

OPTIMAL PLANNING OF GENERATING UNITS IN POWER SYSTEM CONSIDERING UNCERTAINTY OF INFORMATION

M. KEEL, O. LIIK, H. TAMMOJA, M. VALDMA*

Department of Electrical Power Engineering,
Tallinn University of Technology
5, Ehitajate Rd., 19086 Tallinn, Estonia

The task of optimal planning of generating units (OPGU) for optimal operation and expansive planning of all-thermal power system is considered in this paper. The OPGU problem is dealt with as a two-stage problem. During the first stage the optimal dispatching of units when the unit commitment is given takes place. During the second stage the optimal combination of units considering optimal dispatching of units on the first stage will be determined. Taking into consideration the incompleteness of information, besides the deterministic models of OPGU the min-max models will be discussed. Also some procedures of solving the tasks of OPGU and illustrative examples are presented.

* Corresponding author: e-mail mati.valdma@ttu.ee