

A method for control of reactive power sources relates to electricity and may be used in general service circuits. The method comprises measuring value of reactive power deviation from a preset value (in point of connection of a consumer to the electric system). A mathematical model of a reactive power consumption diagram is created, a mathematical model of the power supply system is created, using models the operating regimes for the said circuit are calculated, using criterion of power waste minimum in the power supply system reactive power fluxes are optimized and regulated in the real-time mode. Regulation is performed at two levels of the undertaking power supply system; a microprocessor unit is related to upper level to which electric power metering system in the power supply system input is recorded, at low level – local regulators of reactive power of condensation plants and synchronous motors. In real time mode, control limits are set by microprocessor units of the upper level to microprocessor units of the low level, making provision for standard requirements to voltage levels in every component part and real time mode of the power supply system, information is supplied without intervals to a microprocessor unit of the upper level. The proposed method for control of industrial undertaking reactive power sources makes provision for energy system requirements at distribution limits of electrical networks and consumer networks and at the same time, control of high-voltage condenser installations power, 1000 V batteries, reactive power generated by synchronous motors, and voltage level at terminals of electrical receivers.