Energy Management System

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Solar Generation Management System
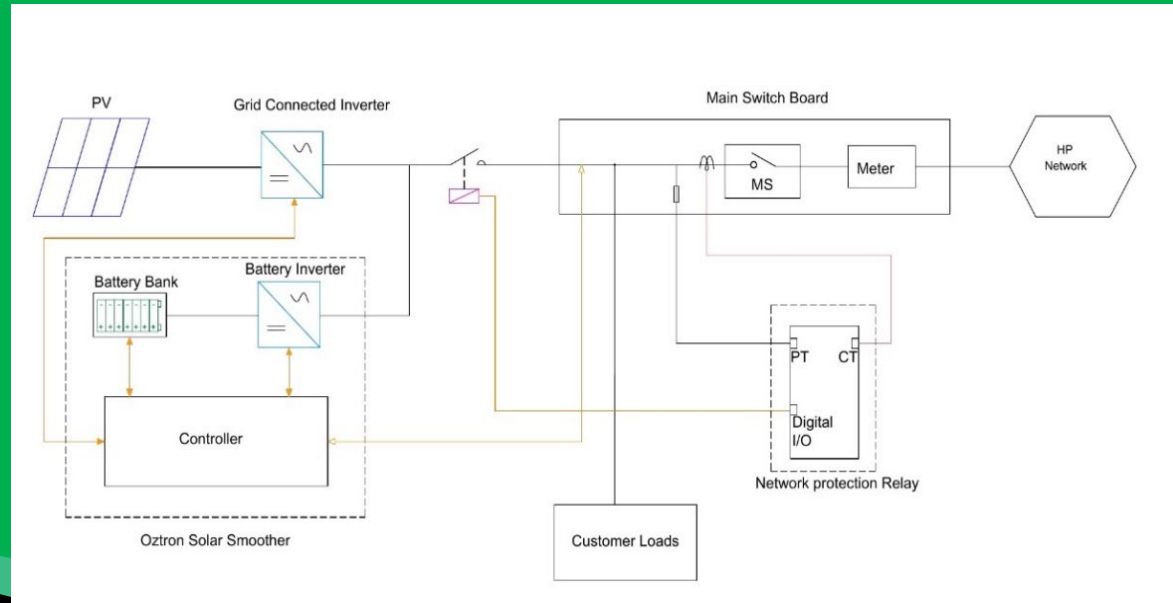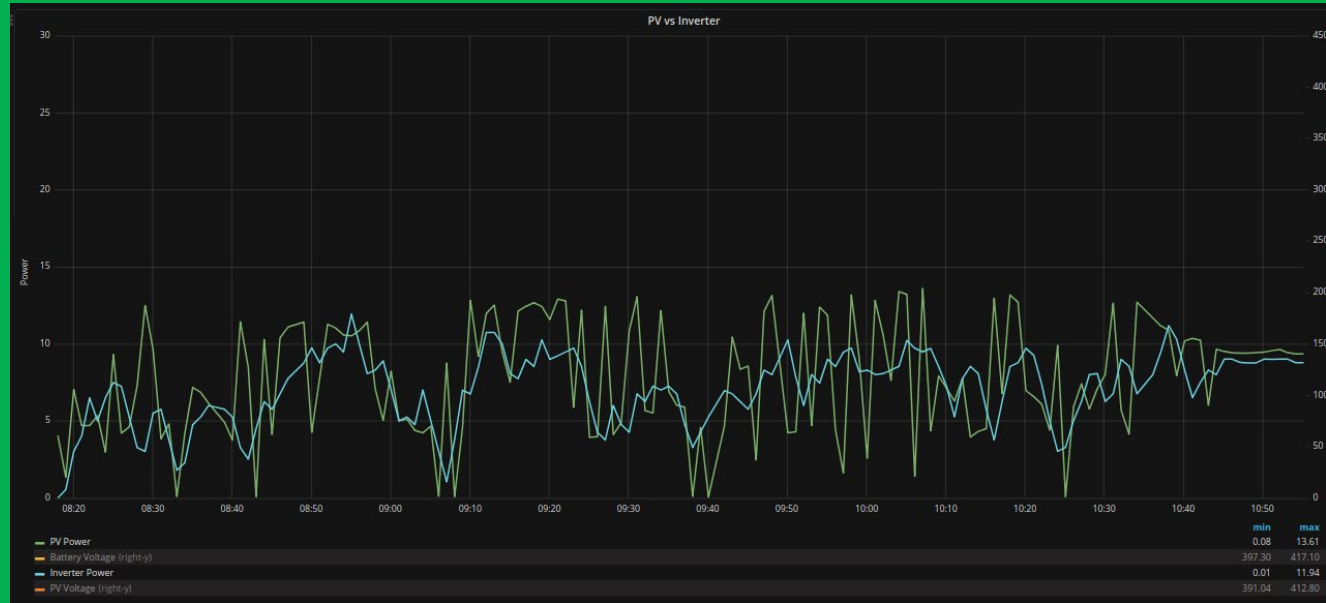
Solar Generation Management Projects

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- Uses AC side Battery Storage with Advanced Controls

- Controlled Ramp-up – Ramp-down as required by the Network Operator

Recent Projects:
1. Onslow Microgrid Trial – 7 sites, 640kW total. Used with PXiSE DERMS
2. Coral Bay Caravan Park – 100kW
3. Aboriginal Health Services, Derby – 60kW
4. Canarvon Motel – 60kW
5. Cable Beach Resort, Broome – 300kW
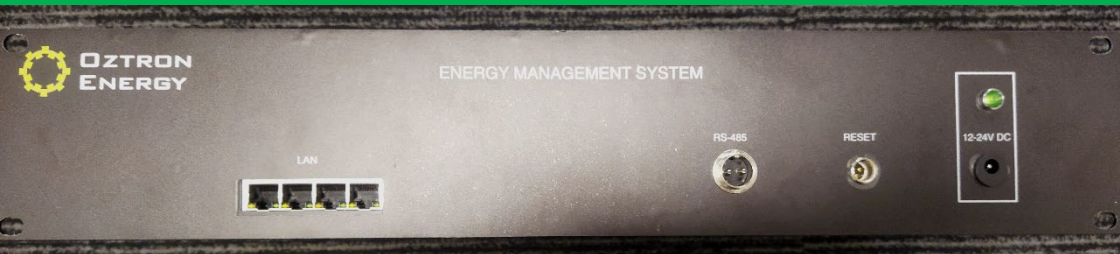
Energy Management System

Rack-mounted EMS for Generation Management

EMS is the Essential Part of a Renewable Energy System

Hardware-Software combination with Cloud based Database and Controls

Level 1 EMS: Integrated with the BESS:

- Controls the Batteries, Inverters and external devices
- Communicates with external Controls, Networks and Cloud
- Ensures compliance with Australian Standards
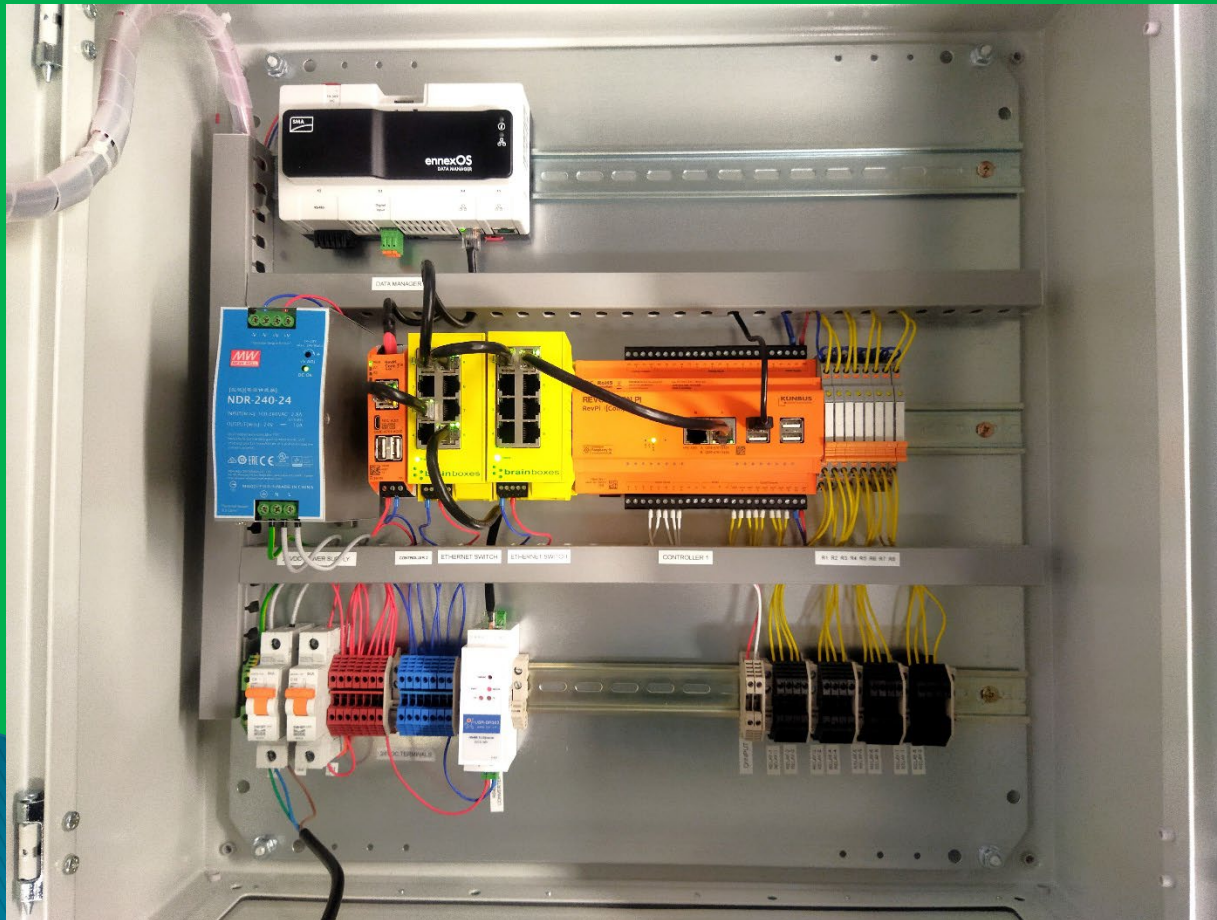- Programmed for different applications

Energy Management System

Microgrid Management System MMS

Level 2: Overall System Controller for managing larger systems and Microgrids.

Manages various components of a Microgrid

Hardware-Software Product. Custom configured for different applications

- Protection Relays
- Power and Energy Meters
- Weather stations, temperature sensors
- HVAC equipment
- VSDs, pumps
- EV chargers
- Load switches, circuit breakers

- Solar Inverters
- Battery Inverters
- Battery BMS
- Other BESS
- Flow batteries
- Diesel and Gas generators
- Hydrogen electrolysers

Communications

Currently compliant with these inverters:

- Fronius
- SMA
- Sungrow
- Sinexcel
- SolarEdge

Other devices:

- Energy Meters: Schneider, SATEC
- Protection Relays: Woodward, ComAp, Schweitzer, ABB
- Generator Controllers: Woodward, ComAp
- BMS: Pylontech
- Modems

Protocols:

- MODBUS TCP
- SunSpec, IEEE 2030.5
- Discrete binary (Relay)
- Analogue

More devices can be added as required

Thank you

OZTRON *The Technology Source for Green Energy*