

ABSTRACT

This thesis provides for the possibility of reconstruction of TPP-1 of JSC "AIES", providing heat supply to the entire East thermal district of Almaty and partially to the central thermal district.

The calculations show the high efficiency of gas turbine plants as a replacement for electricity.

The installation of two blocks of gas turbine units provides coverage of the current level of heat loads due to the operation of waste heat boilers and to improve the quality and reliability of electricity supply and improve the technical and economic indicators of thermal power plants.

The first section provides for the socio-economic needs of the project. In the second part of TPP-1, the source of heat congestion in the zone of district heating and provision of the city of Almaty is a forecast on request. The third section provides technical solutions for reconstruction. The fourth chapter calculates the economic efficiency of the project. The fifth chapter calculates the emissions of harmful substances into the atmosphere.