### Module 4: Transmission & Distribution Models

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Mini Grids vs Grids. Introduction.
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Mesh Interconnected Clustered Mini Grid.

Interconnections are below 66 kV to avoid the cost of substations.

All generation and all consumption is shared over the whole integrated grid providing a self balanced operation.
Mini Grids / Clusters with DER Architecture.

1. Solar PV Plant
2. Inverter Grid Forming
3. Inverter/Charger & Controller
4. Storage
5. Diesel genset as backup.
6. Wind generation and/or others.
Mini Grids / Clusters with DER Architecture.
Module 4.1
Metering
Collections
Mini Utility
Mini Grids / Clusters with DER Architecture. Metering and collections.

Examples of Pre-Pay meters, one with card, the other with code.

They are available in single and 3 phase.

Example of Pre-Pay meters by charged by phone app.

User re-charges by app or sms and receives a code which is dialed into the meter.