14. The power system (1) as claimed in any of the preceding claims, wherein the switch (3c) is a bus-tie arranged to separate the first bus section (3a) from the second bus section (3b).

15. The power system (1) as claimed in any of the preceding claims, wherein the power system (1) is an on-board DC power system for a marine vessel.

16. A method of controlling power transfer in a power system (1) comprising a main DC bus (3) comprising a first DC bus section (3a) and a second DC bus section (3b), a switch (3c) arranged to connect and disconnect the first DC bus section (3a) and the second DC bus section (3b), a first power generating unit (G1) arranged to be connected to the first DC bus section (3a), a second power generating unit (G3) arranged to be connected to the second DC bus section (3b), a first drive system arranged to be connected (7a) to the first DC bus section (3a), a second drive system (7b) arranged to be connected to the second DC bus section (3b), a central energy storage system (17), and a control system (19), wherein the first drive system (7a) comprises a first bi-directional power converter (13a) arranged to be directly connected to the central energy storage system (17), wherein the second drive system (7b) comprises a second bi-directional power converter (13b) arranged to be directly connected to the central energy storage system (17), wherein the method comprises: controlling by means of the control system (19) the first bi-directional power converter (13a) to transfer power to the central energy storage system (17) and controlling the second bi-directional power converter (13b) to transfer power from the central energy storage system (17) to the second drive system (7b).

17. The method as claimed in claim 16, wherein prior to controlling the first bi-directional power converter (13a), directly connecting the first bi-directional power converter (13a) to the central energy storage system (17) and prior to controlling the second bi-directional power converter (13b),