

##C415582 : MAJOR ELECTRICAL ENGINEERING

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LARGE-SCALE POWER SYSTEM. THESIS ADVISOR : SUKUMVIT

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An algorithm which performs feasible unit commitment problem of large-scale energy system is presented. The unit commitment solution method consists of creating a priority list of the full-load average production cost of generation units, dynamic programming technique and then an algorithm needed to minimize the total production cost is calculated in a relative straight forward approach. After the unit commitment solutions have been found, the economic load dispatch is calculated. Results of the final unit commitment solutions of large-scale energy system show a great deal of the total production cost reduction over base case Newton-Rapson fast decouple load flow or basic economic load dispatch solutions. Several examples and results of the computer program (written in TURBO PASCAL and designed for use on microcomputer) are given at the end of this thesis.