- Data provided by the company via company feedback if publicly available.

Information InfluenceMap have been used to inform the ACT narrative assessment.

In the event of a lack of corporate disclosure or inconsistent or incomplete data for an indicator, companies score 0 as no assessable data exists. Companies are invited to directly participate in the data validation process by reviewing the data gathered by WBA's analysts, filling data gaps and providing feedback.

Q. What datasets and data were chosen for the WBA Automotive and Transportation Manufacturers Benchmark 2024?

The Climate and Energy Benchmark uses publicly available data and third-party when relevant.

Data was collected from company reports and other publicly available sources by the assessor team. Collected emissions, activity (level of production or sales), financial data has been directly used when possible. In some cases, in-house calculations from WBA were necessary to shape data at the format required for the assessment.

No third-party data has been considered for this benchmark.

Q: What reporting period is covered?

The ACT methodologies assess the most reliable, latest available public and verifiable data.

The ACT assessment of the automotive and transportation manufacturers considered data from materials published by companies up to 30 September 2024. For the majority of companies, full-year data reporting was available for 2023. If full-year data was not available for 2023 then the most recently available data was collected. In all cases, the most recent year with full-year reporting was applied as the company's reporting year.

More Questions?

If you would like to discuss in more detail the Automotive and Transportation Manufacturers Benchmark results, or the ACT methodologies, please contact the team at info.climate@worldbenchmarkingalliance.org