Citroën ë-C3

MAX ELECTRIC FWD AUTOMATIC

Sustainability Rating

2025 ★★★★★ 90%

Clean Air
9.3 /10

Energy Efficiency
8.1 /10

Greenhouse Gases
9.9 /10

Driving Experience

Consumption & Range
ADEQUATE

Cold Winter Performance
ADEQUATE

Charging Capability
POOR

Our verdict

Although the Citroën ë-C3 is a compact electric European vehicle with low mass and small battery, its sustainability performance is just sufficient for a 5-star rating. The scoring is lower compared to that of other similar vehicles and can be largely attributed to a limited powertrain efficiency and relatively high electricity consumption values.

- The ë-C3 has no exhaust emissions, it scores well for brake abrasion, and adequately for tyre abrasion
- It performs modestly in energy efficiency, especially in cold and highway conditions, likely due to an inefficient powertrain and heating system and higher aerodynamic drag
- Despite the relatively high energy use, the car scores top marks in greenhouse gas emissions thanks to its lightweight design, small battery, and low-emission European electricity supply.

The ë-C3 surprised in a rather negative way. It demonstrates that not every small electric vehicle scores equally in terms of sustainability and that powertrain design, strategy and selection of components are essential in the efforts for minimising environmental impact.

Disclaimer

Think before you print

Clean Air

9.3 /10

Comments

Due to its electric powertrain, the ë-C3 doesn't have any exhaust emissions. The vehicle scores adequately for tyre abrasion. The reduction of brake abrasion through kinetic energy recuperation and the associated minimisation of friction brake usage helps reach a high score in this part of the assessment.

Exhaust emissions

GOOD ● 10.0 /10

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

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)	not applicable	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

9.3 /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 ● 7.7/10

Tyre wear

ADEQUATE ● 3.8/6

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	adequate	2.3/3
Wheel alignment	marginal	0.5/1
Accelerator response	marginal	1.0/2

Brake wear

GOOD ● 5.4/6

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	good	5.4/6

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

Clean Air

9.3 /10

Additional Life Cycle Assessment information

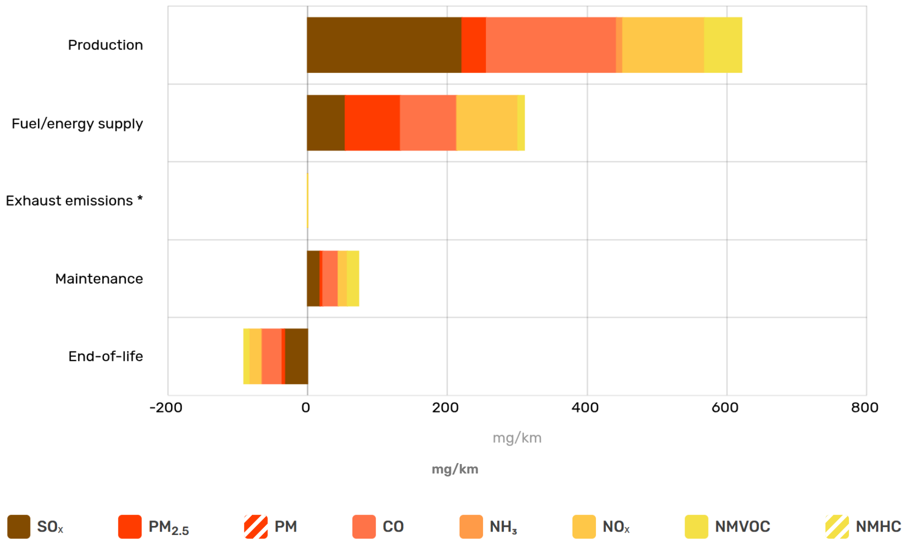
ADEQUATE

8.8/10

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.

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

8.1 /10

Comments

For an electric vehicle of this type, the ë-C3 scores poorly in the Energy Efficiency Index. It generally uses relatively high amounts of energy and the numbers are significantly increased in the -7°C cold winter tests and the Highway Test. The reasons likely are a limited efficiency powertrain, high aerodynamic drag due to the edgy body shape and high consumption heating system, based on a PTC heater only.

Energy demand

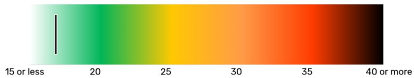
ADEQUATE 8.2/10

Propulsion energy consumption in laboratory

ADEQUATE 8.9 /10

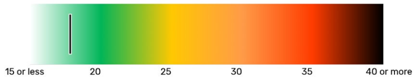
The vehicle's measured consumption figures are displayed in the bar chart. The colour scheme positions the values relative to low and high figures in a typical range. The ranges are different for combustion engine and pure electric vehicles.

Legal test (WLTP)



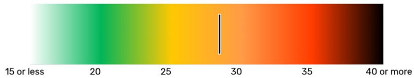
16.8 kWh/100 km

Warm weather



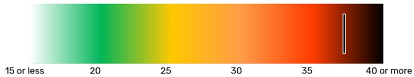
17.8 kWh/100 km

Highway



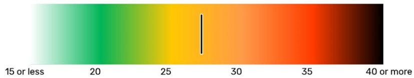
28.4 kWh/100 km

Winter cold start



37.2 kWh/100 km

Winter warm start



27.1 kWh/100 km

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

Energy Efficiency

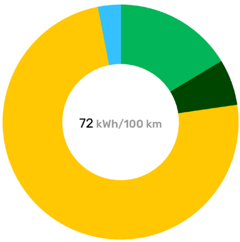
8.1 /10

Additional Life Cycle Assessment information

ADEQUATE 8.8/10

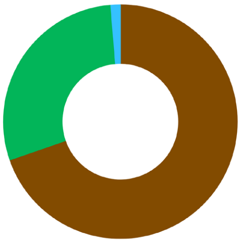
Life Cycle Assessment (LCA) investigates the environmental impact of a car over its entire lifetime 'from cradle to grave'. In this section, the total vehicle life cycle primary energy demand is displayed. The scoring does not consider the direct propulsion energy use, because it is scored separately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

Total LCA energy consumption



- Production & recycling 16.4%
- Battery production 6.3%
- Fuel/energy supply * 74.3%
- Maintenance 3.0%

Energy source share in total LCA consumption



- Fossil 69.7%
- Renewable 29.0%
- Other 1.3%

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.

ADEQUATE 7.3/10

good adequate marginal weak poor not applicable

Greenhouse Gases

9.9 /10

Comments

Thanks to its lightweight, small battery, European production and relatively low emissions of European average electricity supply, the ë-C3 achieves almost all points in the Greenhouse Gas Index, despite its relatively high consumption figures.

Exhaust GHG emissions

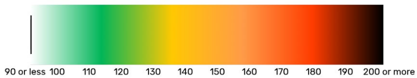
Combustion of conventional fuels releases greenhouse gases at the vehicle's tailpipe. The most significant of these gases are the emissions of CO_2. Green NCAP's assessment considers methane (CH_4) and laughing gas (N_2O) as well. Together, these are counted with their global warming potential to a sum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

GOOD ● 10.0 /10

In laboratory

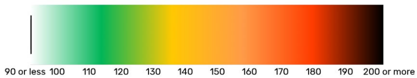
Green NCAP performs a wide range of tests on cars in the laboratory. This is the best way to ensure controlled conditions and guarantee that all cars are tested in the same way, making their results comparable. Read more

Legal test (WLTP)



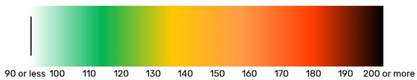
0.0 g CO_2-eq./km

Warm weather



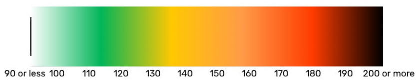
0.0 g CO_2-eq./km

Highway



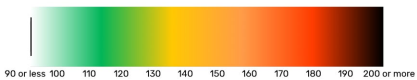
0.0 g CO_2-eq./km

Winter cold start



0.0 g CO_2-eq./km

Winter warm start



0.0 g CO_2-eq./km

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

Greenhouse Gases

9.9 /10

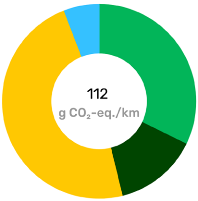
Additional Life Cycle Assessment information

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.

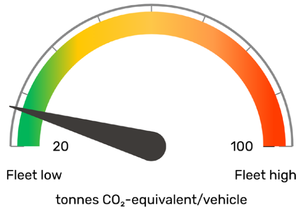
ADEQUATE

6.7 /10

Total LCA GHG emissions



- Production & recycling 32.3%
- Battery production 13.9%
- Tailpipe emissions * 0.0%
- Fuel/energy supply 48.0%
- Maintenance 5.9%



Vehicle Life Cycle average emissions **27** (+/-)
(best **23** | worst **33**)

* **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
ADEQUATE

Cold Winter Performance
ADEQUATE

Charging Capability
POOR

Green NCAP Comment

The ë-C3 failed to impress in the Driving Experience assessment.

- The estimated real-world consumption figures are adequate in warm weather conditions and mostly poor in cold winter usage. The resulting driving ranges are low and lead to another poor note.
- In cold winter driving conditions, drivers can increase the driving range if the vehicle can be preheated while it is plugged and before the trip starts. Yet, due to the small battery, the driving range gain evaluation remains 'adequate'. The ë-C3 manages to heat up the front part of its cabin quickly, but the temperatures in the rear footwell did not reach 16°C during the test. The heating concept relies on a PTC heater only, which is most likely the reason for the high electricity demand for heating.
- The standard home AC charging performance is adequate with a 87.2% grid-to-battery efficiency, but the DC fast charging performance is limited and leads to a poor score. The car does not offer any bi-directional charging functions.

Consumption & Range

ADEQUATE

Estimated actual consumption

ADEQUATE

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	17.3 (adequate)	18.4 (adequate)	22.3 (adequate)	19.1 (adequate)	kWh/100 km
Cold Winter	38.9 (poor)	26.1 (adequate)	31.0 (poor)	32.2 (poor)	kWh/100 km

Driving range

POOR

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	287	270	223	261	km
Cold Winter	128	190	161	154	km

Accuracy of display

GOOD

Is the consumption figure on the display correct?

good — adequate — poor — not applicable

Cold Winter Performance

ADEQUATE

Driving range benefit of pre-warming

ADEQUATE

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	+99 km	adequate
Mixed trip	+50 km	poor

Cabin heating

ADEQUATE

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	315 s (adequate)	513 s (adequate)
Footwell	197 s (good)	

The target temperature in the rear footwell was not reached during the test.

good · adequate · poor · not applicable

Cold Winter Performance

ADEQUATE

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.

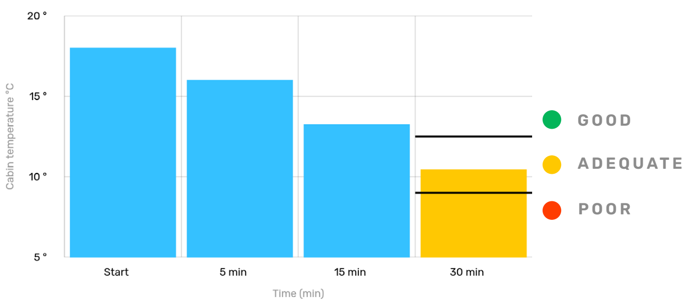
	Y/N	Fitment
Heat pump	N	
Seating heating front	Y	Optional for the tested version
Seating heating rear	N	
Steering wheel heating	Y	Optional for the tested version
Sheduled pre-heating of seats	N	
Scheduled steering wheel pre-heating	N	
Scheduled cabin air pre-heating	Y	Standard
Smart cabin heating management	N	

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

POOR

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	✕	✕

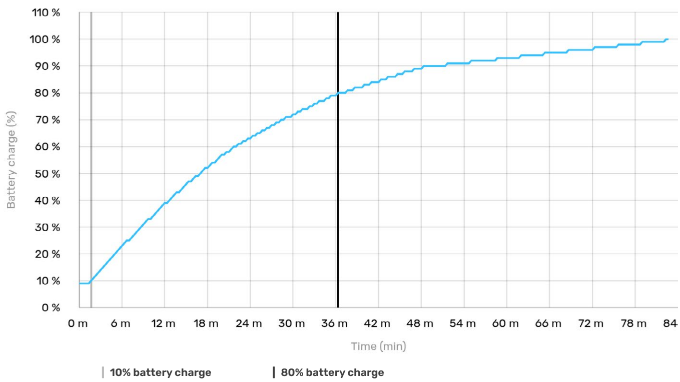
Fast charging

POOR

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

POOR

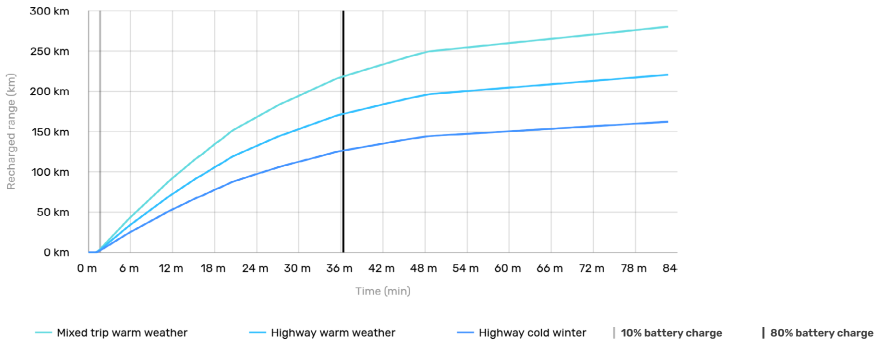
Fast charging

POOR

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.

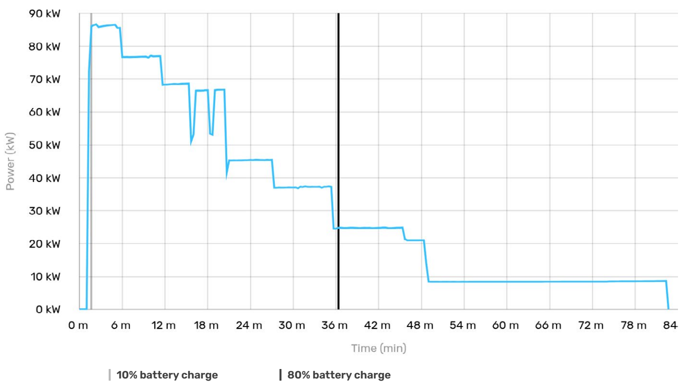
Recharged range gain per charging time

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

POOR

Home charging efficiency

ADEQUATE

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	87%	
Maximum home charging power	11.0 kW	Optional

Bidirectional charging

POOR

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

Not available

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
City and Supermini

System power/torque
83 kW/120 Nm

Engine size
n.a.

Declared consumption
16.8 kWh/100 km

Declared driving range
Overall 320 km
City 446 km

Declared CO_2
n.a.

Declared battery capacity
Usable (net) 44.0 kWh
Installed (gross) 44.0 kWh

Mass
1,476 kg

Heating concept
PTC heater

Tyres
205/50 R17 93V

Emissions class
AX

Tested car
VR7CBZYA7RT15xxxx

Publication date
09 2025

Also covered by this rating

Variants
Citroën ë-C3
Max Plus electric FWD automatic

Other models
FIAT Grande Panda
83 kW electric FWD automatic

green ncap