

OPTIMAL OPERATION OF POWER PLANTS IN COGENERATION SYSTEMS

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This paper presents the principles of optimal dispatch of heat and electrical power: both the district heating and electrical power systems are connected with cogeneration power plants. The cogeneration system with condensing power plants, boiler plants and cogeneration plants with extraction and back-pressure turbines are considered. The conditions of optimality using Lagrangian function are presented. In addition to the combined optimization of heat and power the three subtasks are tackled. These subtasks consider the optimal load dispatch in different market conditions. A computer program has been developed.

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