MAZDA 6e

258 TAKUMI ELECTRIC RWD AUTOMATIC

Sustainability Rating

2026 ★★★★½ 85%

Clean Air
8.7 /10

Energy Efficiency
8.5 /10

Greenhouse Gases
8.4 /10

Driving Experience

Consumption & Range
GOOD

Cold Winter Performance
GOOD

Charging Capability
ADEQUATE

Our verdict

Tested here is the Mazda 6e in its 68.8 kWh battery version – a large and luxurious sedan, build on the EPA1 platform by the Mazda Changan join venture in China. The car demonstrated low consumption values, received a good evaluation in the Driving Experience assessment and merited a solid 4½ star rating with an average score of 85%.

- Scores poorly for tyre abrasion due to vehicle mass and rear-axle toe-in, but minimizes brake abrasion through extensive regenerative braking. Keeps production- and electricity-related emissions relatively low.
- Delivers efficient electricity consumption, even in highway and cold-weather tests, helping offset the higher production impact of a larger vehicle. Features an aerodynamic low-drag body shape and efficient powertrain and thermal system.
- Limits lifecycle emissions to 140 g CO_2-eq./km through an efficient powertrain and the use of European electricity mix. Remains affected by vehicle and battery production emissions but outperforms many large EVs in climate impact.

Disclaimer

Think before you print

Clean Air

8.7 /10

Comments

Being fully electric, the vehicle doesn't emit any exhaust gases. The score for tyre abrasion is relatively low mainly due to the higher vehicle mass and the higher toe-in on the rear axle. On the positive side, thanks to a very high share of electric braking, the use of friction braking is kept to a minimum and the brake abrasion result is very good. Production, and European average electricity supply-related emissions, score a high 7.3/10.

Exhaust emissions

Exhaust pollutant emissions are produced from combustion engines. Although current emission legislation is very strict, this type of emission directly affects air quality, and not all vehicles perform equally well. Read more

GOOD ● **10.0** /10

In laboratory

GOOD ● **10.0** /10

Green NCAP performs a wide range of tests on cars in the laboratory. This is the best way to ensure controlled conditions and guarantee that all cars are tested in the same way, making their results comparable. Read more

	NMHC	NO_x	NH_3	CO	PN	PM	Score
Legal test (WLTP)	good	good	not applicable	good	good	good	8.0/8
Warm weather	good	good	good	good	good	good	10.0/10
Highway	good	good	good	good	good	good	10.0/10
Winter cold start	good	good	good	good	good	good	10.0/10
Winter warm start	good	good	good	good	good	good	10.0/10

On road

GOOD ● **10.0** /10

An on-road driving test , using portable emissions measuring equipment complements Green NCAP's laboratory tests. Read more

	NMHC	NO_x	NH_3	CO	PN	PM	Score
Real-world mixed drive	not applicable	good	not applicable	good	good	not applicable	10.0/10
Short city trip	not applicable	good	not applicable	good	good	not applicable	10.0/10
Congestion	not applicable	good	not applicable	not applicable	not applicable	not applicable	2.0/2

● good ● adequate ● marginal ● weak ● poor ● not applicable

Clean Air

8.7 /10

Non-exhaust emissions

Driving a vehicle also produces emissions different from those of the exhaust pipe. Green NCAP evaluates vehicle properties that contribute to tyre and brake abrasion.

ADEQUATE 6.4/10

Tyre wear

MARGINAL 2.6/6

Tyre abrasion releases small particles during driving, and some vehicle properties have major impact on it. Heavier vehicles, wheel alignment causing increased slip angle, and aggressive acceleration responses all increase tyre wear and particle emissions. Read more

	Result	Score
Influence of mass	marginal	1.1/3
Wheel alignment	marginal	0.5/1
Accelerator response	marginal	1.0/2

Brake wear

ADEQUATE 5.0/6

Brake dust, produced by friction brakes, can be mitigated through filters, enclosed brake systems (like drums), or by reducing friction brake use with regenerative braking in electrified vehicles. Containment keeps dust inside the system, while recuperation lowers brake wear. However, heavier vehicles still generate more brake abrasion due to their greater stopping demands. Read more

	Result	Score
Brake dust mitigation	poor	0.0/4
Brake dust containment	poor	0.0/6
Recuperative braking - warm test	adequate	5.0/6

good adequate marginal weak poor not applicable

Clean Air

8.7 /10

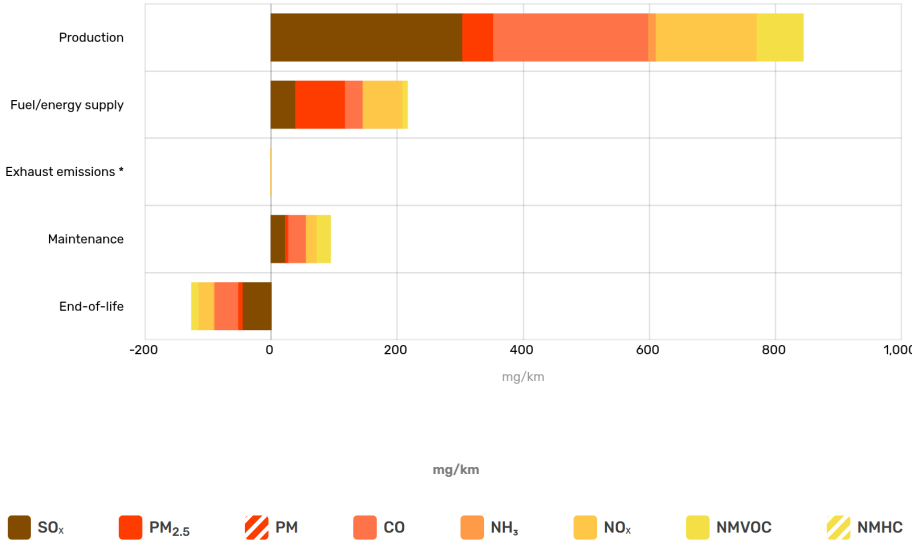
Additional Life Cycle Assessment information

Life Cycle Assessment (LCA) investigates the environmental impact of a car over its entire lifetime, 'from cradle to grave'. In this section, pollutants are estimated in the various stages of a vehicle's life other than use. The chart also displays the measured emissions related to usage, which are taken as an average from the tests and are scored separately in the 'Exhaust emissions' part above. The end-of-life approach uses results in negative values because the benefit of materials recovery and recycling exceeds the effort of obtaining and processing virgin raw materials.

ADEQUATE 7.3 /10

Pollutants

Most of the vehicle exhaust pollutant species are also emitted in others life cycle phases. These are health- and nature-damaging compounds, the amount of which should be reduced as well.



* Exhaust emissions are not contributing to the score in Additional Life Cycle Assessment information because they are scored in the Exhaust emissions section above

good adequate marginal weak poor not applicable

Energy Efficiency

8.5 /10

Comments

The 6e consumption values benefit from the lower aerodynamic drag of the sedan, which is especially visible in the high-power high-speed Highway test with the frugal 24.2 kWh/100 km. Furthermore, the -7°C Cold Winter Test sequence results also suggest an efficient thermal system. The warm weather tests used around 16-17 kWh/100 km. The on-road drive was performed on a dry road at around 10°C and the recorded electricity demand was 18.9 kWh/100 km. These figures help compensate for the higher energy demand in producing a larger vehicle like the Mazda. The final score in this part of the assessment is creditable 8.5/10.

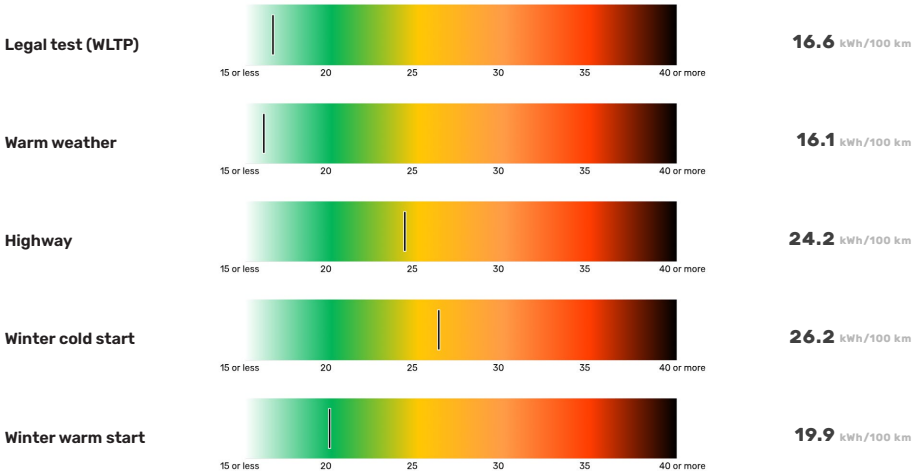
Energy demand

ADEQUATE 8.8/10

Propulsion energy consumption in laboratory

GOOD 9.9 /10

The vehicle's measured consumption figures are displayed in the bar chart. The colour scheme positions the values relative to low and high figures in a typical range. The ranges are different for combustion engine and pure electric vehicles.



good adequate marginal weak poor not applicable

Energy Efficiency

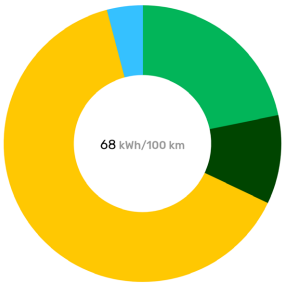
8.5 /10

Additional Life Cycle Assessment information

ADEQUATE 8.7/10

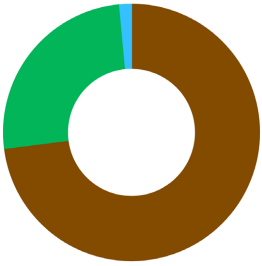
Life Cycle Assessment (LCA) investigates the environmental impact of a car over its entire lifetime 'from cradle to grave'. In this section, the total vehicle life cycle primary energy demand is displayed. The scoring does not consider the direct propulsion energy use, because it is scored separately in the 'Propulsion energy consumption in laboratory'.

Total LCA energy consumption



Production & recycling 21.8%
Battery production 10.4%
Fuel/energy supply * 63.8%
Maintenance 4.1%

Energy source share in total LCA consumption



Fossil 73.0%
Renewable 25.5%
Other 1.5%

Direct propulsion energy share is not shown, it is included in 'Fuel/energy supply'.

Rolling resistance

Rated here is the vehicle's resistance to movement at low speeds. Different factors have an impact on it, but the most significant one is mass.

WEAK 2.2/10

good adequate marginal weak poor not applicable

Greenhouse Gases

8.4 /10

Comments

The total lifecycle greenhouse gas emissions value is calculated to 140 g CO_2-eq./km. A large share of the CO_2 savings comes from the efficient vehicle operation using the relatively green European average electricity, but naturally, the production of a relatively heavy vehicle and its battery take a toll on the final number. Nevertheless, with a score of 8.4/10 in this category, the Mazda positions itself as a greener option compared to many other large electric cars.

Exhaust GHG emissions

Combustion of conventional fuels releases greenhouse gases at the vehicle's tailpipe. The most significant of these gases are the emissions of CO_2. Green NCAP's assessment considers methane (CH_4) and laughing gas (N_2O) as well. Together, these are counted with their global warming potential to a sum known as CO_2 equivalent.

GOOD **10.0**/10

In laboratory

Green NCAP performs a wide range of tests on cars in the laboratory. This is the best way to ensure controlled conditions and guarantee that all cars are tested in the same way, making their results comparable. Read more

Legal test (WLTP)	90 or less – 100 – 110 – 120 – 130 – 140 – 150 – 160 – 170 – 180 – 190 – 200 or more	0.0 g CO_2-eq./km
Warm weather	90 or less – 100 – 110 – 120 – 130 – 140 – 150 – 160 – 170 – 180 – 190 – 200 or more	0.0 g CO_2-eq./km
Highway	90 or less – 100 – 110 – 120 – 130 – 140 – 150 – 160 – 170 – 180 – 190 – 200 or more	0.0 g CO_2-eq./km
Winter cold start	90 or less – 100 – 110 – 120 – 130 – 140 – 150 – 160 – 170 – 180 – 190 – 200 or more	0.0 g CO_2-eq./km
Winter warm start	90 or less – 100 – 110 – 120 – 130 – 140 – 150 – 160 – 170 – 180 – 190 – 200 or more	0.0 g CO_2-eq./km

good · adequate · marginal · weak · poor · not applicable

Greenhouse Gases

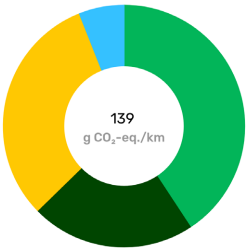
8.4 /10

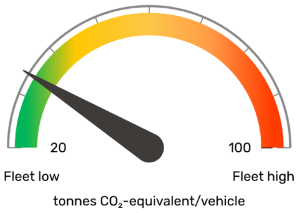
Additional Life Cycle Assessment information

Life Cycle Assessment (LCA) investigates the environmental impact of a car over its entire lifetime, 'from cradle to grave'. In this section, the total vehicle life cycle greenhouse gas emissions are displayed.

MARGINAL 4.6/10

Total LCA GHG emissions





Vehicle Life Cycle average emissions **34** (+/-)
(best **31** | worst **36**)

- Production & recycling 40.7%
- Battery production 22.0%
- Tailpipe emissions * 0.0%
- Fuel/energy supply 31.3%
- Maintenance 6.0%

* The scoring does not consider the direct exhaust GHG emissions at the tailpipe, because they are scored separately in 'Exhaust GHG emissions' above.

good adequate marginal weak poor not applicable

Driving Experience

Consumption & Range

GOOD

Cold Winter Performance

GOOD

Charging Capability

ADEQUATE

Green NCAP Comment

- The Mazda 6e shows mainly good estimated real-world consumption values in different conditions and especially in cold winter operation. With the installed 68.8 kWh battery, the estimated driving ranges are considered to be adequate or good, depending on the trip scenario. Drivers can trust the consumption figures shown on the display.
- The heating performance of the car in -7°C cold start conditions was exceptional, providing very quick heat-up at all measured positions. The driving range can benefit from preconditioning the car prior to a cold weather trip, while it is still plugged in. This way, an additional 175 km of range can be gained in urban trips. For a mixed trip, the figure is 82 km. The cabin thermal insulation is adequate, meaning that once heated up the car retains the warmth well inside the cabin.
- The standard home AC charging is efficient and receives a 'good' evaluation. The fast DC charging performance is adequate, taking 29 minutes to charge from 10 to 80%. The vehicle is capable of bidirectional charging in vehicle-to-load mode and can deliver up to 3.3 kW to a connected external consumer through its plug.

Consumption & Range

GOOD

Estimated actual consumption

GOOD

What consumption can be expected in real world conditions?

In-laboratory measured consumption values are only partially representative of real-world use. Green NCAP's estimates aim at providing more realistic figures, which are based on measured results, modified by correction factors.

Conditions	Urban	Rural	Highway	Mixed	
Warm weather	16.3	16.8	19.5	17.2	kWh/100 km
Cold Winter	25.0	19.4	24.4	23.0	kWh/100 km

Driving range

GOOD

What driving range can be expected in real world conditions?

Of special importance to consumers is the real-world driving range of electric vehicles. Green NCAP estimates this based on measured data, modified by correction factors.

Conditions	Urban	Rural	Highway	Mixed	
Warm weather	468	454	391	443	km
Cold Winter	305	393	312	330	km

Accuracy of display

GOOD

Is the consumption figure on the display correct?

good adequate poor not applicable

Cold Winter Performance

GOOD

Driving range benefit of pre-warming

GOOD

How much further can you drive in winter, if the car is pre-warmed?

A cold vehicle has increased energy consumption at the start of its trip, mostly due to the cabin heating demand. Pre-warming the car while it is plugged, when possible, can significantly benefit its driving range in cold weather conditions. Green NCAP's winter tests are performed at -7°C.

Type	Driving Range Benefit	Result
Urban trip	+175 km	●
Mixed trip	+82 km	●

Cabin heating

GOOD

Does the vehicle get warm quickly in winter?

This indicates the time needed to reach 16°C in seconds at different positions in the cabin after the cold vehicle has been started at -7°C ambient temperature.

	Front	Rear
Head area	164 s ●	177 s ●
Footwell	263 s ●	

The rear footwell area left reached the temperature in 248 seconds and in the right in 162 seconds.

● good ● adequate ● poor ● not applicable

Cold Winter Performance

GOOD

Additional heating functions

What functions can be used to improve heating comfort?

Unlike a combustion car, which usually uses the engine's waste heat to provide warmth to the cabin, in electric vehicles, the energy needed comes from the battery. Therefore, there is a trade-off between thermal comfort and energy consumption. Some additional heating functions can deliver good thermal comfort performance at lower energy use compared to heating up the entire cabin. If they can be scheduled or remotely activated before a trip, while the vehicle is still plugged, both comfort and driving range can be notably improved.

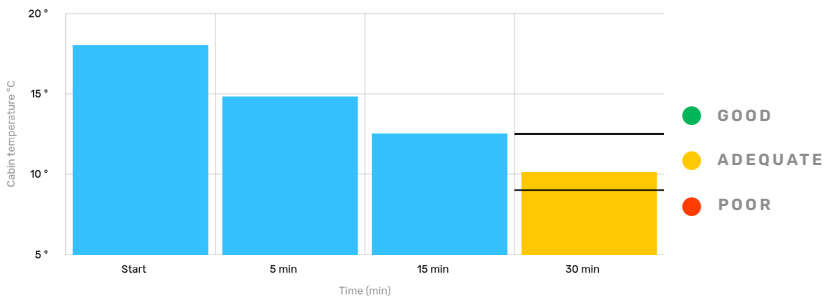
	Y/N	Fitment
Heat pump	✓	Standard
Seating heating front	✓	Standard
Seating heating rear	✗	
Steering wheel heating	✓	Standard
Sheduled pre-heating of seats	✓	Standard
Scheduled steering wheel pre-heating	✓	Standard
Scheduled cabin air pre-heating	✓	Standard
Smart cabin heating management	✗	

Cabin thermal insulation

ADEQUATE

How well does the cabin maintain its temperature?

Assessed here is the average cabin temperature drop after 30 minutes, starting from 18°C when the outside temperature is -7°C and the vehicle is inactive.



good adequate poor not applicable

Charging Capabilities

ADEQUATE

Battery pre-conditioning

Does the vehicle have the ability to optimize the battery temperature for fast charging?

Fast charging is quicker when the battery temperature is in a certain range, and many vehicles possess the function to actively prepare for a coming fast charging event. Most use the charger destination in the navigational system to control the process, and some would offer a manual activation function.

	Manual	Automatic
Battery pre-conditioning	✓	✓

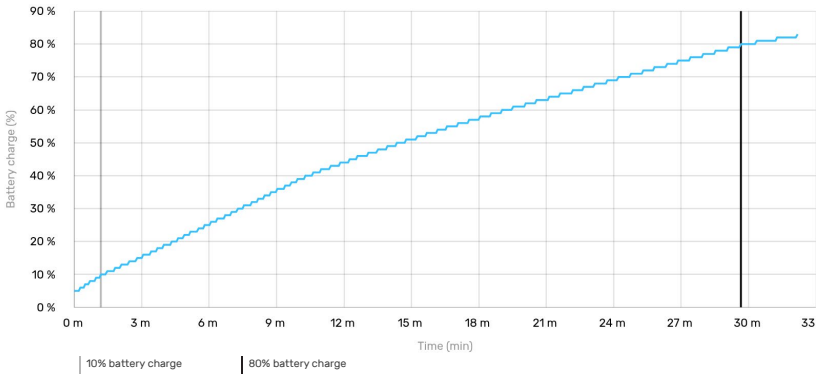
Fast charging

ADEQUATE

Green NCAP's fast charging test verifies the vehicle's ability to recharge fast, which is crucial at long trips or tight schedules. Although constantly improving, not all vehicles offer the same capabilities.

Charging time

How quickly can the battery charge?



good adequate poor not applicable

Charging Capabilities

ADEQUATE

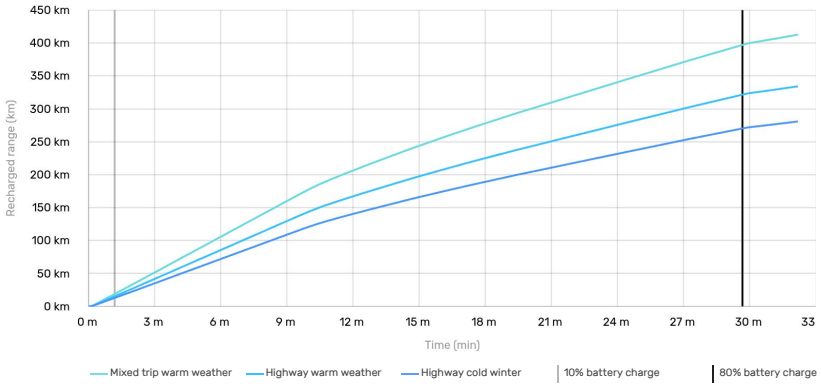
Fast charging

ADEQUATE

Green NCAP's fast charging test verifies the vehicle's ability to recharge fast, which is crucial at long trips or tight schedules. Although constantly improving, not all vehicles offer the same capabilities.

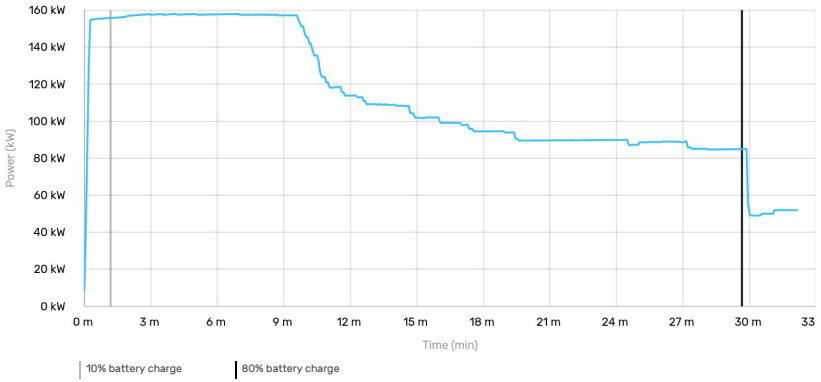
Recharged range gain per charging time

How long do you need to fast charge to drive a certain distance?



Charging power

How quickly does energy flow into the battery, depending on its charge level?



good adequate poor not applicable

Charging Capabilities

ADEQUATE

Home charging efficiency

GOOD

Is charging at home efficiently utilizing the energy withdrawn from the grid?

The assessed efficiency value is the grid-to-battery-output efficiency, which describes what share of the energy taken from the electricity grid is available for the vehicle to use for propulsion and other auxiliary functions. The value encompasses not only the charger efficiency but considers several other losses as well.

Home charging efficiency	90 %
Maximum home charging power	11.0 kW

Bidirectional charging

ADEQUATE

How capable is the vehicle of supplying energy from its battery to other devices or systems?

Bi-directional charging is available in some vehicles and is gaining increasing popularity. It comes with different power and functionality levels. However, battery usage for purposes additional to regular vehicle driving and charging might be disadvantageous for its durability and manufacturers might introduce limitations to protect it.

Power output

3.3 kW

Fitment:

Compatibility

✓ **Vehicle-to-Load (V2L)**
The inlet or the interior socket can provide AC power through an electrical domestic socket.

✗ **Vehicle-to-Household (V2H)**
The vehicle can provide power to a household through a charger.

✗ **Vehicle-to-Grid (V2G)**
The vehicle can return power to the grid.

Grid integration

✓ **Basic**
No integration (just a socket for a stand-alone load). No scheduling option. Very basic visualisation.

✗ **Limited**
Energy management system through the vehicle app (timers availability and power monitoring). Dedicated interface in the car, with mobile app monitoring.

✗ **Advanced**
Advanced settings available such as tariff and consumption control, linked to distributor energy prices. Advanced real time energy flow visualization. AI powered suggestions for optimal usage.

good adequate poor not applicable

Specifications

Vehicle class
Large Family Car

System power/torque
190 kW/320 Nm

Engine size
n.a.

Declared consumption
16.6 kWh/100 km

Declared driving range
Overall 479 km
City 605 km

Declared CO_2
n.a.

Declared battery capacity
Usable (net) 68.8 kWh
Installed (gross) 68.8 kWh

Mass
1,962 kg

Heating concept
Waste heat & PTC heater & heat pump

Tyres
245/45R19

Emissions class
AX

Tested car
LVRHDAEK9SN40xxxx

Publication date
09 2026

Also covered by this rating

Variants Names may vary by country

MAZDA 6e
258 Takumi Plus electric RWD automatic

green ncap