EV FACT SHEET

Lexus RZ450e

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Lexus RZ450e. Image: Lexus

INTRODUCTION

The Lexus RZ450e is built on Toyota's e-TNGA electric platform - as are the Toyota BZ4X and Subaru Solterra. Australian sales of the RZ450e began in May 2023, making it the first of these three EVs to go on sale here. It is also the first Lexus to incorporate the now standard CCS2 charging socket, making it compatible with the vast majority of AC and DC chargers in Australia.

It is offered here in two motor, constant all-wheel drive guise, however the 'drive-by-wire' steering system incorporating a yoke rather than a steering wheel offered in some overseas markets is not available here due to Australian Design Rules compliance issues.

The RZ450e on release comes with five years of capped-price servicing at $395 per service with intervals of 12 months or 15,000 km.

DRIVING RANGE

Currently, the official Australian ADR 81/02 test cycle is based on the outdated (and highly over-optimistic) European NEDC test cycle. Unlike most manufacturers here now (who generally quote the more achievable ranges found using the newer European WLTP test cycle), at the time of writing (May 2023) Lexus have only included the NEDC number in their advertising material.

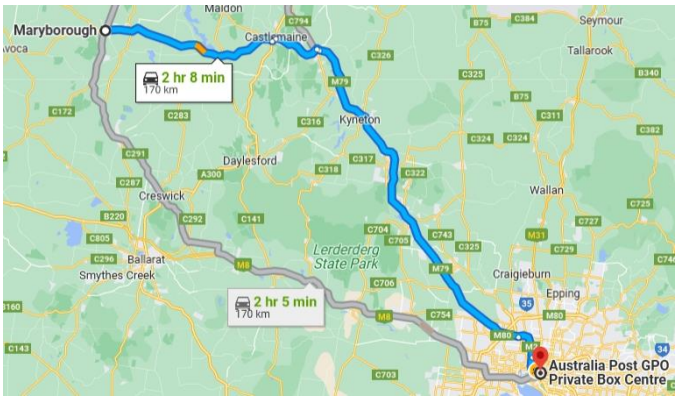
Therefore, to avoid disappointment always check which test cycle has been used when assessing an EV for your needs and/or comparing it to other models. As a rough guide, NEDC is generally 30% too high, WLTP a good estimate if doing mostly urban and outer suburban driving and US EPA the better guide if doing mostly outer suburban to regional driving.

DRIVING RANGE (continued)

National testing system range estimates:		
NEDC (Aust)	**WLTP (Euro)**	**US EPA**
470 km	395 km	354/315[1]

Table 1: Driving range estimates for the Lexus RZ450e.

Using the US EPA rating, a Lexus RZ450e fitted with 18 inch wheels do a round-trip from the Melbourne CBD to Maryborough (170 km NW of Melbourne), provided the heating or air conditioning were not heavily used. For this sort of trip, a short DC top-up charge in Maryborough itself or at one the various DC charger sites along the possible routes there and back would be recommended. (For further charging options and availability, see: https://www.plugshare.com/).



Typical return trip range for the RZ450e. Image: Google maps

CHARGING SPEEDS/REQUIREMENTS

Charging port

The RZ450e is fitted with a CCS2 socket allowing it to charge via Type 2 AC chargers[2] as well as CCS2 DC fast-chargers.

CCS2 charging plug and socket

Notes:

1. 354 km for 18 inch wheels, 315 km for 20 inch wheels.
2. The RZ450e can be charged at any AC EVSE, however an adaptor will be needed to use the (few) remaining older EVSEs fitted with Type 1 (J1772) plugs.

CHARGING SPEEDS/REQUIREMENTS (CONTINUED)

AC charging:

Like all new EVs sold in Australia, the RZ450e is fitted with a type 2 AC socket.

Charging rates:

Single phase: maximum of 7.4 kW (32A)
Three phase: maximum of 11 kW (16A per phase)

Charging speeds vary on the capacity of the EVSE (Electric Vehicle Supply Equipment) the car is connected to. Approximate AC charging times for 0 – 100% and DC 0 – 80% are shown in table 2.

AC: 0 – 100% time				DC: 0 – 80% time	
10 A (power point)	15 A 1 phase (Caravan outlet)	32 A (1 phase Home EVSE)	16 or 32 A (3 phase public AC EVSE)	DC Fast charge (50kW)	DC Fast charge (150+kW)
33h	15h	7.5h	16A: 6.5h 32A: 6.5h	65m	35m

Table 2: Approximate AC and DC charging times for the Lexus RZ450e.

DC fast charging

The Lexus RZ450e uses the CCS2 DC fast-charge connector and can charge at up to 150 kW DC.

V2X capability:

The RZ450e does not currently offer any V2X functions.

Notes:

V2X is the generic term covering the options of getting 230V AC power from the battery and supplying it as:

- V2L: vehicle to load (230V power available from outlet in car)
- V2H: vehicle to home (supply home via special connection)
- V2G: vehicle to grid (supply home or grid via spec. connection)

HOME CHARGING CONSIDERATIONS

General

To get the shortest home charging time for the Lexus RZ450e, an 11kW AC charger would be needed. However, depending on your existing power supply and/or charging needs, it may only be practicable to fit a lower rated EVSE. (See notes below). Lower capacity EVSEs will increase charging times, as shown in table 2.

Important notes for any home EVSE installation:

1. High charging rates are generally not needed for overnight charging.
2. Homes do not normally have three phase AC connected.
3. Switchboard and/or electrical supply upgrades may be needed if your home is more than 20 years old. For more information on this item – see Fact Sheets at EVchoice.com.au or read articles in:
   (a) Renew magazine edition 143. (EVSE wiring)
   (b) Renew magazine edition 156. (EVSE buyer's guide)

SPECIFICATIONS

Boot volumes in litres (1 litre = 10 x 10 x 10 cm)

- Boot under parcel shelf: 522
- Rear seat folded, loading space to roof: not specified

Dimensions:

- Overall length: 4,190 mm
- Overall height: 1,635 mm
- Ground clearance: 156 mm
- Overall width (mirrors in): 1895 mm
- Overall width (mirrors out): not specified

Battery:

- 71.4 kWh (64 kWh usable)

Energy consumption: (WLTP)

- 18.7 kWh/100km

Kerb weight:

- 2105 kg

Charging:

- 1 phase AC: 7.2 kW max.
- 3 phase AC: 11 kW max.
- DC: 150 kW max.

Charge port location:

- LH front guard (just above/behind front wheel).

Drive configuration:

- all-wheel drive

Towing:

- 750kg/750kg (Braked/unbraked)

Performance:

Max. Power (kW)	0 to 100km/h (Sec)
150 front 80 rear	5.6

IMPORTANT NOTE

Always check all specifications with the manufacturer prior to any purchase. No responsibility accepted by AEVA or Bryce Gaton (EVChoice) for errors factual or due to reproduction in this Fact Sheet. Whilst all efforts are made to ensure the accuracy of the material in this Fact Sheet, manufacturers regularly make changes (often unannounced) to their model ranges and specifications.