

1 HYBRID DC POWER SYSTEM 2.1 Introduction and Hybrid Power System Operation The Chapter 2 introduces and analyzes the hybrid wind–solar–storage DC power system from perspective of system configurations and descriptions. Figure 2.1 indicates that two DC/DC converters and one AC/DC converter are used to connect to DC bus from solar panel, wind turbine and battery, and then the common DC bus integrates to the grid with an individual DC/AC inverter. Many researchers have shown numerous configurations and proposed various possible control and optimization methods on both stand–alone and grid–connected systems Fig.2. 1.