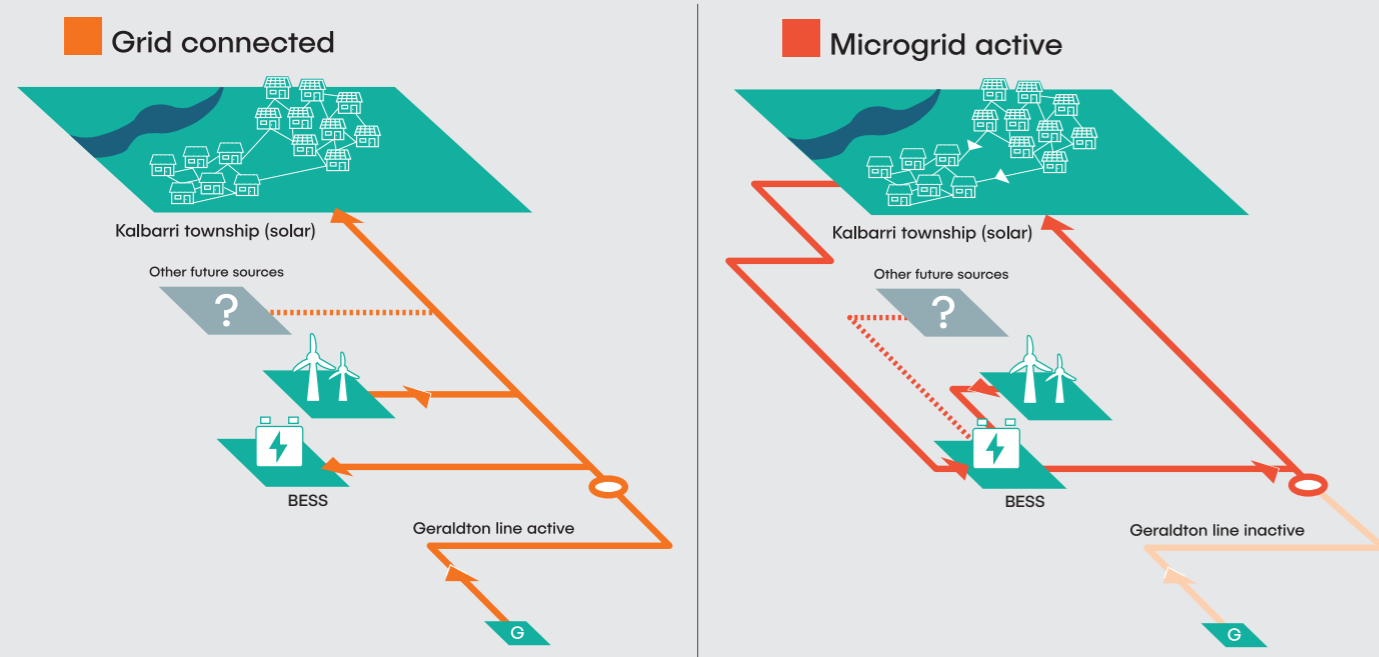


# Kalbarri microgrid

A microgrid is a small part of the network that can work independently if needed, for example, if the main feeder line is out of action.



## A microgrid needs:

### Electricity generation

Local sources of electricity such as wind turbines or diesel generator. Kalbarri uses rooftop solar and wind turbines.

### Smart systems

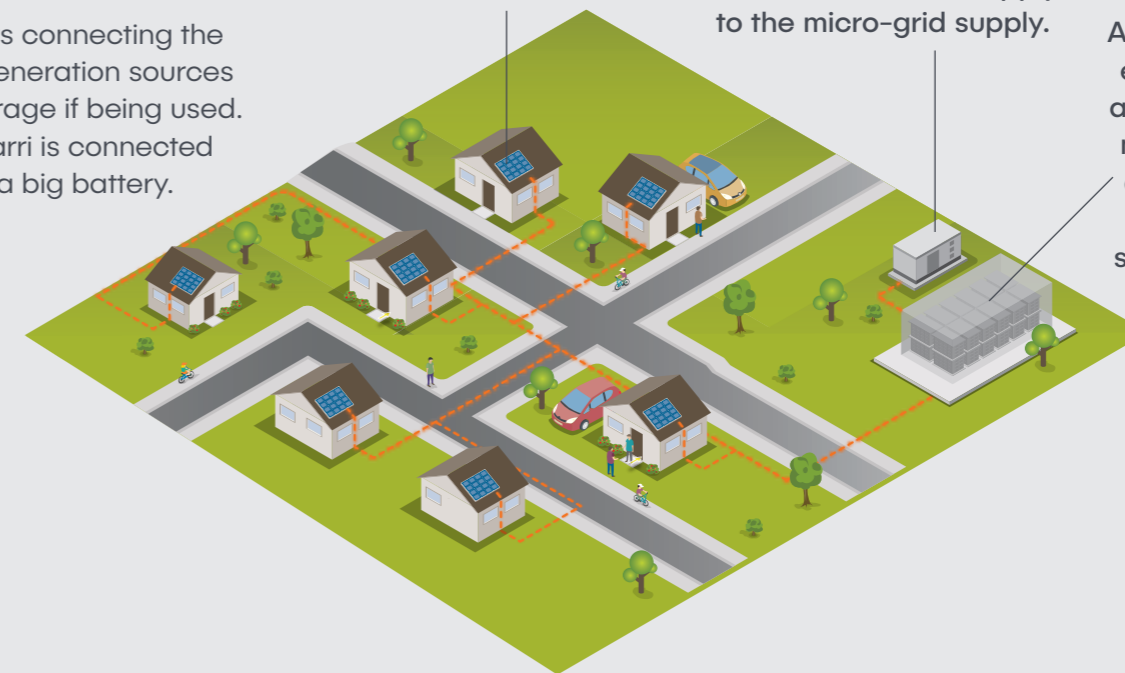
Computers that monitor and control the independent system. In Kalbarri they know when to switch over from main network supply to the micro-grid supply.

### Energy storage

A large battery that stores energy from the network and supplies electricity as needed when network is disconnected. It is often called a BESS which stands for Battery Energy Storage Solution.

### Connections

Circuits connecting the local generation sources and storage if being used. Kalbarri is connected to a big battery.



## Kalbarri microgrid numbers

<b>140km</b> long main feeder line	<b>5MWh</b> BESS battery total capacity	<b>2.5MWh</b> average daily peak load
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Intelligent monitoring equipment will switch from network supply to battery supply in <b>1/10 of a second</b>	<b>64 x 95kVA</b> inverter modules
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The battery is made up of: <b>80</b> racks of <b>9</b> modules	Each module has <b>22</b> cells totalling	<b>15,840</b> lithium ion cells
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## Kalbarri BESS and wind turbine