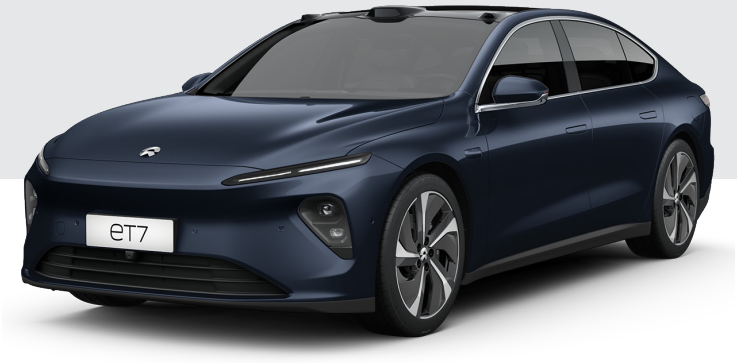
green ncap

NIO

2022

NIO ET7

480 kW electric AWD automatic



10.0 /10	9.4 /10	9.6 /10
Clean Air Index	Energy Efficiency Index	Greenhouse Gas Index

10.0 /10 Clean Air Tests

	Laboratory Test	NMHC	NO_x	NH_3	CO	PN
10.0/10	Cold Test	●	●	●	●	●
10.0/10	Warm Test	●	●	●	●	●
10.0/10	Highway	●	●	●	●	●
10.0/10	Cold Ambient Test	●	●	●	●	●
	Road Test					
10.0/10	On-Road Drive	●	●	●	●	●
5.0/5	On-Road Short Trip	●	●	●	●	●
8.0/8	On-Road Heavy Load	●	●	●	●	●
5.0/5	On-Road Light Load	●	●	●	●	●
2.0/2	Congestion	●	●	●	●	●

● n.a. ● good ● adequate ● marginal ● weak ● poor

Comments

NIO only produces battery electric vehicles. Accordingly, the tested ET7 scores the maximum index of 10 in this part of the assessment as it doesn't emit any polluting exhaust gases.

9.4 /10 Energy Efficiency Tests

	Laboratory Test	Energy		
10.0/10	Cold Test		→	**17.7** kWh/100 km
10.0/10	Warm Test		→	**16.9** kWh/100 km
9.2/10	Highway		→	**25.4** kWh/100 km
8.5/10	Cold Ambient Test		→	**30.4** kWh/100 km

	Consumption	Driving Range
Average	**20.0** kWh/100 km	**530** km
Worst-case	**30.4** kWh/100 km	**337** km

n.a. good adequate marginal weak poor

Comments

The ET7 convinces with low electricity consumption in both the cold and warm WLTC+ tests. The dynamic drive in the Highway Test requires more – 25.4 kWh/100 km – but still below the lower rating threshold thanks to low aerodynamic drag. As is typical for electric vehicles, the Cold Ambient Test presents the biggest challenge due to high cabin heating demand. Here, the NIO shows 72% higher consumption than in the standard WLTC+ case. In the real world On-Road Drive test, a consumption of 18.8 kWh/100 km and a range of about 545 km can be expected.

9.6 /10 Greenhouse Gases Tests

	Greenhouse gases	CO_2	N_2O	CH_4
10.0/10	Cold Test	●	●	●
10.0/10	Warm Test	●	●	●
9.8/10	Highway	●	●	●
9.0/10	Cold Ambient Test	●	●	●

n.a. good adequate marginal weak poor

Comments

The Greenhouse Gas (GHG) Index is based on a Well-to-Wheel+ approach, meaning that the GHG emissions related to the supply of energy are added to those of the tailpipe. The vehicle's production is not yet included in the assessment due to the implicit limitations of generic data about global supply chains. Since the NIO ET7 is a purely electric car, its GHG emissions originate only from the upstream processes of electricity supply – ca. 48-86 g CO_2-eq./km . Thanks to its low energy consumption and the relatively low GHG emissions of EU electricity production, the ET7 scores a very high 9.6/10.

Our Verdict

NIO is a relative newcomer to the European market and makes a strong statement with its fully-equipped ET7. The car comes with two motors and all-wheel-drive, a formidable power output of 480 kW and a huge 100 kWh battery (a 75 kWh variant is also offered). But this all adds weight, and the NIO tips the scales at 2.4 tons. In the laboratory WLTC+ test, the ET7 exactly matched its declared range. The battery capacity test is performed with 11 kW AC charging and the determined available capacity is 92.5 kWh. This value is below the officially promoted figure, but this is compensated by slightly lower consumption than what is declared. The measured charging/discharging efficiency from the charging socket to battery output is 90%.

Despite its high mass, the ET7 demonstrates high overall efficiency. Under cold winter conditions (WLTC+ test at -7°C), however, the consumption is increased by 72% and this significantly reduces the driving range. The initial cabin heating needs a lot of energy and improving the climatization management requires a special effort by electric vehicle manufacturers in principle.

The absence of polluting exhaust gas emissions, the high energy efficiency and the relatively low greenhouse gas emissions of European average electricity production grant the NIO ET7 an impressive Weighted Overall Index of 9.6 out of 10 and a well-deserved 5 Green stars.

Disclaimer

Specfications

Publication Date	Tested Car	Tyres	Emissions Class
11 2022	LJ1EFAUU0NG06xxxx	245/45R20	Euro 6 AX
Mass	**Engine Size**	**System Power/Torque**	**Declared CO_2**
2,379 kg	n.a.	480 kW/850 Nm	n.a.

Declared Battery Capacity	Declared Driving Range	Declared Consumption
100.0 kWh	Overall 580 km City 660 km	19 kWh/100 km

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