

# SOLARENERGY

# STORAGE SYSTEM

the PowerRouter  
you're in charge

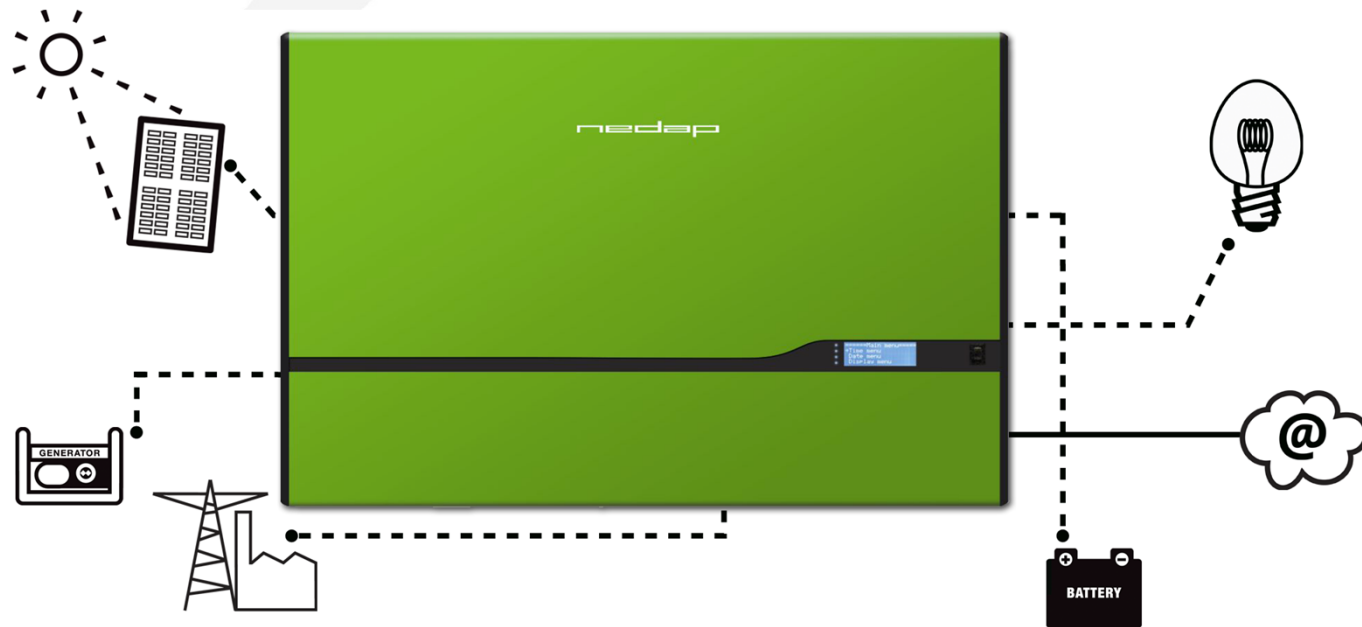


The PowerRouter - An Integrated Power Management System Proudly supplied by...



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you're in charge



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## Who is Nedap

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- Nedap N.V. was founded in 1929
- Head office in Groenlo, the Netherlands
- Listed on the AEX stock exchange since 1947
- 600+ employees worldwide
- Total of 122 MW of produced inverter capacity
- Over 15 year experience in power electronics
- Experience across a range of industries



Security  
Management



Retail



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## What is the PowerRouter

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- An integrated power management system - suitable for:
  - Solar Inverter – generate and use your own solar energy
  - Solar Battery – for self sufficiency (off grid)
  - Solar Battery – for UPS backup (on grid)
  - Self Use – optimise use of self generated solar energy with batteries
  - Off Grid
- A compact, easy to install and all-in-one system that inverts and routes generated renewable energy. Includes a web based customer portal and online monitoring.
- "Local Out" connection switches to "Island Mode" when grid fails – supplies power to a local load without batteries.

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## Fully Integrated System

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- Local power out supply of power to residence should the grid go down – assuming solar available – to dedicated GPO
- Upgradeable and expandable
- 2 x MPP trackers on 3.7 and 5.0kw
- 5 years complimentary online monitoring
- Customer web portal – [www.mypowerrouter.com](http://www.mypowerrouter.com) - includes full energy consumption data
- Compact, easy to install, an all-in-one system
- Solar expandable to cater for self use in future
- Smart Grid ready
- Excess energy can be redirected from supply to grid to optional appliance eg pool pumps (New Late 2012)

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## Available In

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- Solar



+ Expansion Unit



- Solar Back up



- Self Use



Versions available: 3.0, 3.7 & 5.0 kw

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## Local Out – Power Without Grid

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- When Grid fails, the PowerRouter enters "anti island" mode to protect linesman
- Only inverter in world that is certified not to shut down when grid goes down
- Power diverted through the local out
- Loads still serviced – via renewable input
- Charge your phone or laptop, lights etc...
- Power without batteries or grid



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## Modular & Expandable

### Create a Future Revenue Stream

- Solar Module is expandable with Expansion Unit
- Becomes a full Solar Backup or Self Use Model
- Create opportunity to start with Solar (cost effective)

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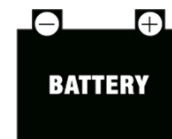


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## Solar with Battery (PRSB)

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- UPS functionality – (On grid)
- Completely off grid
- Suits fringe of grid or brown/blackout areas



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## Battery Back Up Mode

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- Grid disruption. Loads on local out serviced by the solar and batteries
- Grid resumes, battery charged to float via solar or grid
- How long do I have power?



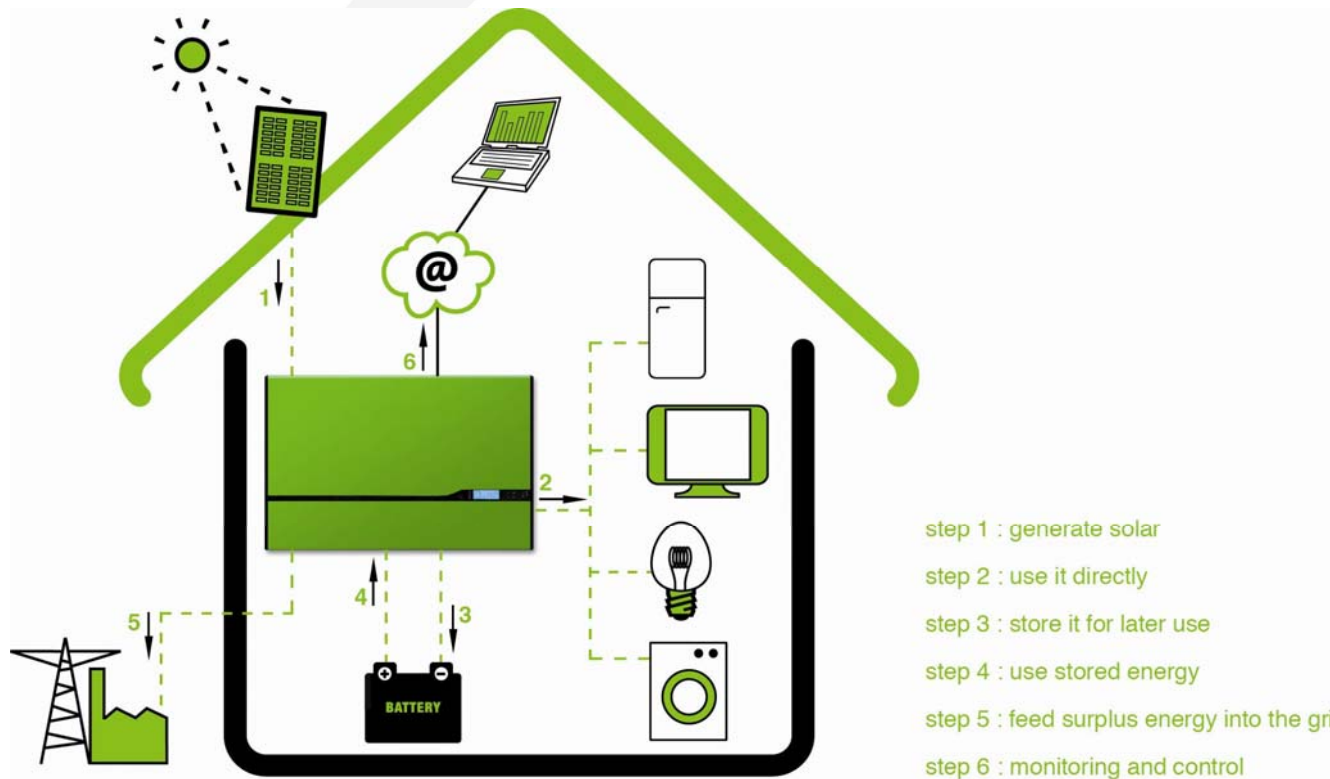
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## Self Use (PRSU)

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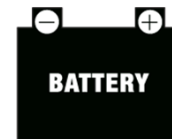


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## Self Use Mode

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- All loads serviced by solar then batteries
- Only feeds to grid when there is excess solar
- Parallels with grid when more energy is required



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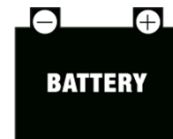


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## Self Use Mode Installation

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- Local out connected to dedicated GPO
- Installation of current sensor (provided) at incoming active and connected to CAN BUS on PowerRouter



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## Self Use Yield

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## Self Use Consumption

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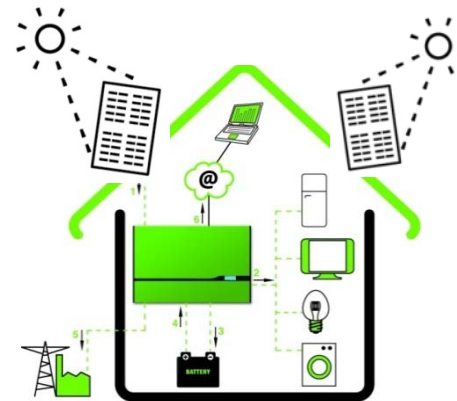


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## Dual Independent MPP Trackers

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- Two built in fully independent MPPT's (3.7 & 5 kW versions)
- Full input capacity on each MPPT
  - (Eg. 3.7 kW x 2 and 5 kW x 2)
- Asymmetric loading capabilities
  - Allows for varied configurations
  - Different technologies; thin film, poly, mono etc...



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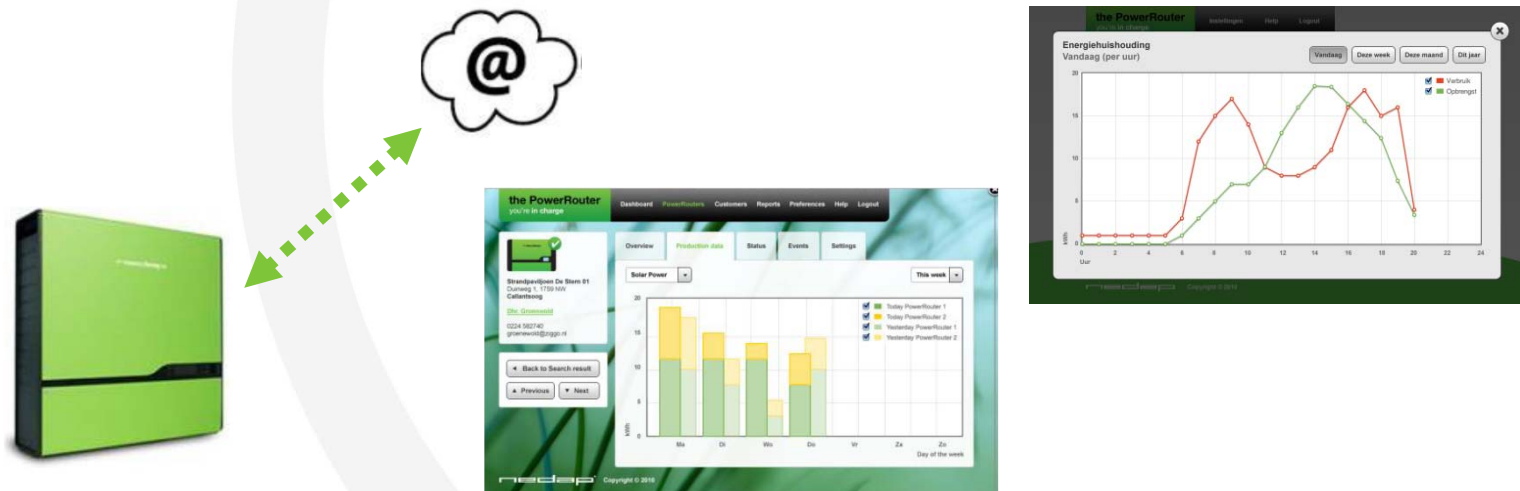
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## Monitor & Manage

[www.mypowerrouter.com](http://www.mypowerrouter.com)

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- An internet portal and mobile app for monitoring, controlling and managing your PowerRouter
- Dealers, installers, utilities and other stakeholders can have access to customer's installation data ensuring excellent service and support.



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## The Distributor: Monitor & Manage

[www.mypowerrouter.com](http://www.mypowerrouter.com)

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- An internet portal and mobile app for monitoring, controlling and managing your PowerRouters
- Dealers, installers, clients can have access to customer's installation data ensuring excellent support.
- Create and maintain important relationships
- Provide an impeccable level of service to your customer



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## What the Customer Sees

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## What the Customer Sees

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The screenshot displays the PowerRouter web interface. At the top, a navigation bar includes 'Dashboard', 'PowerRouter', 'Report', 'Settings', 'Help', and 'Logout'. The main content area is divided into several sections:

- System Overview:** A card showing a PowerRouter unit icon with a checkmark, labeled 'PR50SB' at Henderson Road 19 3180, Victoria Knoxfield Australia.
- Navigation Tabs:** 'Overview' (selected), 'Status', and 'Production data'.
- System Information:**
  - System:** Serial no. 9561382B81100210, Type label PR50SB-BS/S240, Version 3.5.0, System power 5000 W, Installed on 28/09/2011, Last communication 1 minute ago.
  - Installation:** Battery 200 Ah, Brand/type of battery Lithium - UltraLife Trial, Battery status Charging, Energy rate 22.0 cents, Grant 44.0 cents.
- Map:** A Google Map showing the location in Victoria, Australia, with labels for Melbourne, Canberra, and the Australian Capital Territory. Includes a scale bar (200 km / 200 mi) and map controls.

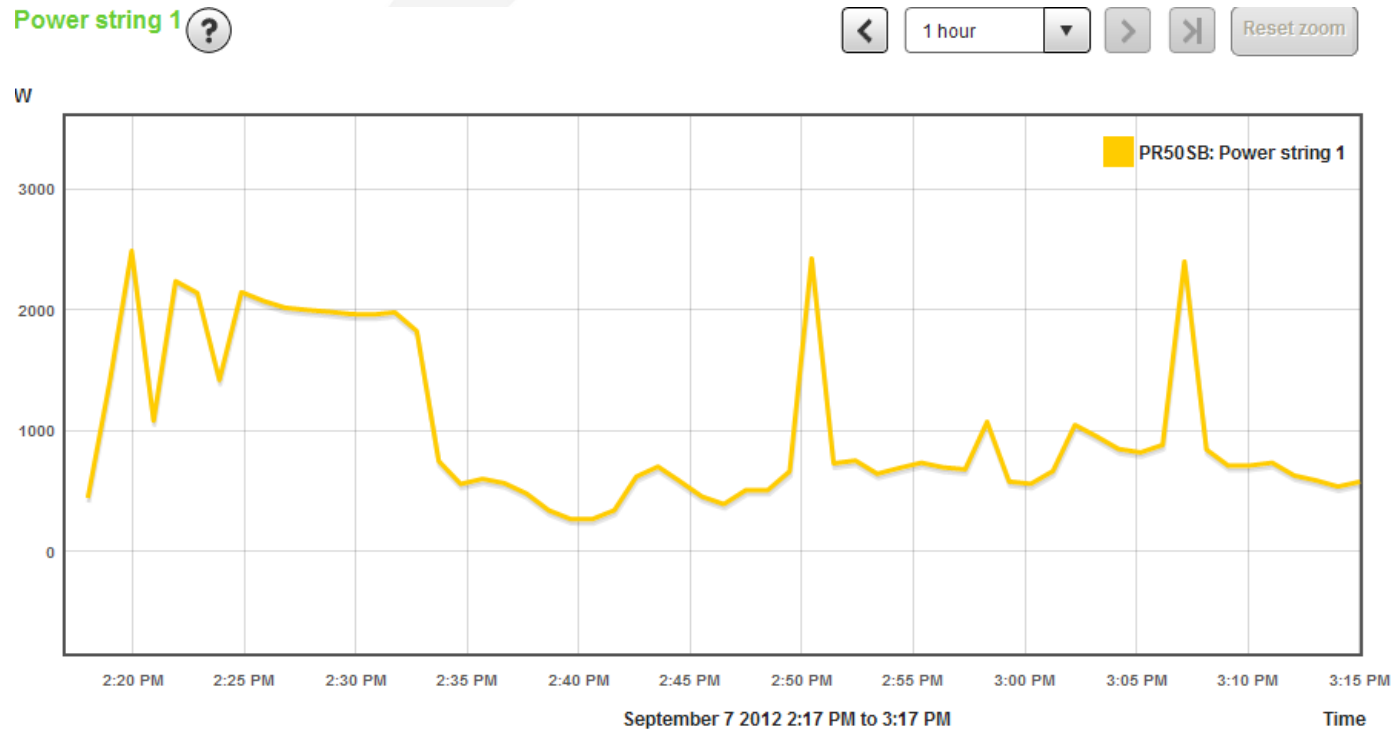
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## What the Customer Sees

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Quick to Install

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Only 30 Mins



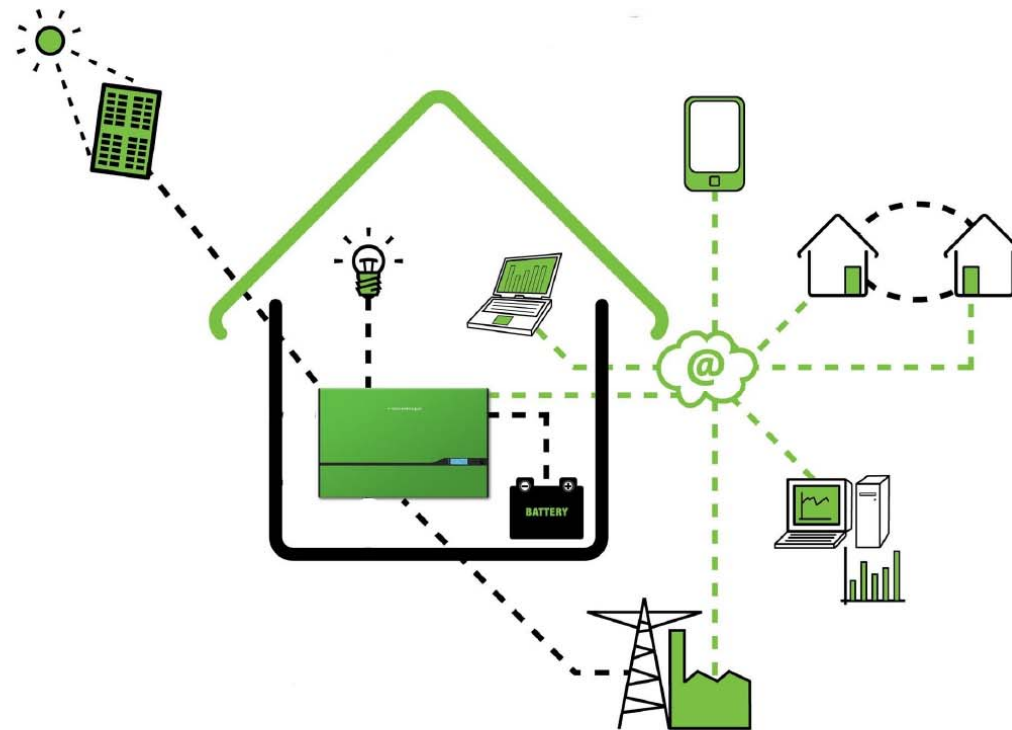
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## Smart Grid Ready

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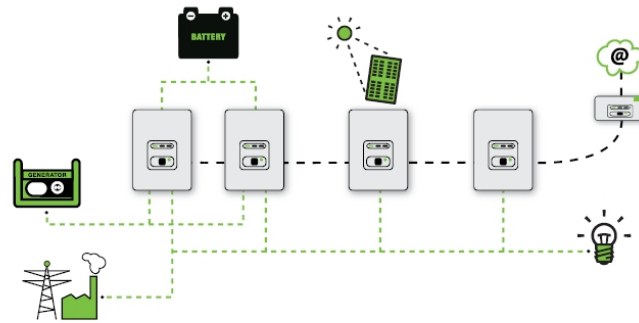
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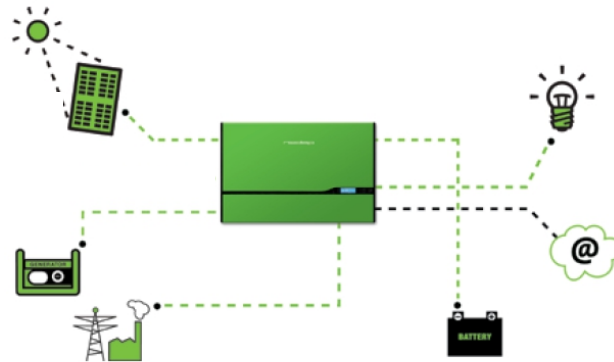
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## Fully Integrated System

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The PowerRouter all-in-one solution resolves these issues.



- Upgradeable
- Expandable
- Installation <30 mins.
- Caters for wind
- Smart Grid Ready

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## BatteryMate Kits

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The BatteryMate is a sturdy, fully ventilated storage container designed specifically for the protection of your valuable batteries!

**Just Click and Connect!**

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## BatteryMate Kits

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Stackable



Housing for Cabling



### Benefits

- Expandable to add more later
- Stackable
- Compliant to ASNZ Standards
- Full kit – nothing else required
- Quick to assemble



### Kit Includes

- Battery Mate
- Batteries
- All cabling preterminated
- Breakers
- Interconnects
- Battery positioners



Schneider Breakers



Schneider Breakers



Ventilated Walls



Battery Interconnects

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## BatteryMate Kits

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### Option 1

Suitable for installer to utilise own batteries and cabling option



### Option 2

Suitable for Battery Backup solution with 4.8kWh of available energy



### Option 3

4.8kWh Option for Self Use with 2.4kWh available energy at 50% DOD - expandable



### Option 4

12.0kWh Option for Self Use with 6.0kWh available energy at 50% DOD



### Option 5

19.2kWh Option for Self use with 9.6kWh available energy at 50% DOD – or small off-grid

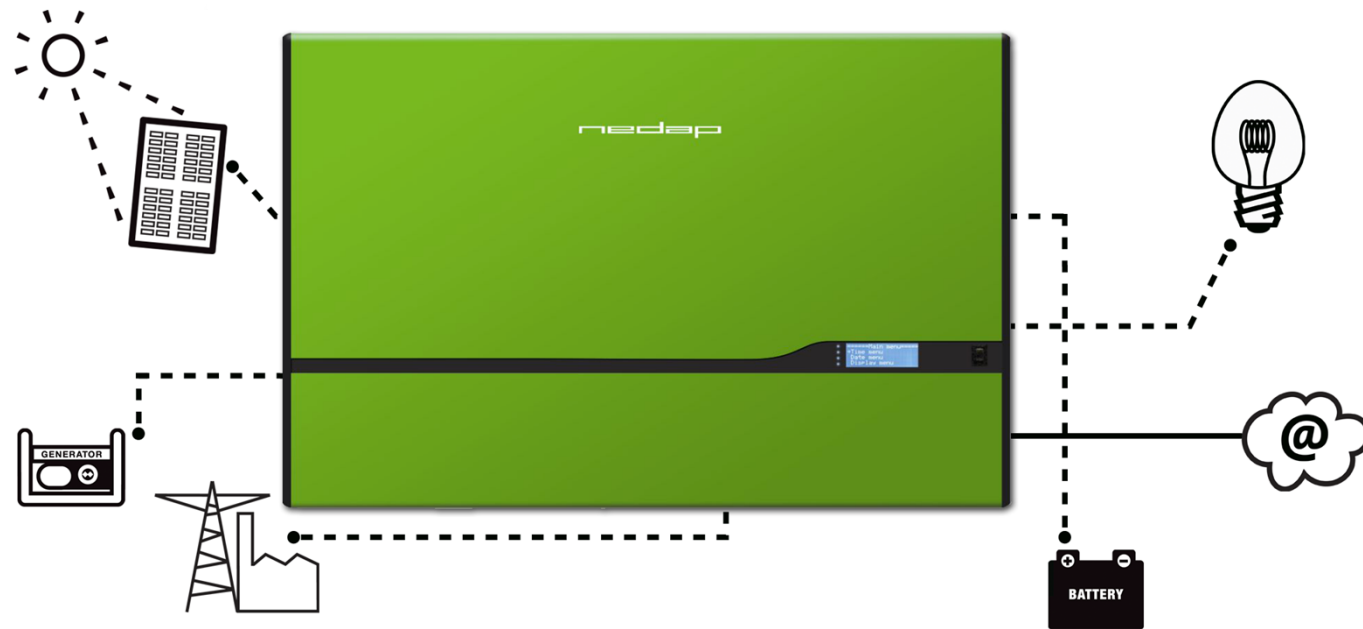
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