

ABSTRACT

METHOD FOR PROVIDING A FREQUENCY RESPONSE FOR A COMBINED
CYCLE POWER PLANT

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The disclosure refers to a method for providing a frequency response for a combined cycle power plant (1) connected to an electric grid (21). The combined cycle power plant (1) includes a gas turbine engine (2) and a steam turbine engine (3). The steam turbine engine (3) includes a boiler (11), a steam turbine (12), a pump (14), a condenser (13), a bypass (15) for the steam turbine (12), a steam admission control valve (12a). The steam turbine engine (3) operates with the bypass (15) closed or at least partly open to supply steam from the boiler (11) to the condenser (13) bypassing the steam turbine (12), and/or with the steam admission control valve (12a) at least partly open. The method comprises regulating the output load of the combined cycle power plant (1) by regulating the steam admission control valve (12a) and/or by regulating the steam flow through the bypass (15) in response to a frequency change of the electric grid (21). The output of the gas turbine (2) can also be adjusted, such that steam generated by the boiler (11) is sufficient to achieve the target load for the steam turbine (12).

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(Fig. 1)