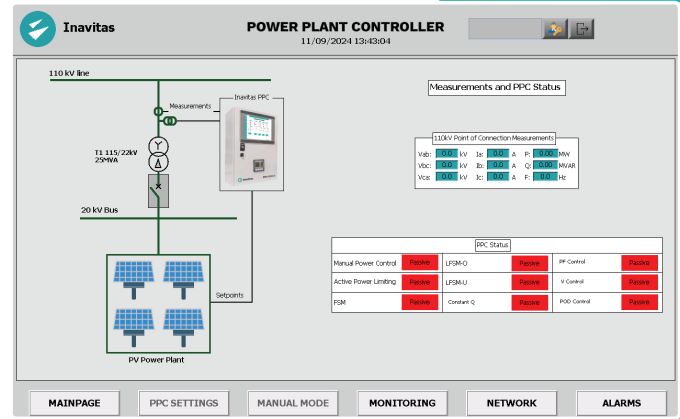




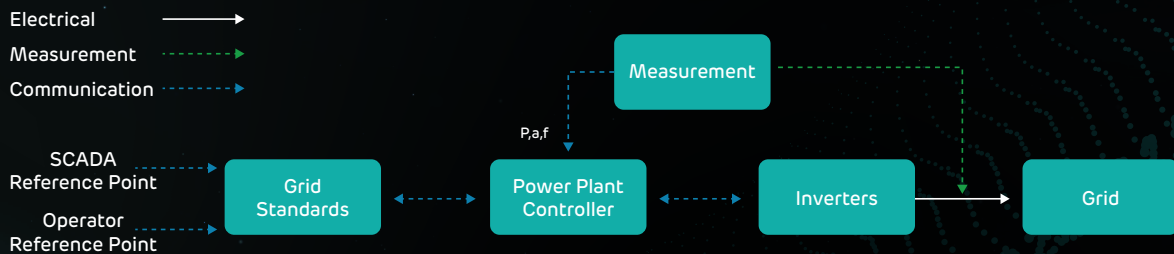
# Power Plant Controller for Renewable Power Plants (PPC)

The Power Plant Controller (PPC) is the central system responsible for managing the renewable generator's interaction with the transmission or distribution grid. It plays a vital role in regulating power production, providing grid support during faults, and ensuring compliance with grid regulations. The PPC manages active power, reactive power, voltage, power factor, and frequency in real-time, aligned with grid codes and operator requirements.

The PPC operates in several modes to optimize performance: Active Power Control regulates power output to meet grid demand, while Reactive Power Control supports grid by dynamic reactive power. Dynamic Power Control optimizes energy output in power plants, ensuring optimal utilization of resources. Voltage and Frequency Control maintains stable grid parameters, and Power Factor Control prevents reactive power charges due to consumption in power plants.



## Power Plant Controller System Architecture



# Power Plant Controller inavitas Highlights



## Real-time Monitoring

Comprehensive and real-time view of plant performance and grid conditions



## Remote Control

Manage and optimize power generation with active, reactive, dynamic & power factor control



## Increased Efficiency

Boosting general system efficiency by dynamic and individual demand control



## Improved Integration

Compliance to hourly voltage and frequency values thru API set by Market Operator



## Grid Compliance

Ensure compliant with grid codes



## Enhanced Security

Stop or continue production in your power plant during maintenance or as a safety precaution.

# Power Plant Controller Working Modes



## Reactive Power Control

Supporting the grid by constant or dynamic reactive power control



## Active Power Control

Continuous dynamic control of active power according to grid standards



## Dynamic Demand Control

Controlling demand through dynamic control of inverter output



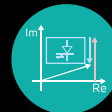
## Voltage & Frequency

Voltage and frequency support for renewable and traditional power plants



## Power Factor

Preventing reactive power charges due to consumption of power plant at night



## STATCOM Mode

Decreasing installation costs by running as a STATCOM mode in parallel with the passive filters for complying with the grid standards

# Power Plant Controller How System Works?



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