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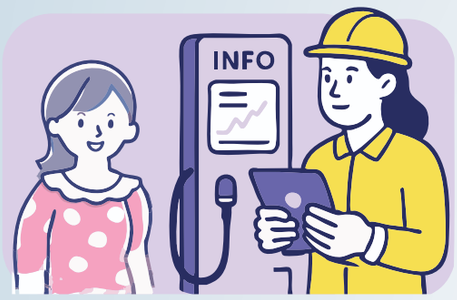
TNB Customer Guide
Before You Install an EV Home Charger

Congratulations for deciding to buy an Electric Vehicle (EV)!
Here are the steps you need to know before installing an EV Home Charger.

Step 1: Consult an Expert



Engage a qualified ST-registered Competent Person / Contractor
(ST refers to Suruhanjaya Tenaga. Contractor registration can be verified via the official ST website)

(a) Check internal wiring & Distribution Board (DB)

(b) Assess electrical load capacity for EV charging

(c) Confirm supply scheme and determine total load requirement (including EV charger):

- **Single Phase** → Supports **load up to 10kW**
- **Three Phase** → Supports **load above 10kW**

Their assessment determines whether internal upgrades or/and TNB supply upgrade are needed

Step 2: If Wiring Upgrade is Required

A. Installer/ Non TNB work

Your expert may recommend internal upgrades such as:

- Wiring improvements
- New main circuit breakers (MCB) or RCD for safety
- DB enhancements or safety protection devices

Note: Only ST-registered Competent Persons / Contractors should handle wiring and safety upgrades. Do not DIY or change TNB fuse.

B : Inform TNB

Your home may require changes to the electricity supply

- To upgrade from Single Phase to Three Phase Wiring, only TNB can process and approve supply upgrades.
- For more information and how to apply, please refer to myTNB Portal

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Good to Know

1. EV Charger Installation & Wiring Requirements

- EV Charger installers must be ST-registered Competent Persons / Contractors (in compliance with Electricity Supply Act 1990 / Act 447)
- No mode 1[1] charging allowed. Only mode 2[2] and Mode 3[3] (AC Type 2) is permitted.

Charging Equipment:

- Switched socket outlet (SSO) that meets MS 589-1 / BS 1363-1 standards
- Wall box charger approved and labelled by ST-SIRIM

Wiring:

- Dedicated circuit with a cable sized appropriately for the EV charger, following its design requirements and safety standards.
- Protected by 30 mA RCD (Type A RDC+DD[6] or Type B).

2. Safety tips after installation

- Ensure test report is obtained from appointed ST-registered Competent Person / Contractor after EV wall box installation.
- Perform regular inspections and maintenance
- Avoid extension cords (if using mode 2) and wall sockets (13A)
- Keep Class C[4] fire extinguisher nearby
- For more details, see ST EVCS Guideline 2025

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Notes:

1. Mode 1 - Direct Wall Socket
2. Mode 2 - Wall Socket with Safety Box
3. Mode 3 - Wall Mounted EV Charger with Cabling from Home Electrical Distribution Box
4. Class C - Fire Extinguisher for Electrical Equipment
5. RCD - Residual Current Device
6. DD - DC Detection