



**RENAULT**  
Passion for life

# Charging your EV at home



ZOE

# Never visit a petrol station again....

Unlike petrol or diesel cars, you can 're-fuel' your electric car from the comfort of your own home by installing a home wallbox.

If you have a private driveway or off-street parking, you may be able to install a home wallbox that you can use to do the majority of your charging.

Most people's houses have an electricity supply capable of supporting a 7kW home wallbox. A 7kW wallbox will charge a Renault ZOE with Z.E. 50 battery from 0-100% in about 9.5 hours but the likelihood is you won't be charging from flat to full very much, just topping up, as and when you need.

Charging from home really is the simplest, cheapest and most convenient way to charge your electric car. Pull up on your driveway, plug your car in and leave it to top itself up whilst you enjoy your evening.



# How much will it cost to charge my car at home?

The good news is, charging your electric car at home is the most cost effective way unless you are lucky enough to come across a free charging station at work or out and about!

You can work out your cost to charge by multiplying the battery size by the rate you pay for your electricity:

*52kWh battery in a ZOE x 14.4<sup>^</sup> pence per kWh = £7.48 for a 0-100% charge*

Even better, unlike petrol or diesel prices, you can choose your energy provider and tariff so you could opt for a tariff that gives you cheaper electricity overnight and bring your cost to charge down to £3-4.

# How much can you save on fuel compared to a petrol or diesel?

Because electricity is cheaper than petrol or diesel, your fuel costs are likely to be the biggest saving you will make by switching to electric:

	Equivalent petrol vehicle*	ZOE Iconic R110 Z.E 50
Mileage	10,000 miles	10,000 miles
Pence per mile <sup>1</sup>	10.5p	3.1p
Total fuel cost	£1,050	£310
Saving over 10,000 miles	<b>£740</b>	



<sup>^</sup>Based on a UK average electricity cost of 14.4p per kWh as of 09/2020, obtained from <https://www.ukpower.co.uk>

\*Vehicle used for comparison is Renault CLIO Iconic TCE 100 Auto

<sup>1</sup> Total energy cost for the petrol vehicle (Renault CLIO TCE Automatic Iconic) is based on an average petrol cost of £1.13 a litre (as of [09/20], figures obtained from <https://www.gov.uk/government/statistical-data-sets/oil-and-petroleum-products-weekly-statistics>) with a combined WLTP fuel consumption of 48.7 mpg. The total energy cost for the ZOE is based on an average electricity cost of 14.4 pence per KW (as at [09/2020], figure obtained from <https://www.ukpower.co.uk/>)

# The government Electric Vehicle Homecharge Scheme (EVHS)

The EVHS grant provides a 75% contribution up to a maximum of £350 towards the cost of purchasing and installing a home wallbox.



In order to qualify for the grant, you must:

- Provide evidence of ownership or lease of an eligible vehicle (most electric vehicles and plug-in hybrids are eligible)
- Use an approved installer
- Have a designated private driveway/off-street parking with good access
- Not have claimed the grant before unless you are owning two electric cars simultaneously

The authorised wallbox installer has to apply and claim the government grant on your behalf.

If you are unsure about your eligibility or require further information, you can contact your chosen wallbox provider to guide you through the process.

# How do I choose a wallbox supplier?

There are a variety of different wallbox's and installers to choose from and it can be daunting deciding which is the right home charging solution for you and your Renault.

A few things we would recommend considering when choosing a home charging solution:

## **Cost**

As with any product or service, costs will vary depending on the company you choose. There are wallbox options available for those on a budget or those wanting something a little more premium, with the differences coming down to charging speed, aesthetics, smart/remote functionality etc. After government grants, 7kW home wallbox installations are likely to start from around £500 ranging up to £1000.

## **Charging Speed**

The most basic home chargers will have a power output of around 3 to 3.7kW, however, these units will take around 20- 25 hours to charge a ZOE with 52kWh battery. Most houses will be able to support a 7kW wallbox which will charge most EVs from 0-100% overnight in 8-10 hours and is therefore the most convenient option.

## **Government Charging Grant**

If you are entitled to the government charging grant (EVHS), it is worth checking the wallbox you want to have installed is eligible too. From July 2019, the eligibility criteria was updated to insist that all eligible chargers must be 'smart capable' - this means being connected to the internet and operated remotely. This smart capability allows the user to schedule charging times or start and stop charging from a smart phone App.

## **Tethered or untethered?**

You can choose whether you want a tethered or untethered wallbox. A tethered wallbox means it comes with the charging cable already connected and is great if you 'd rather not get your own cable out the boot of your car each time. Some people may argue this option isn't as future proof, however, most electric cars in the UK charge with a Type 2 connector and cable so it shouldn't be a major issue. An untethered or socketed wallbox comes with just a socket and no cable and means you use the Type 2 cable that has come with your Renault to plug into the wallbox.



## Functionality

All wallbox units approved for the government grant will have 'smart capability' which means you will be able to manage your charging remotely from a smartphone app. If you have solar panels fitted, you may want to choose a wallbox that is compatible with your solar panels, allowing you to charge your Renault for free and with your own renewable energy!

## Z.E. Ready

At Renault, we have developed the Z.E. Ready charging certification. This is a Renault specific certification that sets minimum standards for wallbox manufacturers and installers to ensure their products and installs are compatible with Renault EVs.

We would recommend ensuring the wallbox and installer you choose is certified Z.E. Ready. Your Renault dealership will be able to advise you on Z.E Ready approved suppliers and installers. Choosing a supplier or installer that is not Z.E. Ready does not mean the wallbox or installation will be incompatible with your Renault EV, just that, the company has not gone through the Z.E. Ready certification process to have it confirmed.

# Wallbox application and installation

## Select your chosen supplier and wallbox

There are many different wallbox installers and suppliers to choose from and it can be daunting at first. Please see page 5 for advice on choosing a wallbox and installer.

## Contact & application

Once you have decided on a wallbox and installer, contact them to begin your application. They should be able to explain the process to you and let you know what costs may be involved. They may ask you to send photos of your electrics and driveway or they may come and do a physical survey of your property themselves. You should tell the installer when you expect to take delivery of your Renault so they can try to ensure you have your wallbox installed in time for your new car to arrive.

## Confirmation

Once all the surveys have been carried out and paperwork completed, your chosen installer should be able to give you a date to install your wallbox.

## Government grant

If you are eligible for the government charging grant, the installer will claim this on your behalf and deduct the amount of the grant from your final bill. They may need you to fill in and sign paperwork in order to establish your eligibility.

## Installation

On the agreed day of installation, your chosen installer will send an engineer to fit the wallbox. Once completed, ask them to demonstrate how the wallbox operates to ensure you are confident when it comes to charging your Renault for the first time.

# Things to be aware of...

Although most installations are straightforward, there are sometimes issues that crop up that can lengthen the time from application to installation and may affect the cost of an installation.

A standard installation would be considered as:

- A 7kW home wallbox
- Standard single-phase domestic installation carried out by 1 person within 6 hours
- Cable run of up to 15 meters
- No civil works or electric remedial work required



We aren't all qualified electricians, so here are some useful explanations regarding some of the terms you may come across during the installation process:

## **Additional cable run**

Additional cable run may be required if you are wanting your wallbox fitted a long distance from your house. A standard install would include up to 15 meters cable run and any extra cable may incur additional charges.

## **Distribution Network Operator (DNO)**

A DNO is the company that owns and operates the power lines in your area.

All installers will assess the electrical demand to your home electrics before a wallbox can be fitted. They will do this in the first instance by asking you several questions about the electrical appliances in your home.

If the electrical demand or 'load check' comes back over 60amps then your DNO will be contacted in order to approve the installation or to increase the maximum electrical demand to your property in order for the wallbox to be installed.

Unfortunately, DNOs can take up to 14 to 21 days to respond to a request and longer if remedial work is required. As the 'load check' is done at the start of your application, you should be aware from the outset if you are likely to experience a delay due to DNO involvement.

### **Looped supply**

A looped supply is when two properties share a single electricity service cable and are most commonly found in terraced or semi-detached properties.

A looped supply is perfectly safe, however, it may need to be separated if one neighbour wants to install a home wallbox.

To separate a looped supply, both neighbours will need to agree and depending on the situation, the neighbour that is requesting the separation may be liable to pay for the work.

You can contact your local DNO for advice if you are worried about a looped supply. You can find out who your local DNO is by visiting [www.energynetworks.org](http://www.energynetworks.org).

### **Isolation switch**

You may need to arrange for an isolation switch to be fitted if the installer cannot get access to your existing fuse board. An isolation switch allows the installer to isolate the circuit and fit an additional mini fuse board for the wallbox to run off. An isolation switch usually has to be requested and fitted by your DNO so you should allow extra time and possible extra cost (dependent on your DNO), for the final install to take place.

### **Old electrics**

If the electrics in your home haven't been updated in a while, you may need to update parts of the system to allow for a wallbox install to be carried out. Your installer will be able to advise you on any upgrades, if required.

### **Residual Current Device (RCD)**

An RCD is a safety device designed to prevent or minimise injury from an electric shock if you were to touch anything live, such as a bare wire. If the worst were to happen, it is designed to cut off the power before serious injury can occur.

In some instances where an RCD is present, the installer is unable to gain access to the existing fuse board to carry out the install. To complete the install the supply may need to be separated from the RCD.

If you are concerned that your install might fall outside of the standard install or you want further information on any of the issues, you can contact your installer to discuss before going ahead with your install.

# FAQs

## **Why can't I use a 3-pin plug to charge?**

Renault do provide the option to buy a 3-pin cable for occasional or emergency use.

Using a 3-pin cable as your main source of charging is not only much slower (taking 25-30 hours to fully charge) but is also not as safe as using a dedicated wallbox or charging station.

Drawing this amount of current on a continual basis can put too much strain on some wiring systems and can be dangerous. The use of extension leads from a 3-pin plug is also not recommended as this can overheat under the continual load.

A home wallbox is wired directly into your consumer board (fuse box) and therefore will not overload your home's electricity circuit. This means a home wallbox is completely safe to charge for long periods of time.

## **What is the difference between a tethered cable and socketed Homecharge unit?**

A tethered wallbox has a built-in charging cable with a connector. A socketed unit does not come with a built-in cable and therefore you would use the cable that comes with the car.

## **How long does application to install take?**

We estimate that from the point of first contact with your chosen installer, most installs should be completed within 3-6 weeks, depending on the speed the application is completed, the electrics in your home and whether any further checks need to be carried out.

## **Can I take my wallbox with me if I move to new house?**

Yes, it is possible to remove and re-install your wallbox. Your installer will be able to provide you with a quote in order to do this.

