

A serious disadvantage of coupling a solar PV and wind energies of a hybrid system into the main DC bus is the compatibility of the voltage. In fact the PV system response is faster than the wind system one. This can affect negatively on the whole hybrid system response especially in case of variable loads switching. In this paper a hybrid energy system consisting of two sources: wind turbine generator and photovoltaic solar, without energy storage is modeled and simulated using MATLAB/SIMULINK. Management of the obtained power is achieved through two adaptor switches in the DC output of both sources. Each subsystem switch is controlled in order to supply either a dump load or the consumers' loads via an inverter. The objective is to obtain an acceptable (compromise) system response and to make it more compatible. A control strategy of those two switches is proposed to adapt the inputs of the sources to the output of the DC bus. Satisfying results have been obtained in terms of voltage response stability, precision and global compatibility achievement