



Road to Zero Report Card 2023

ANNEX:

KPI methodology

Produced in association with:



Performance Indicators: Demand

KPI	Metric	Methodology
Rental customer demand <i>(Parked)</i>	ZEV utilisation in rental fleet <div style="background-color: #e67e22; color: white; padding: 5px; display: inline-block; margin-top: 10px;">Red</div>	ZEV utilisation rate was used as an indicator of demand in the rental sector. The utilisation of ZEVs is compared to ICE to assess performance, where thresholds were defined as: <ul style="list-style-type: none"> Equal or higher utilisation = Green Up to 10% lower utilisation = Amber More than 10% lower utilisation = Red Data was collected by BVRLA from their members. ZEV cars have a utilisation of 62% compared to 81% for ICE cars, while ZEV vans have a utilisation rate of 76% compared to 90% for ICE vans. As the difference between ZEV and ICE is greater than 10% for both vehicle types, a red scoring was given for this metric.
Business leasing demand <i>(Cruising)</i>	Percentage of ZEVs in leased fleet <div style="background-color: #27ae60; color: white; padding: 5px; display: inline-block; margin-top: 10px;">Green</div>	New additions of ZEVs in the business leasing fleet is compared to the overall uptake of ZEVs in the UK, where thresholds are defined as: <ul style="list-style-type: none"> More than 25% higher = Green Within 25% = Amber More than 25% lower = Red Leasing fleet uptake data is collected by BVRLA from their members and whole market sales data is from DfT. ZEV uptake in the business leasing fleet (54%) is significantly outperforming the uptake in the UK wide fleet (16%), resulting in a green score.
Personal leasing demand <i>(Accelerating)</i>	Percentage of ZEVs in leased fleet <div style="background-color: #f1c40f; color: white; padding: 5px; display: inline-block; margin-top: 10px;">Amber</div>	New additions of ZEVs in the personal leasing fleet is compared to the overall uptake of ZEVs in the UK, where thresholds are defined as: <ul style="list-style-type: none"> More than 25% higher = Green Within 25% = Amber More than 25% lower = Red Leasing fleet uptake data is collected by BVRLA from their members and whole market sales data is from DfT. ZEV uptake in the personal leasing fleet (19%) is less than 25% higher than the uptake in the UK wide fleet (16%), resulting in a green score.

Performance Indicators: Demand

KPI	Metric	Methodology
Cost of ownership <i>(Brakes on)</i>	Cost of fuel and energy <div style="background-color: #FFC000; padding: 5px; display: inline-block;">Amber</div>	<p>The pence per mile (ppm) cost has been used to compare running costs for EVs and ICE vehicles. Electricity prices for public rapid, public ultra-rapid, and private charging have been combined using a 25:25:50 weighting. An average ICE value has been calculated from petrol and diesel. Thresholds are defined as:</p> <ul style="list-style-type: none"> • More than 25% cheaper than ICE = Green • Up to 25% cheaper than ICE = Amber • More expensive than ICE = Red <p>2023 data is taken from RAC’s Charge Watch. In June 2023, average EV ppm (15.2) was marginally cheaper than ICE (17.3), resulting in an amber score.</p>
	Cost of vehicle <div style="background-color: #FF0000; padding: 5px; display: inline-block;">Red</div>	<p>The average new vehicle cost of an EV is compared to an ICE, where thresholds were set as:</p> <ul style="list-style-type: none"> • Equal to or cheaper = Green • Up to 25% more expensive = Amber • Greater than 25% more expensive = Red <p>Data was provided by Auto Trader, based on the prices of all cars available to buy on the market each month. With an average cost of £52,720, BEV cars remain significantly more expensive than their ICE counterparts (£36,796), resulting in a red score.</p>

Performance Indicators: Demand

KPI	Metric	Methodology
Used ZEV market <i>(Brakes on)</i>	Cost of depreciation <div style="background-color: red; color: white; text-align: center; padding: 2px;">Red</div>	<p>The cost of depreciation for EVs and ICE vehicles is compared, using the monthly percentage movement of the residual cost of a 3 year old, 60,000 mile car. Thresholds for performance were defined as:</p> <ul style="list-style-type: none"> • Equal to or lower than ICE = Green • Within 25% of ICE = Amber • Greater than 25% more than ICE = Red <p>The data was supplied by cap hpi. In 2023, EV depreciation is greater than 25% higher than ICE, resulting in a red score. However, data for June and July suggests that the trend for EV depreciation is improving steadily.</p>
	Demand vs supply of used ZEVs <div style="background-color: red; color: white; text-align: center; padding: 2px;">Red</div>	<p>Demand is compared to supply using data from Auto Trader’s monthly market intelligence report. Year on year changes in demand and supply are reported. Thresholds for performance were defined as:</p> <ul style="list-style-type: none"> • Supply lower than demand = Green • Supply up to 25% greater than Demand = Amber • Supply more than 25% greater than Demand = Red <p>In May 2023, supply (~300%) is outpacing demand (~50%) in the electric volume segment, a trend that has been seen across 2023.</p>
	Used ZEV sell times <div style="background-color: green; color: white; text-align: center; padding: 2px;">Green</div>	<p>The time to sell a used ZEV and ICE cars is compared, using data from Auto Trader. Thresholds for performance were defined as:</p> <ul style="list-style-type: none"> • EV sell time equal or shorter = Green • EV sell time within 10% longer = Amber • EV sell time more than 10% longer = Red <p>With the average sell times of EVs (30 days) matching that of ICE (31 days), this metric is given a green score.</p>

Performance Indicators: Infrastructure

KPI	Metric	Rationale
Public charging availability and reliability <i>(Cruising)</i>	Public chargepoint numbers <div style="background-color: #28a745; color: white; padding: 5px; text-align: center; width: fit-content; margin: 0 auto;">Green</div>	<p>Annual deployment of public chargepoint numbers (Source: DfT) from 2015 to July 2023 were plotted against linear and exponential pathways towards the UK government’s 2030 target of 300,000 chargepoints. Thresholds for performance were defined as:</p> <ul style="list-style-type: none"> • Between exponential and linear pathway = Green • Within 10% below exponential pathway = Amber • More than 10% below exponential pathway = Red <p>With 44,020 chargepoints deployed in July 2023, the current trajectory falls between the linear and exponential pathways, corresponding to a green rating.</p> <p>This metric was given a 50% weighting towards the overall KPI, as both deployment and reliability of the network are critical.</p>
	% chargepoints out of service <div style="background-color: #ffc107; color: white; padding: 5px; text-align: center; width: fit-content; margin: 0 auto;">Amber</div>	<p>The percentage of charge points that are out of service are a common metric for assessing network reliability. Forthcoming regulation sets a target for 99% chargepoint reliability to be achieved within 12 months of the regulation coming into effect. Reliability levels in comparable regions were used to inform thresholds for performance:</p> <ul style="list-style-type: none"> • At 99% or higher = Green • Between 90-99% = Amber • Less than 90% = Red <p>With current levels of reliability estimated at 95.5%, this metric was scored amber. This metric was given a 50% weighting towards the overall KPI as both overall deployment and reliability of the network are critical.</p>

Performance Indicators: Infrastructure

KPI	Metric	Rationale
Public charging user experience <i>(Brakes on)</i>	% network with open data <div style="background-color: green; color: white; padding: 5px; text-align: center; width: fit-content; margin: 0 auto;">Green</div>	<p>Forthcoming regulation mandates that CPOs must now use Open Charge Point Interface (OPCI) to hold and open their data, ensuring standards are met. Thresholds for performance were defined as:</p> <ul style="list-style-type: none"> • More than 80% open data = Green • Between 60-80% open data = Amber • Less than 60% open data= Red <p>The current proportion of the network with open data was determined using ZapMap data. Over 90% of ZapMap’s coverage has open data, surpassing the 80% threshold which was set for a green rating. In future years that thresholds may be updated on the basis of more comprehensive data being available on the proportion of the network with open data, and to reflect the target set in the regulation. Each metric in this KPI was given a 25% weighting given their importance in relation to user public charging experience.</p>
	% of network that is pre-bookable <div style="background-color: red; color: white; padding: 5px; text-align: center; width: fit-content; margin: 0 auto;">Red</div>	<p>Only one London-based CPO was found to offer pre-booking of chargepoints as a service, which represent less than 5% of the charging network. Due to a lack of available data, thresholds were not defined. It is anticipated that thresholds will be set in future years, drawing upon increasing data availability.</p>
	Ease of payment across network <div style="background-color: orange; color: white; padding: 5px; text-align: center; width: fit-content; margin: 0 auto;">Amber</div>	<p>Currently, there is no comprehensive dataset on the overall proportion of the network which is covered by roaming providers, but market research shows a number of emerging platforms. Octopus Electroverse covers 77% of UK chargepoints, Paua covers 56% and Allstar covers 85% of motorway service chargepoints.</p> <p>Given the lack of available data, thresholds have not been defined but an amber score has been awarded based on available information of the market. In future years it is anticipated that threshold will be based on progress towards fulfilling the target set in the legislation.</p>
	% of network that is van accessible <div style="background-color: red; color: white; padding: 5px; text-align: center; width: fit-content; margin: 0 auto;">Red</div>	<p>No dataset was identified on the proportion of the charging network which is van accessible. Due to a lack of comparable information, thresholds were not defined. Nevertheless, this metric was given an equal weighting (25) towards the KPI score, as a lack of data on van accessibility is a key challenge for fleets.</p>

Performance Indicators: Infrastructure

KPI	Metric	Rationale
Ease of implementation <i>(Brakes on)</i>	Average grid connection times <div style="background-color: #FFC000; padding: 5px; display: inline-block; margin-top: 10px;">Amber</div>	<p>The performance of DNOs against their targets on time-to-quote and time-to-connect can be assessed using data reported by Ofgem. Thresholds for performance were defined as:</p> <ul style="list-style-type: none"> • Met or exceed target = Green • Within 10% of target = Amber • More than 10% off target = Red <p>While 100% of DNOs met their targets for their Connections Guaranteed Standards of Performance, stakeholder feedback and other sources indicate that challenges with power connection for larger commercial installations persist. This results in an amber rating being awarded.</p>
Local authority engagement <i>(Parked)</i>	Local authority engagement with fleets <div style="background-color: #FF0000; color: white; padding: 5px; display: inline-block; margin-top: 10px;">Red</div>	<p>BVRLA's fleet friendly charging index tracks local authority (LA) engagement with fleets. Performance is based on the shared of LAs with an EV infrastructure plan who are engaging with fleets, with thresholds set as:</p> <ul style="list-style-type: none"> • More than 50% = Green • Between 25-50% = Amber • Less than 25% = Red <p>This metric indicates that the proportion of Local Authorities with an EV infrastructure plan in place which have shown some evidence of engaging with fleets is just 20%, representing a red rating.</p>

Key Performance Indicators: Supply

KPI	Metric	Rationale
ZEV product suitability (Accelerating)	Vehicle efficiency Amber	Vehicle efficiency (mi/kWh) used to determine suitability. For cars and vans, a threshold of 3 mi/kWh was set as the benchmark, with HGVs set at 1 mi/kWh. Fleet efficiency data was derived from the EV database and specifications from manufacturer websites. Of the models assessed, 75% of cars, 45% of vans, and 33% of HGVs exceeded this threshold. These scores were weighted by vehicle composition in total BVRLA member fleets, resulting in an overall score of amber.
	Vehicle affordability Amber	<p>This metric is based on two elements - each weighted at 50% of the overall scoring:</p> <ol style="list-style-type: none"> The share of vehicles assessed as affordable - defined by a maximum threshold of £30,000. Data on price collected from EV Database and manufacturer websites. Scoring levels set at less than 40% (Red), between 40% and 69% (Amber), and greater than 70% (Green). For both cars and van, 27% of models are below the threshold, resulting in a red scoring. The correlation between the number of models and the number of registrations across price groups. Price distribution data of available models derived from Auto Trader and registration data from government datasets, as well as model prices. Thresholds were set using the correlation coefficient, with: <ul style="list-style-type: none"> Strong correlation for coefficient greater than 0.5 = Green Weak correlation for 0.3 and 0.5 = Amber No correlation for coefficient lower than 0.3 = Red <p>The correlation coefficient between models and registrations was 0.88 and 0.94 for cars and vans respectively. The score for vehicle types were weighted by the car and van composition in total BVRLA member fleets.</p> <p>Combining the two elements resulted in an overall score of amber.</p>
	Vehicle charging speeds Amber	<p>This metric assessed the ability for electric vehicles to rapid charge, an important factor to ensure deployment in high-mileage environments. A charging speed threshold of 300 mph (range in miles per hour) was set based off rapid charging providing 80% battery capacity in 30 minutes with typical vehicle range of 200 miles. Thresholds for performance were set as:</p> <ul style="list-style-type: none"> Over 70% models exceeding the range threshold = Green Between 40% and 69% of models exceeding the range threshold = Amber Less than 40% of models exceeding the range threshold = Red <p>Of available models, 61% of cars and 6% of vans were above the threshold. No HGV models exceeded the threshold. The scores for vehicle types were weighted by car and van composition in total BVRLA member fleets, resulting in an overall score of amber.</p>

Key Performance Indicators: Supply

<i>KPI</i>	<i>Metric</i>	<i>Rationale</i>
ZEV product suitability <i>(Accelerating)</i>	Van minimum range <div style="background-color: red; color: white; text-align: center; padding: 5px;">Red</div>	<p>A threshold of 200 miles for van range was used to assess the suitability of current models to high-mileage use cases, with ranges collected from vehicle specifications on manufacturer websites. Thresholds were set as:</p> <ul style="list-style-type: none"> Over 70% models exceeding the range threshold = Green Between 40% and 69% of models exceeding the range threshold = Amber Less than 40% of models exceeding the range threshold = Red <p>Only 18% of electric van models had a range greater than this threshold, resulting in a score of red.</p>
ZEV product lead time <i>(Cruising)</i>	Average vehicle lead times <div style="background-color: green; color: white; text-align: center; padding: 5px;">Green</div>	<p>Using vehicle lead times from a BVRLA survey of members, this metric compares the share of ZEV to ICE vehicles delivered within 6 months. For both cars and vans, ZEV lead times were faster than ICE vehicles by 5% and 13% respectively, leading to a green score. The thresholds used were ZEV share greater than ICE share (Green), ZEV share within 10% of ICE share (Amber), BEV share lower than 10% of ICE share (Red).</p>

Key Performance Indicators: Supply

KPI	Metric	Rationale
ZEV sales and manufacturing <i>(Accelerating)</i>	% of sales that are ZEV Amber	<p>This metric assesses the development of ZEV registrations in light of the proposed ZEV Mandate targets for car and van sales from 2024 onwards. The growth in BEV registrations in the year to July 2023 was used to project the annual share for 2023. Thresholds were set based off the SMMT forecast for BEV registrations in 2023 of 17.9% for cars and 7.0% for vans:</p> <ul style="list-style-type: none"> Projected annual ZEV share more than 0.5% above the 2023 forecast = Green Projected annual ZEV share within 0.5% of the 2023 forecast = Amber Projected annual ZEV share more than 0.5% below the 2023 forecast = Red <p>For cars, the annual share of registrations by the end of 2023 is projected to exceed the forecast by 2.1%. For vans, the annual 2023 share is projected to be 0.7% below the annual forecast. These scores were weighted by vehicle composition in total BVRLA member fleets, resulting in an overall score of amber.</p>
	Number of qualified ZEV technicians Green	<p>Using data collected by the Institute of the Motor Industry, it was assessed that there is a current surplus of EV-trained technicians of 19,000 technicians. Thresholds for this metric were set as:</p> <ul style="list-style-type: none"> Greater than 10% surplus of EV-trained technicians = Green Within 10% of the needed EV-trained technicians = Amber Greater than 10% shortfall of EV-trained technicians = Red <p>With a 95% surplus over the required 20,000 technicians at the end of 2022, the metric was scored as green.</p>
Aftermarket services <i>(Cruising)</i>	ZEV repair times and costs Green	<p>This metric compares the servicing and maintenance repair times and costs for ZEV and ICE vehicles, using data collected by Fleet Assist. Thresholds were set for this metric as:</p> <ul style="list-style-type: none"> ZEV repair times/costs less than ICE repair times/costs = Green ZEV repair times/costs within 10% of ICE repair times/costs = Amber ZEV repair times/costs more than 10% greater than ICE repair times/costs = Red <p>ZEV repair times are 25% faster and parts costs are 46% lower than for ICE vehicles, resulting in a metric score of green.</p>



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