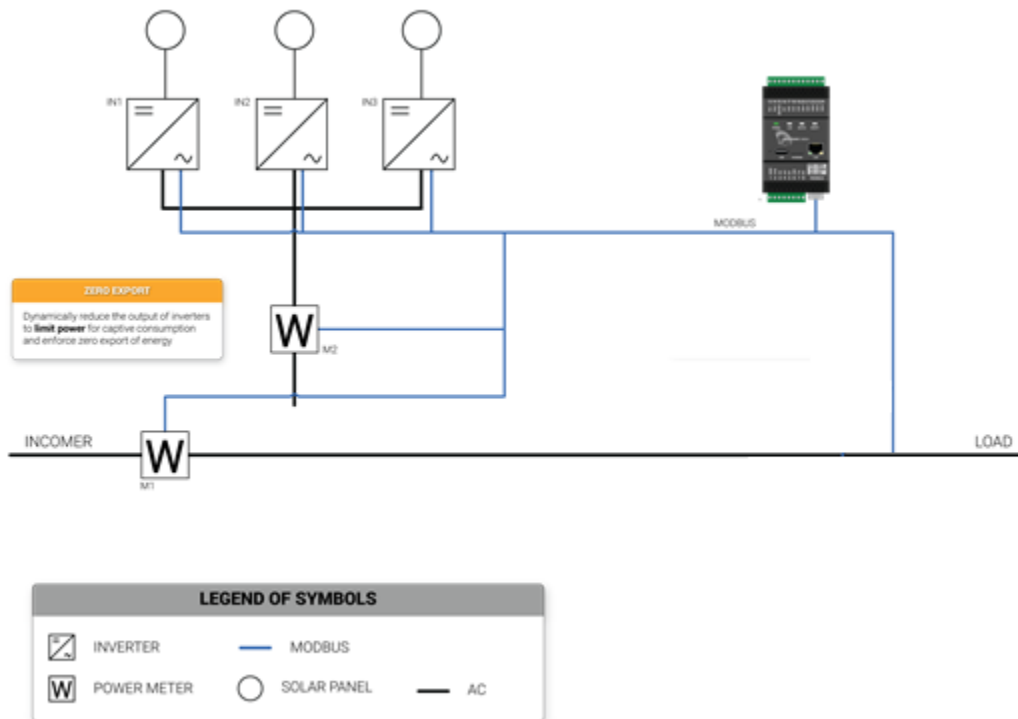## Zero Export Solution

What is Zero Export

In case of unavailability of net metering, to use solar as per load requirement, we need to sync solar with the grid. In this solution, solar will take only reference voltage from the grid, but does not export power to the grid. This way the user would be able to use grid-connected solar plant without export.

Broad Schema of Solution

- ***In case of Zero export, bidirectional meter shall be installed at Incomer side.***
  Load from grid shall be ensured to run at 4% to 8% of the sanctioned load, it might change depending upon the load variation/ fluctuation.

  The controller working principle is as per below-

The working principle is as follows-

1. *Read Active Power from meter*

2. *Is Active power > Max Set point? If yes, increase power on inverters*

3. *Is Active power < Min Set point? If yes, decrease power on inverters*
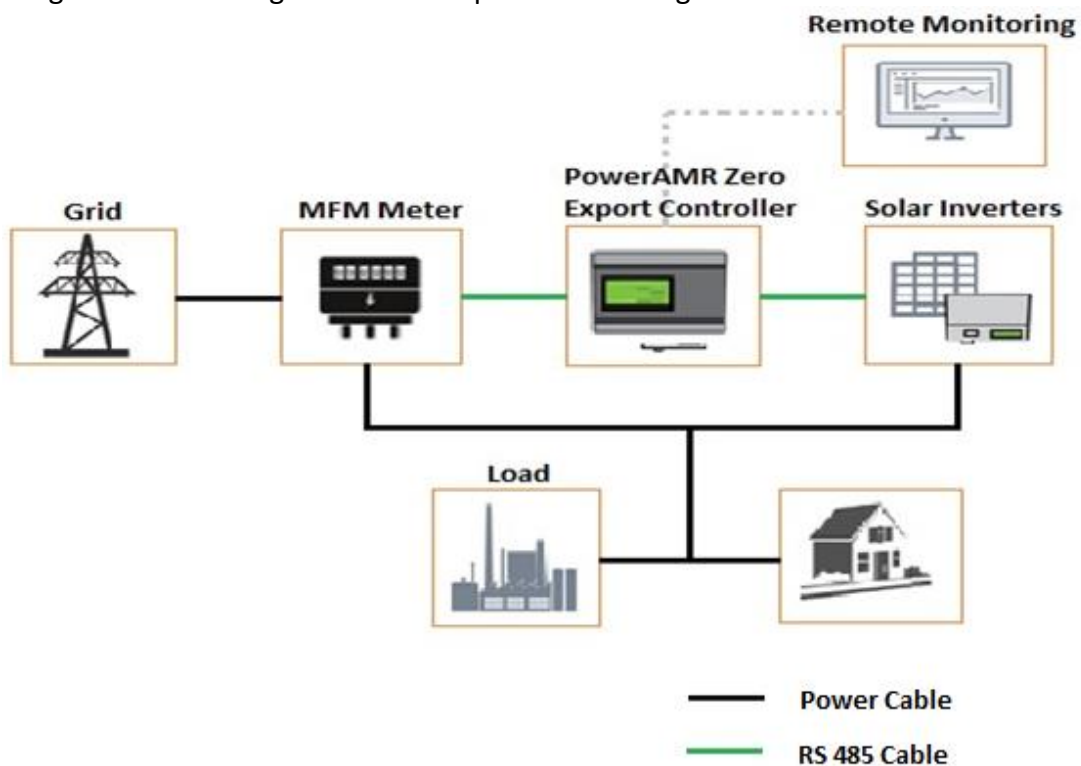
4. *Repeat from step 1*

Basic Requirement:

Following information is required for configuration :

1. Inverter(s) and Energy Meter(s) make and model

2. Inverter(s) and Solar Plant rating in kW

System Architecture:

The general Block diagram of Zero export solution is given below-

This solution is working when grid is available but there is no net metering at site. The zero export solution will help user to use solar as per demanded load. This solution will throttle the power of solar inverters as per building load and there will be No Export to grid.

Key Benefits

- **Smart Control:** The device provides real time power control and will ensure that the inverter ramps down the solar production, in case of low/ no load.

- **Flawless Protection**: Our System ensures that the inverter doesn't trip and minimum or no reverse feed-in is sent back to the grid.

- **Graphical representation:** Client can log on to the PowerAMR website and see working of power control on real time through the single line diagram and graphical illustration.

- **Remote Monitoring:** PowerAMR ZED simultaneously acts a Data Logger and provide real time and historical data monitoring on our Solar Management Platform

- **Deemed Generation:** The system estimates the amount of energy throttled due to impact of zero export device at every 10 minute interval.

- **Integrate Weather Sensors-** Connect Zero export device with weather sensors like pyranometers, module and ambient temperature, wind sensors to get performance analysis and PR

- **Power Limiter:** The system also has the provision to limit the amount of energy export, eg. For 100 KW solar plant, if net metering is permitted for 40 KW, system can export upto 40 KW of power to the grid

Compatible Devices

Inverters :

- ABB
- Chint Power
- Delta
- Evvo
- Fronious
- Goodwe
- Growatt
- Havells
- Huawei
- Hitachi
- INVT
- Kaco
- K Solare
- Kehua
- Kstar
- Luminous
- Polycab
- Powerone
- Ingeteam
- Refusol
- Saj
- Schneider
- SMA
- Sofar
- Solis
- Solax
- SolarEdge
- Sukam
- Sungrow
- Tmeic
- UTL
- Waaree
- Zever, and many more

Energy Meters :

- Archmeter PA330
- Eastron SDM630
- Elmeasure Little Genius & Tiny Master
- Klemsan KLEA 320P
- Legrand EMDX3
- L&T ER300P
- Rishabh
- Schneider Conzerv EM6400, EM6436 and all other models
- Schneider PowerLogic EM7280
- Secure Elite 440 series, 103, 307
- Sumeru Verde Damodar series, and many more

*** Addition of other inverters and energy meters based upon requirement*