

**To connect to the Essential Energy network, an application needs to be completed and approved before the solar system can be installed.**

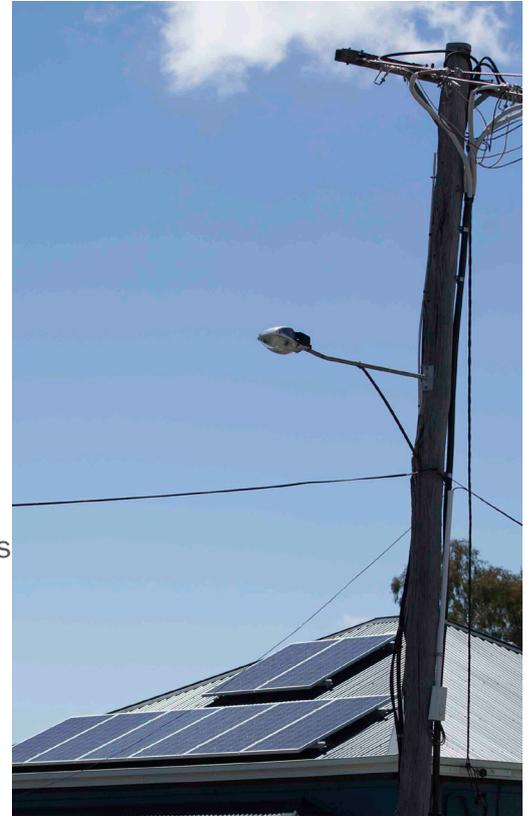
## Summary

Small scale solar systems have been the most popular embedded generation installations for Essential Energy. In recent years Essential Energy has seen substantial growth in roof top solar power systems installations.

As a customer, it is important to check with your system provider to confirm the solar system you select meets the current Australian Standards before committing to your purchase. Any solar installation that meets current Australian Standards can be permanently connected to Essential Energy's distribution network.

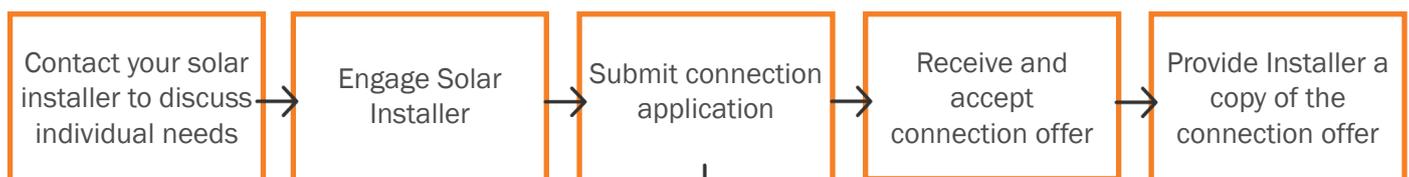
Before you commit to purchasing or upgrading a solar installation, it is important to understand all costs associated with system installation and possible impacts on your anticipated return on investment. These include system costs, metering costs and if applicable, any private network upgrade requirements, export limits and changes in feed-in tariffs.

The connection process includes completion of an Application for Low Voltage Connection on the Essential Energy website. Your application will then be assessed to determine whether the local network is able to accommodate any export of energy from your system.



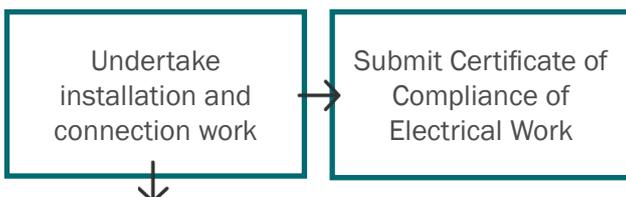
## The Process of getting a connection to our network

### Customer to complete



Solar Installers or Solar companies can prepare and submit the application on your behalf. Always ask for a copy of the connection offer to ensure any site specific conditions are understood before proceeding.

### Installer to complete



Installer to ensure the system is installed in accordance with the single line diagram, voltage rise calculations and site specific conditions

### Essential Energy supporting solar energy

Essential Energy is committed to supporting renewable energy, in particular solar. Essential Energy has seen large amounts of solar systems connect to our network. In 2020 Essential Energy has approved over 23,000 applications which involved the connection of solar.

## Solar exports and voltage stability

One of the key issues for Essential Energy's network is to keep voltage stable and this means there are limitations on the quantity of generation that can be exported back into the electricity grid. Essential Energy provides all customers the opportunity to install solar whilst managing the resultant impact on the electricity network.

Essential Energy's unique network of long line lengths across regional NSW means that the export of generation from solar connections, are significant contributors to overvoltage situations.

## Frequently Asked Questions

### Do I need to engage a solar installer and an Accredited Service Provider(ASP)?

Under normal circumstances you will only need to engage a solar installer who would have an Electrical Contractor to submit the required Certificate of Compliance Electrical Work.

### How will I know if my application for connection has been submitted?

The person who applied on your behalf should provide your details in the application. You should request a copy of your offer prior to installation.

### Can I obtain a copy of the connection application?

Yes, if you are unable to attain a copy from your installer, contact Essential Energy on 132 391 and they can provide you with a copy of the Offer letter.

### Why can exporting solar onto the network be an issue?

As the amount of embedded generation increases, the potential for the network to experience reverse power flows, voltage fluctuations and power quality issues increases. These can damage assets and cause blackouts for customers.

### Can Essential Energy charge customers for exporting onto the network?

We do not currently charge customers who use the network to export energy from their solar systems. This may change in the future as electricity exports will eventually drive the need for new network expenditure as the inherent 'hosting capacity' of the existing network is used up.



### Why does Essential Energy limit exports to the network?

Essential Energy is not limiting the amount of generation that can be installed for the customer's consumption. Essential Energy only limits the level of export back into the network.

Essential Energy's approach is to ensure all customers are not negatively impacted by newly installed solar systems. Therefore, an export limit may be applied to ensure the network can accommodate the additional exported power.

If the network cannot accommodate the additional exported power, the customer has the ability to increase the capacity of their local network to ensure the network voltage stays within required limits. This reduces the impact on other customers.

### How do you assess what a customer can export to the grid?

The installer needs to conduct a Voltage Rise Assessment to ensure the voltage is within required limits in the customer's installation. Essential Energy determines the impact on the electricity network of new solar installations and applies site specific conditions if required.