



EV FACT SHEET

Genesis GV70 EV

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Image: Genesis

INTRODUCTION

Based on the petrol/diesel GV70 that went on sale in 2021, the Genesis GV70 EV is an electrified version of the ICE (internal combustion engine) GV70. Whilst it shares the electric motors and battery from the E-GMP platform, it is not built on the EV-only platform that the Genesis GV60 (and Hyundai stablemates¹ the Ioniq 5 and Kia EV6) use. Australian sales of the GV70 EV began in 2022.

Classed in Australia as a 'Large SUV', competitors for the buyer's attention in this (rough) price segment would include the BMW iX3, Mercedes EQC, Audi e-tron and the Jaguar I-Pace. A possible 'left-field' alternative would be the Tesla Model X, although at the time of writing (May 2023) the Model X is unlikely to be sold again in Australia until late 2023 at the earliest.

The GV70 EV can AC charge at up to 11 kW as well as at a maximum 233 kW DC fast-charge rate. Connected to the fastest DC chargers, the GV70 EV can recharge 100 km of range in just over 4.5 minutes. The Genesis GV70 EV also offers Vehicle to Load (V2L) functionality at up to 3600W.

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Currently, the official Australian ADR 81/02 test cycle is based on the outdated (and highly over-optimistic) European NEDC test cycle.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 give this figure for their new releases. Instead they generally quote 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 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)

Testing system range estimates:		
NEDC (Aust)	WLTP (Euro)	EPA (USA)
Not yet rated	445	380

Table 1: Driving range estimates for the Genesis GV70 EV

Using the US EPA range – a GV70 EV should be (just) capable of a return trip from the Melbourne GPO to Shepparton in central Victoria, provided the heating or air conditioning were not heavily used. For this sort of trip, it would be recommended to do a short top-up DC charge at any of the multiple DC charger stops along the Hume highway, or one of the two in Shepparton itself. (For further charging options and availability, see: <https://www.plugshare.com/>).

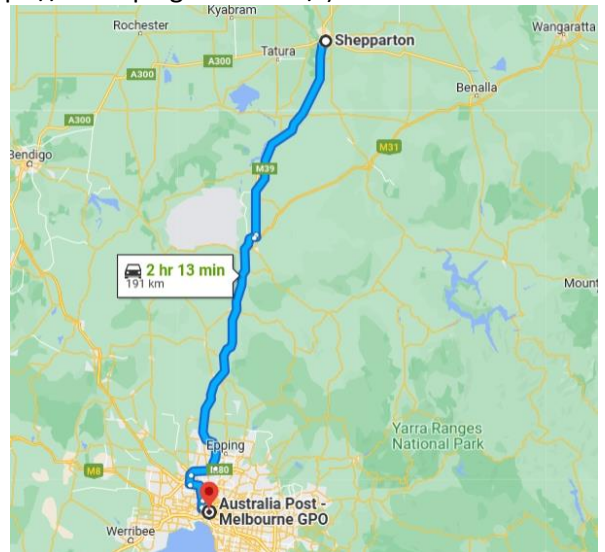


Image: Google maps

CHARGING SPEEDS/REQUIREMENTS

Charging port

The GV70 EV is fitted with a CCS2 socket allowing it to charge via Type 2 AC chargers² as well as CCS2 DC fast-chargers.



CCS2 charging plug and socket

Notes:

1. Genesis is a subsidiary of the Hyundai Motor Company.
2. The GV70 EV 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 Genesis GV70 EV is fitted with a type 2 AC socket.

Charging rates:

Single phase: maximum of 7.4 kW (32A)

Three phase: 11 kW (16A per 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. Approximate charging times for the GV70 EV 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 Home EVSE)	16 or 32 A (3 phase public AC EVSE)	DC Fast charge (50kW)	DC Fast charge (350kW)
33h	21.5h	10.7h	7h	1.6h	18m

Table 2: Approximate charging times for the Genesis GV70 EV.

DC fast charging:

The GV70 EV uses the CCS2 DC fast-charge connector and can charge at up to 233 kW.

V2X capability:

The GV70 EV offers V2L functionality up to 15A (3600W) through a plug-in adaptor for the AC charge socket.

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 GV70 EV, an 11kW three phase AC EVSE would be needed. However, depending on your existing power supply and/or charging needs, a lower rated EVSE may only be practicable, or needed. (See notes below). Lower capacity EVSEs will increase charging times, as shown in table 1 above.

The GV70 EV also comes with a Mode 2 portable EVSE for plugging into a 10A power point. Charging with this EVSE will take around 33 hrs for a 0 – 100% charge.

Important notes for any 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 or business is more than 20 years old. For more information on this item - read EV Information articles at <http://evchoice.com.au/> or see:
 - (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)

- Seats up: 503 L
- Seats down: 1673

Front boot ('froot'):

- 25 L

Dimensions:

- Overall length: 4715 mm
- Overall width:
 - 1910 mm (mirrors in)
 - 2165 (mirrors out)
- Overall height: 1630 mm
- Ground clearance: 175 mm

Battery:

- 77.4 kWh (Approximately 74 useable)

Charging:

- 1 phase AC: 7.4 kW max.
- 3 phase AC: 11 kW max.
- DC: 233 kW max.

Charge port location:

- Front left side.

Energy consumption: (WLTP)

- 19.9 kWh/100 km

Kerb weight:

- 2310 kg

Drive configuration:

- All Wheel Drive (AWD)

Towing:

- 1800 kg braked/750 kg unbraked.

Performance:

- Max. Power: 320 kW (360 kW in boost mode)
- 0 to 100 km/h: 4.2 sec.

IMPORTANT NOTES:

Always check the specifications with the manufacturer prior to any purchase. No responsibility accepted by AEVA or Bryce Gaton 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.

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