

RedEarth Energy Storage

SEIA – Annual Solar Installers Meetings



Dingo: 50kW/360kWh



Damien Prins
R&D Electrical Engineer

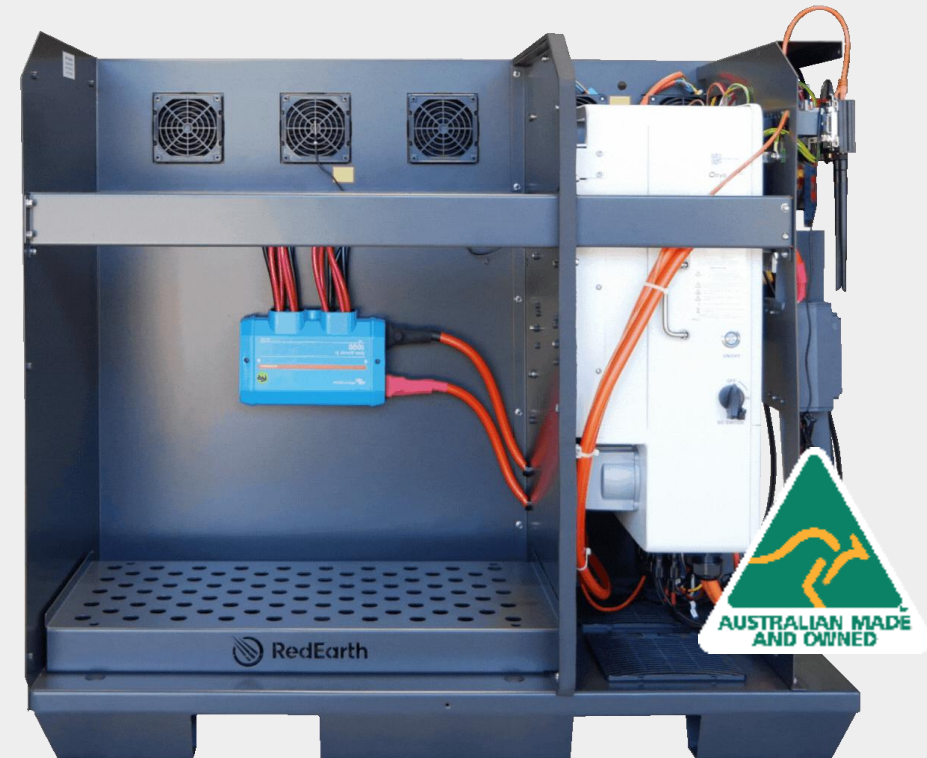
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On-Grid **vs.** Off-Grid

Discuss choice for the same product for grid connect and stand-alone power for household loads and any inherent limitations

- Hybrid's are versatile – OFG initial with OG upgrade
 - Utility connection delays
 - On-grid revenue
 - Export excess solar vs. derating
 - Wholesale Energy trading
 - Peer to peer trading
- Transformer based vs. transformerless
 - Surging and managing inrush
- Learn a unified ecosystem
- Grid Codes
 - Australia A
 - Australia B
 - Australia C
 - Micro Grid
- Generator 2 wire AutoStart
- Autonomous management of AC PV



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BushChook: 12kW/44.8Wh

Full home Backup

Is a change in switchboard to separate essential and non-essential loads required?

→ Overengineered passthrough

- No need to split the board

→ Smart Loads

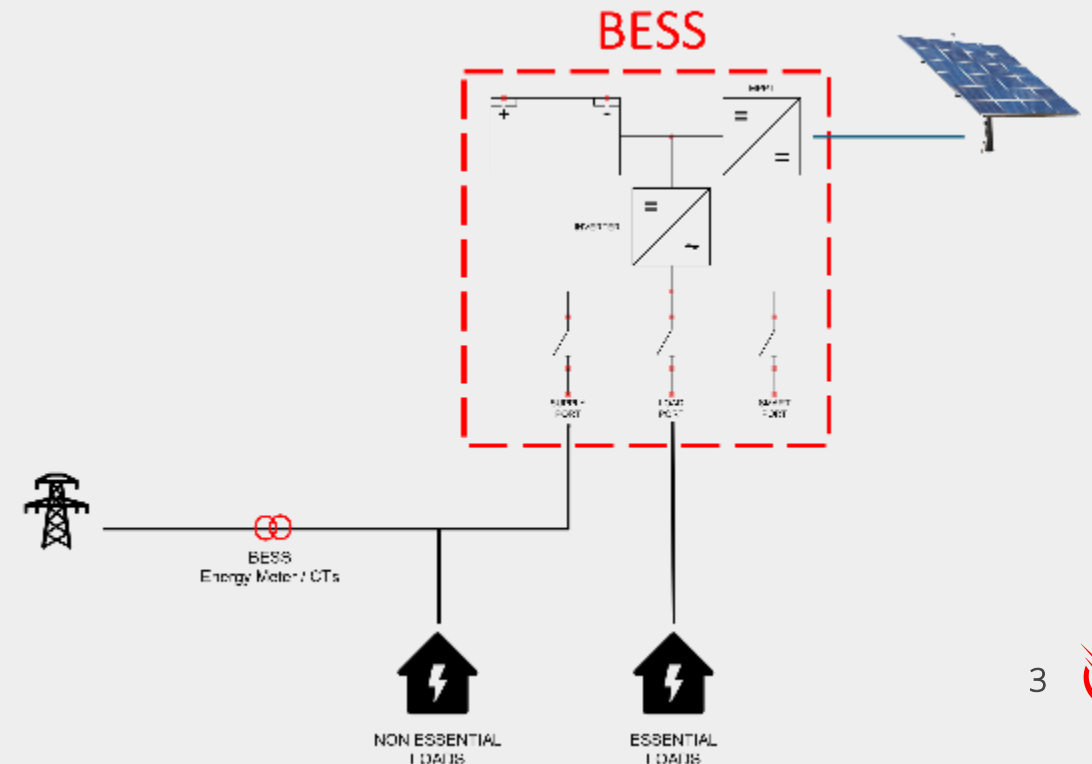
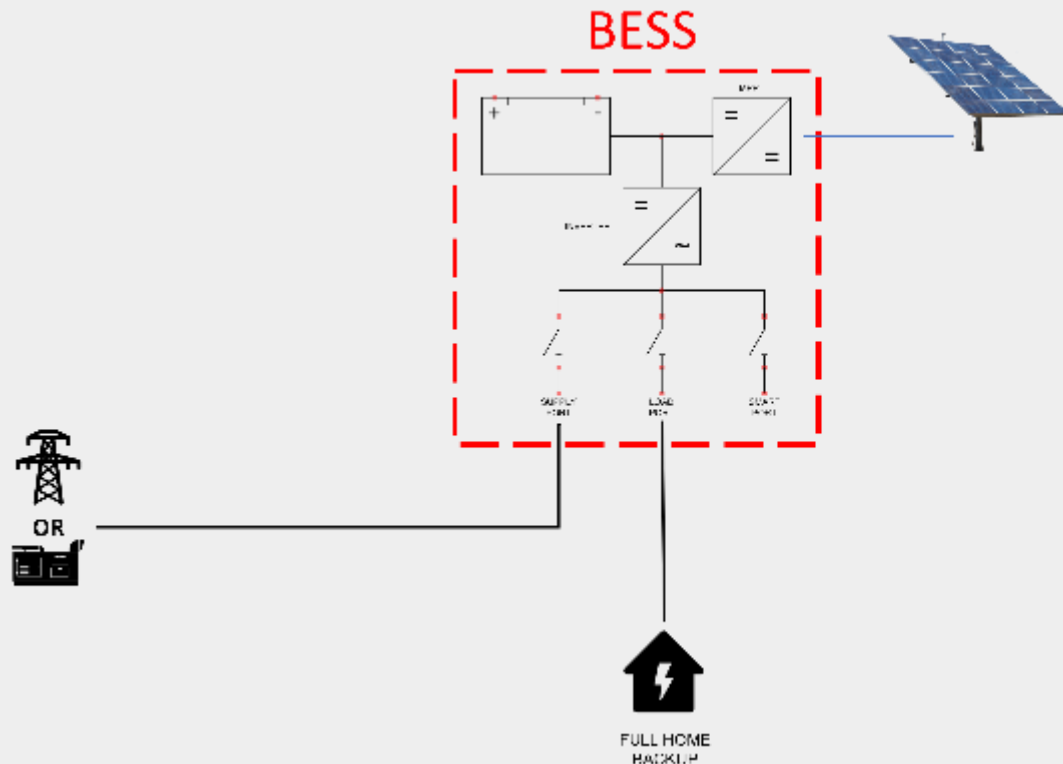
- Still backed up unlike NEPS

→ BESS Energy Meter export control

→ 4ms Switching time

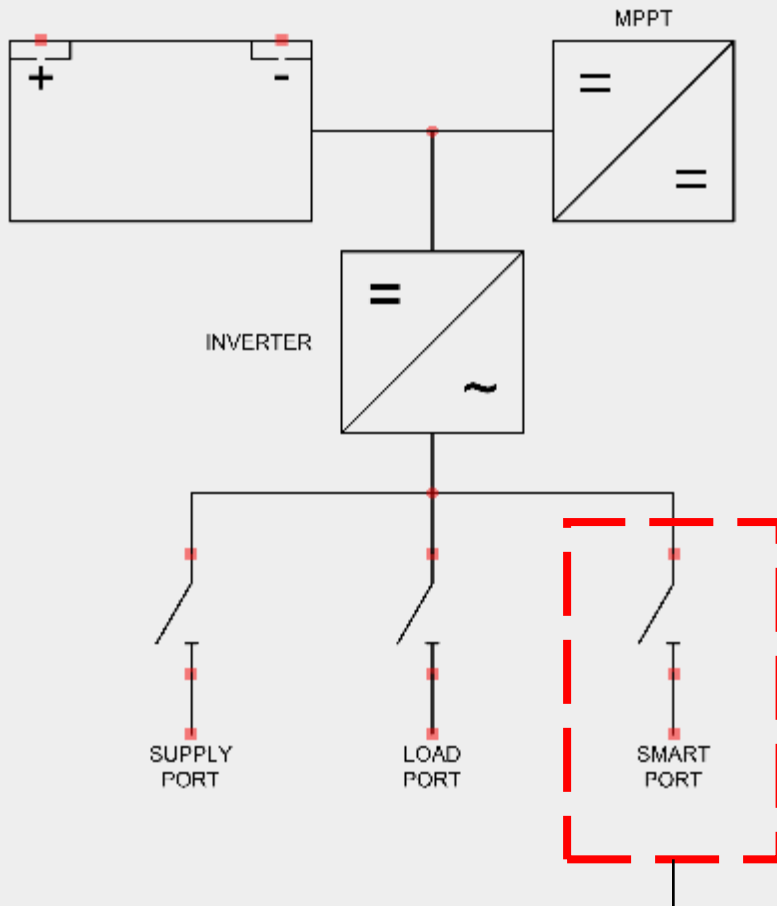
→ Reduce grid reliance

- Use the grid as your backup
- Emergency Backstop Mechanism
- Storm Protection



The Smart Port

Are other products compatible with the system for retrofit



→ Smart Port (Separate Monitoring)

- AC Coupled Solar (Generic – no comms)
 - Frequency Shifting (linear derating)
 - Relay control
 - Energy meter export control
- Backup Generator
- Smart Loads
- V2G Bidirectional Charger

→ Static Transfer Switch (STS)

PV & Parallel Operation

DC vs AC coupling options and paralleling options.



DC & AC PV

- Hybrid products have built in MPPTs
 - Allowable PV = 2x INV. Capacity
 - MPPT rating = 1.5x INV. Capacity
 - Black Start
- Smart port and Frequency shifting – Easy AC PV
 - Load side or Smart port
 - Grid side with energy meter

Paralleling (Inverter & Battery Capacity)

- Core philosophy – scalability
 - minimizes upfront costs
 - grow your system as needs evolve
 - enables installers to upskill & expand into C&I
- Parallel 3PH units for C&I Projects
 - Cabinet or Containerised
 - 50kW-500kW
 - 100kW-2MW



1PH, 3PH and 3x1PH Systems

Discuss suitability for 3 phase systems



- Parallel 1PH for large 1PH systems
 - Rural / remote properties
 - SWER
- Oversize your inverting capacity and recommend 3PH
 - Future proofing for larger loads and expansion
 - HVACs
 - EV charging
 - 3PH has an increased export limit
- SWER in, 3PH out
 - LV 1PH Grid facing inverter to LV 3PH Load facing inverter
 - Working on a HV inverter solution



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Containerised Dingo: 100kW/240kWh

PPP & V2G

Who is your customer? Work out what they are trying to achieve!



Optimum

Ongoing system health checks



Power Ranger

Use your battery like a remote



EV Charging

Smart charge your vehicle



V2G

~ Coming soon ~



Energy Trading

Wholesale pricing and energy trading



Peer-to-Peer

Share your power with grandma



PPP: An ever-growing set of products and services designed to maximise the value of the customers' system **for the customer.**



Questions?

Feel free to ask now or find me later for a discussion.

Thank **you.**

www.redearth.energy

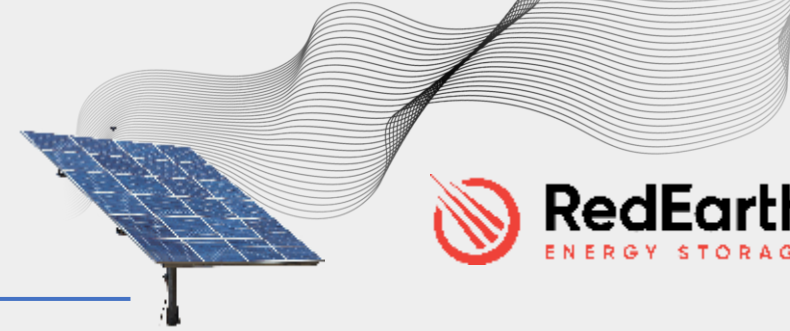
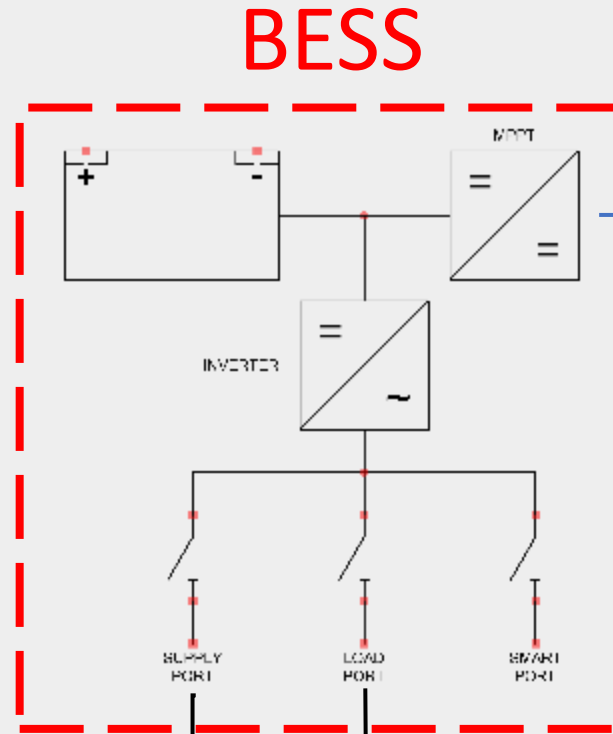
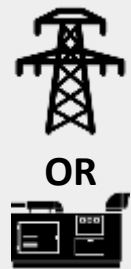


Damien Prins



Passthrough SLD

Basic

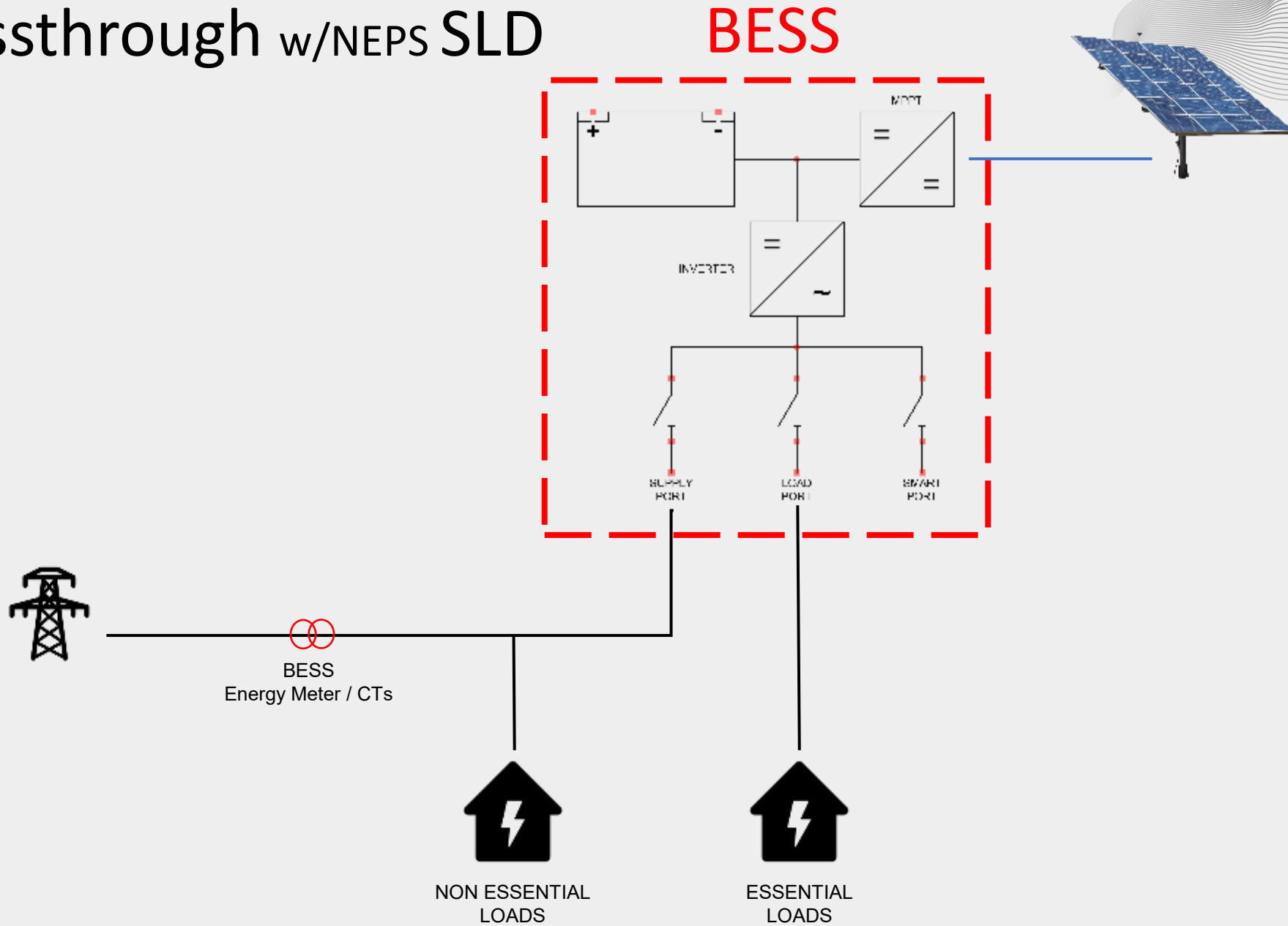


FULL HOME
BACKUP



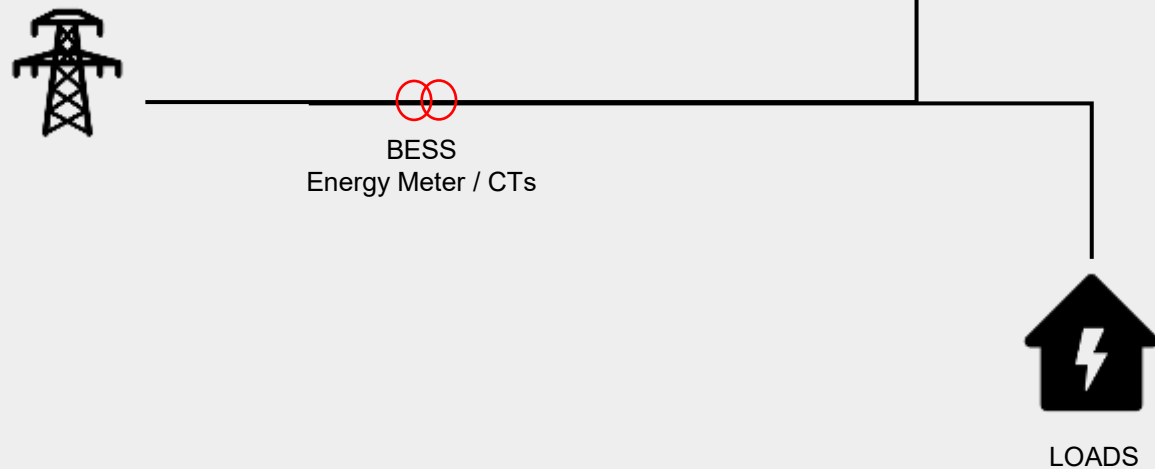
Passthrough w/NEPS SLD

Basic

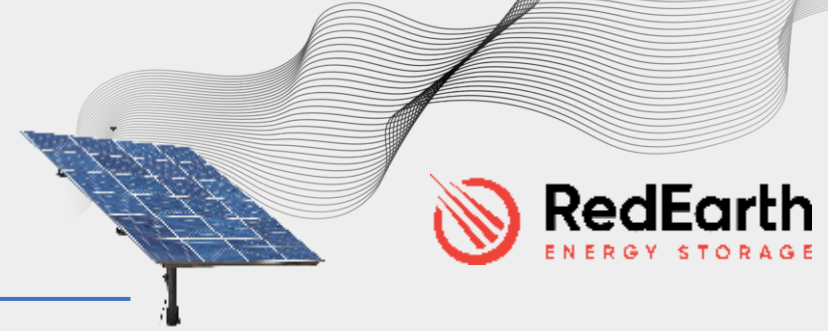
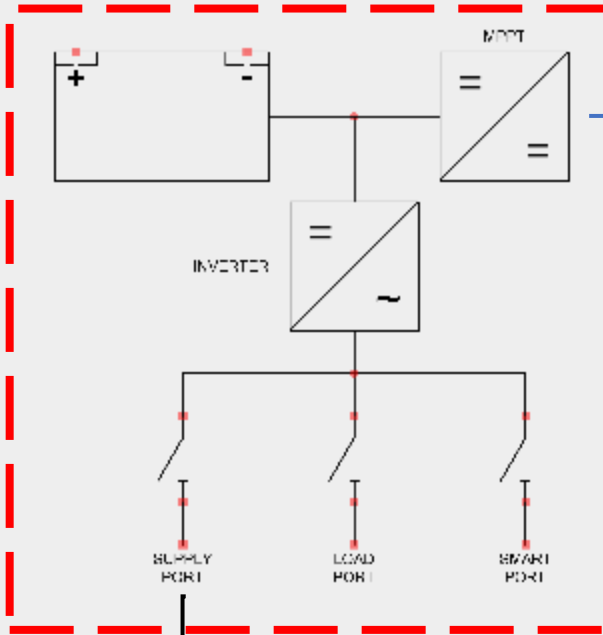


“T” Connected SLD

Basic

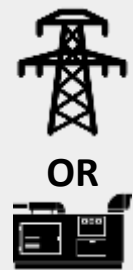


BESS

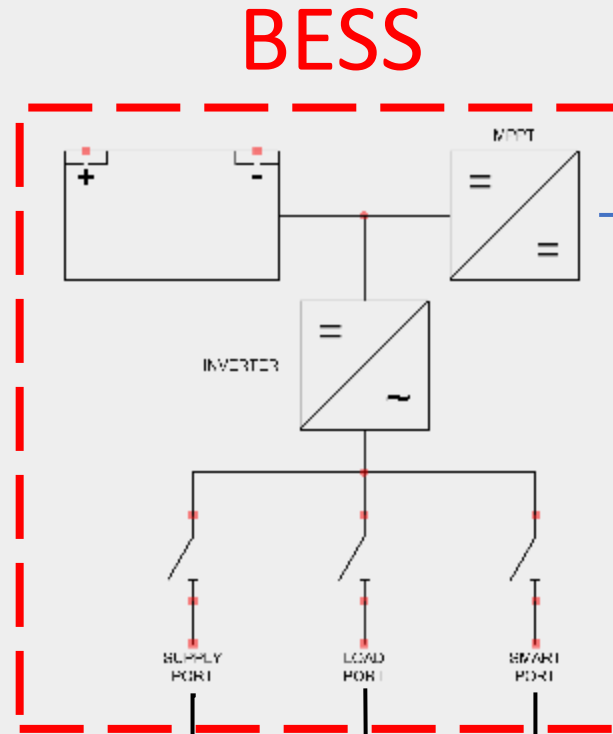


Passthrough SLD

Smart Port



AC PV
Energy Meter / CTs



FULL HOME
BACKUP

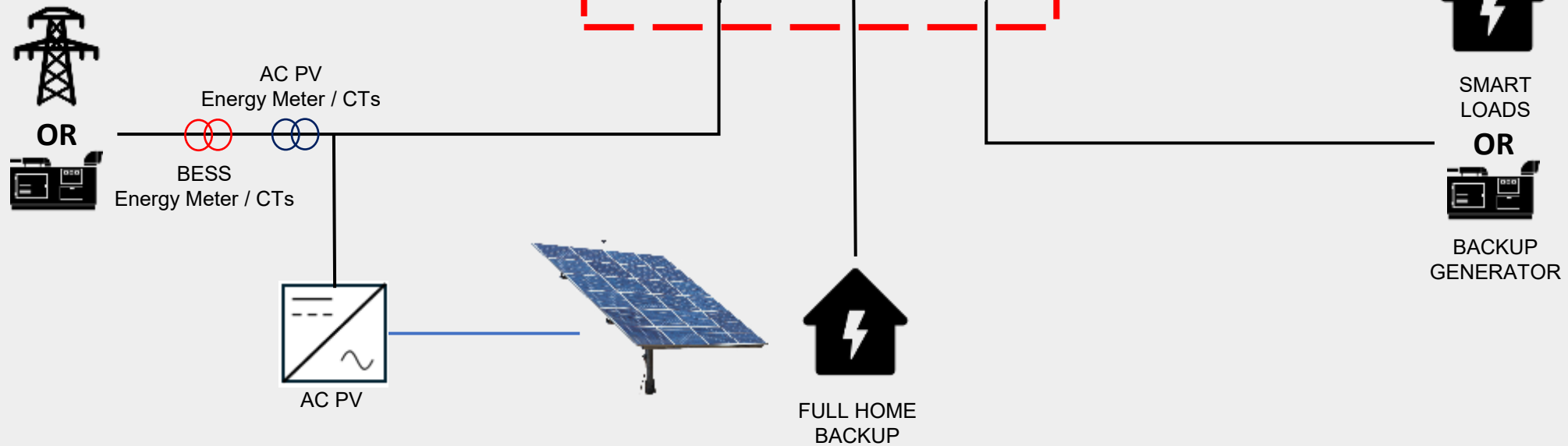
AC PV



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Passthrough SLD

Grid Side



“T” Connected SLD

With AC PV

