### MODULE 5

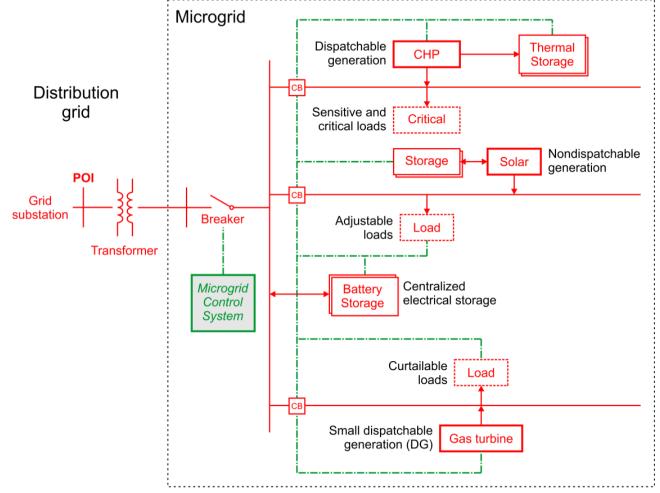
# Primary Controllers for Grid Forming Inverters







## Introduction to Microgrids



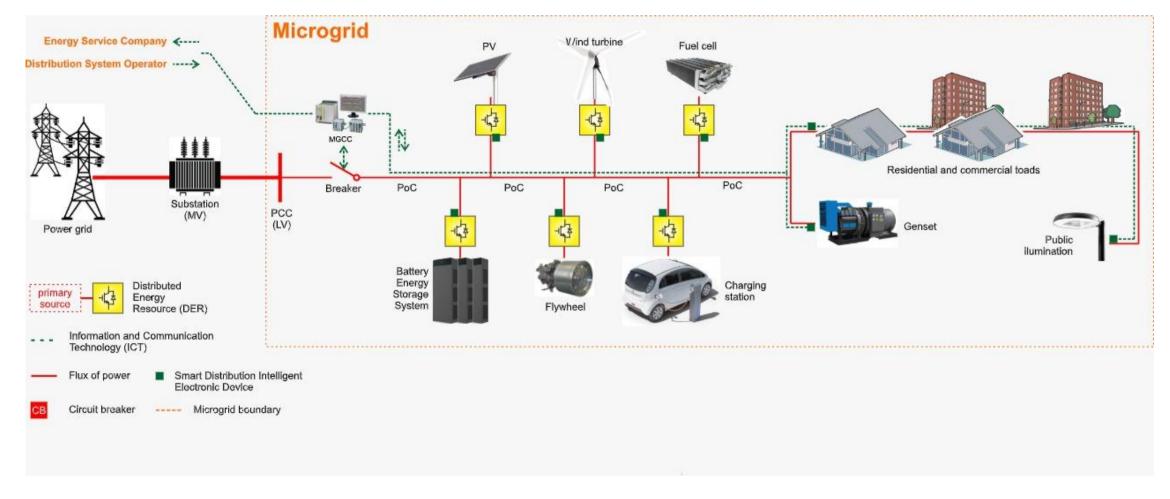
**Source:** IEEE Std 2030.8-2018. IEEE Standard for the Testing of Microgrid Controllers







# Introduction to Microgrids

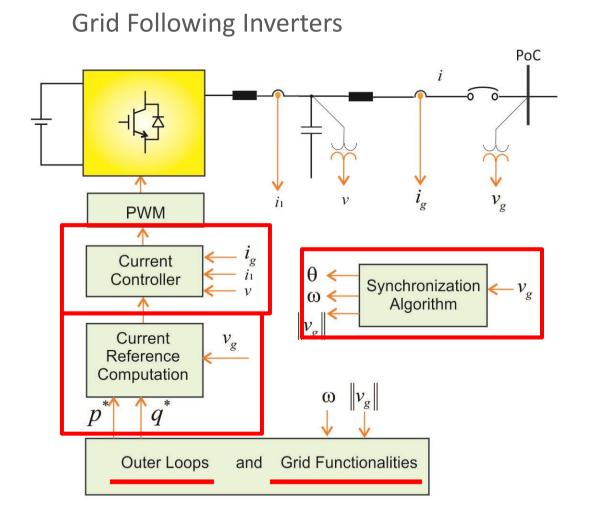


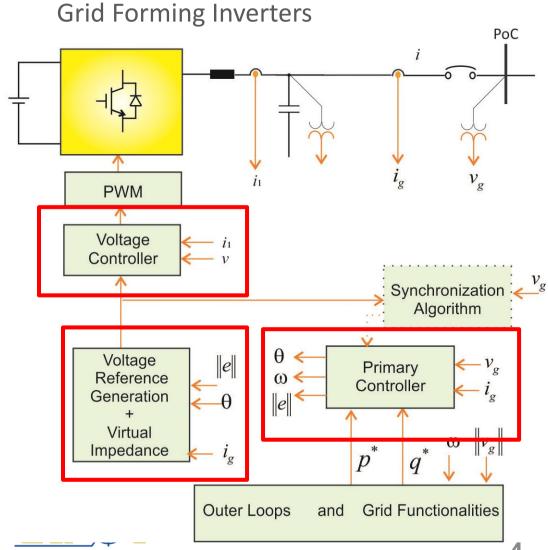






#### Introduction Grid Tied Converters





Typhoon HIL

de Potência e Controle

# **Grid-Forming Inverter Controllers**







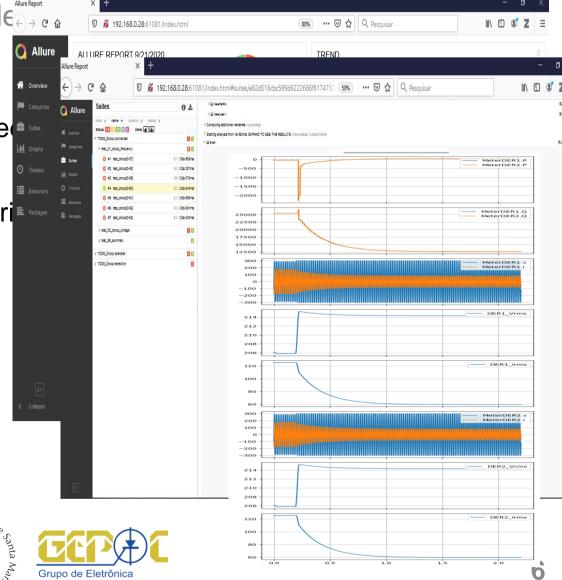
#### Course Goals

To recognize the difference between the thre

 $\square$   $\;\;$  To select the main design parameters of a pri

☐ To get familiar with a test-driven approach

☐ To understand the weak and strong points of the considered primary controllers.



## Primary controllers for Grid Forming Inverters

- □ Droop Control;
- □ Virtual Synchronous Generator;
- ☐ Dispatchable Virtual Oscillator;
- □ Others;





