

METHOD FOR OPERATING A COMBINED CYCLE POWER PLANT
ABSTRACT

5 The invention refers to a method for operating a combined cycle power plant (10), which comprises a gas turbine (11) and a steam turbine (23) which, via a connected electric generator (18, 24) in each case, generate alternating voltage of an assigned frequency and deliver it to an AC network (28), wherein the flue gas (21) of the gas turbine (11) is used for producing steam for the steam turbine (23).

10 A reliable and flexible network restoration during a black start is achieved by, in a first step, in island mode, internal consumers being supplied by the gas turbine (11), wherein the operating point of the gas turbine (11) is selected so that a minimum steam temperature is achieved for the steam turbine (23), in a second step, in island mode, the steam turbine (23) being synchronized and ramped up to

15 an operating point at which a maximum power increase can be achieved, wherein the resulting load change of the steam turbine (23) is compensated by the gas turbine (11), in a third step consumer loads being connected block by block, in a fourth step the increase in the demanded load being provided totally or partially and permanently or temporarily by the steam turbine (23), in a fifth step the load of

20 the steam turbine (23) being gradually reduced for increasing its load-increasing capacity, and steps three to five being repeated until the base load of the combined cycle power plant (10) is achieved.

(Fig. 1)