Abstract: A Microgrid can be defined as a part of the grid with elements like distributed energy sources, power electronics converters, energy storage devices and controllable local loads, that can operate autonomously islanded but also interacting with the main power network, in a controlled, coordinated way.

General aspects of a MicroGrid: “Definition and Operation”

- Primary Control: Modeling + Inner loops + droop Control (P/Q Sharing).
- Secondary Control:
  - f/V Restoration (Island) : Set-points assignment from MGCC to the DGs.
  - Synchronization (Island to grid Connected mode)
- Tertiary Control: Power import/export from/to the grid.