EV FACT SHEET

Renault Kangoo ZE

Aust. delivered 2017-23

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Image: Renault Australia

INTRODUCTION

The Renault Kangoo ZE is the BEV (Battery Electric Vehicle) version of Renault's popular Kangoo van.

In Australia, the Kangoo ZE is only offered in the 'Maxi van' size, although it is offered in three sizes in Europe.

Available with a 22 kWh battery in Europe since 2013, the larger (33 kWh) battery version became available in Australia in late 2017. (NB: There is a small number of 22 kWh Kangoo ZE vans available second-hand in Australia following trials with selected business in 2014 - 17).

It is worth noting here that the Kangoo ZE was limited to a maximum of 7 kW AC with no DC charging option. As a result, the business use-case for this van was limited to the maximum range of one charge unless the vehicle was able to be left idle to charge for several hours between trips. (See table 2 for AC charging speeds and times).

DRIVING RANGE

Currently, the official Australian ADR 81/02 test cycle is based on the outdated (and highly over-optimistic) European NEDC test cycle. However few manufacturers now quote this figure for their new releases. Instead they give the more achievable ranges found using the newer European WLTP test cycle.

Therefore, to avoid disappointment - always check which test cycle has been used when assessing an EV for your needs. As a 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. (**Note:** only NEDC and Renault supplied 'real-world' figures are available for the Kangoo ZE).

DRIVING RANGE (continued)

National testing system range estimates in kilometres		
NEDC (Aust)	'Real-world'	US EPA
270	120-200[1]	NA[2]

Table 1: test cycle range estimates for the 33 kWh Renault Kangoo ZE.

FLEET EV TRANSITION TIPS:

Key to increasing the efficient use of an electric LCV is recharging whilst loading and unloading at delivery points as well as during down-times at its home base. Installing the maximum AC charger size at the home base may be useful, as well as placing that charger adjacent to the loading area.

Note: Planning for a business EV transition where more than one LCV is used will include the need to review the business location's power supply situation as well as an overall EV fleet use-case charging needs assessment.

BUYING SECOND-HAND

1. Portable EVSE

If there is a portable EVSE (charger) with the vehicle, check it is undamaged and functioning.

2. Battery data

Over time, all EV batteries lose a small amount of capacity. This is generally 0.5% to 1% per year, with most manufacturers guaranteeing their batteries for around 8 years/160,000 km and 70% State of Health (SoH).

Important note regarding Renault battery warranty:
Renault only offered a 5 year/70% battery warranty on both the Zoe ZE40 and Kangoo ZE, meaning (as of the time of writing) it will have already have expired for many of the Kangoo ZEs imported to Australia.

3. General assessment of a second-hand EV

For more information on how to assess the condition of a second-hand EV see Jan – Mar 2022 Renew magazine (edition 158) for article on 'How to make a pre-purchase assessment of a second-hand EV' or go to:
https://evchoice.com.au/ev-information.html

Notes:

1. Renault supplied 'real-world' range numbers. According to Renault, 120 km was worst-case in winter, 200 km was best case in summer.
2. Renault do not sell in the US.

3. CHARGING SPEEDS/REQUIREMENTS

AC charging:

The Kangoo ZE is fitted with a type 2 AC socket.

Charging rates:

Single phase: maximum of 7.4 kW (32A)
Three phase: maximum of 7.4 kW (single phase)

Charging speeds and times vary on the capacity of the EVSE (Electric Vehicle Supply Equipment) it is connected to and the chosen battery size. Charging times for the Kangoo ZE are shown in table 2 below.

AC: 0 – 100% time				DC: 0 – 80% time	
10 A (power point)	15 A 1 phase (Caravan outlet)	32 A (1 phase)	16 or 32 A (3 phase)	DC Fast charge 50kW	DC Fast charge 100+kW
20h	12h	6h	12h: 16A 6h: 32A	NA	NA

Table 2: Approximate charging times for the 33 kWh Renault Kangoo ZE

DC fast charging:

The Renault Kangoo ZE did not support DC charging.

V2X capability:

The Kangoo ZE did not include any V2X capability.

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/BUSINESS CHARGING CONSIDERATIONS

General

To get the shortest home charging time for a Kangoo ZE, a 7.4 kW single phase 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 information pages 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

Seating capacity: 2

Dimensions and weights:

Dimensions/weights/volumes	
Length (mm)	4666
Width (mm) – mirrors in	1829
Width (mm) – mirrors out	2138
Height (mm) – unladen	1836
Ground clearance (mm)	Not specified
Wheel base (mm)	3081
Turning circle (m)	11.9
Cargo area length (mm)	1862
Rear door width-100 mm from sill (mm)	1219
Rear door width-1 m from sill (mm)	1141
Cargo area height (mm)	1252
Width at wheel arches (mm)	1218
Side door opening width (mm)	Not specified
Side door opening height (mm)	Not specified
Gross vehicle mass (kg)	2190
Payload (kg)	650
Tare weight (kg)	1585
Cargo volume (m^3)	4.6
Spare wheel?	Yes

Battery: 33 kWh

Charging:

- 1 phase AC: 7.4 kW (maximum)
- DC: not available

Charge port location:

- Front, centre. (Under Renault badge)

Vehicle to Load connection: (position and power): Not fitted

Energy consumption: (NEDC):

- 15.9 kWh/100km

Drive configuration:

- Front wheel drive

Towing:

- 322 kg unbraked/322 kg braked.

Performance:

Motor power	Motor torque	0 – 100 km/h time
44 kW	225 Nm	22.4 sec

IMPORTANT NOTES: