home

about

publishers

editorial boards

advisory board

for authors

call for papers

subscription

archive

news

links

contacts

authors gateway

username

•••••

submit

Are you an author in Thermal science? In preparation.

THERMAL SCIENCE International Scientific Journal

Elis Sutlović, Matislav Majstorović, Ivan Saraj**Č**ev

A METHOD FOR THE LONG-TERM SCHEDULING OF HYDROTHERMAL POWER SYSTEM WITH MULTIPLE USER RESERVOIRS

ABSTRACT

This paper presents an optimization-based method for the

long-term scheduling of hydrothermal power system with several multiple-user reservoirs. The proposed method maximizes the profit of various types of water utilization taking into account limited water resources and all accomplishable restrictions. Hydroelectric power plants and other water users are treated like a peer participant in the profit realization. The method has been implemented in a computer program and tested on real system.

KEYWORDS

long-term hydrothermal scheduling, multiple-user reservoirs, power system planning, profit maximization

PAPER SUBMITTED: 2006-07-24 PAPER REVISED: 2007-02-07 PAPER ACCEPTED: 2007-03-15 DOI REFERENCE: TSCI0703075S

CITATION EXPORT: view in browser or download as text file

THERMAL SCIENCE YEAR 2007, VOLUME 11, ISSUE 3, PAGES [75 - 83]

REFERENCES [view full list]

- 1. Wurbs, R. A., Modeling and Analysis of Reservoir System Operations, Prentice Hall PTR, Upper Saddle River, N. J., USA, 1996
- 2. Wood, A. J., Wollenberg, B. F., Power Generation, Operation and Control, John Willey & Sons, New York, USA, 1984
- 3. Niessen, S., Haubrich, H. J., DelaFuente, J. L., Garcia, C., Nabona, N., Heredia, F. J., Dobiasch, R., Stelzner, P., Albrecht, J., Short and Long-Term Optimization of Electricity Generation and Trading in a Competitive Electricity Market The SLOEGAT project, Proceedings, XXXVII CIGRE, Paris, 1998, paper 38-206
- 4. Sherkat, V. R., Campo, R., Moslehi, K., Stochastic Long-Term Optimization for a

Authors of this Paper Related papers Cited By

External Links

- 8, pp. 2040-2049
- 5. Duran, H., Puech, C., Diaz, J., Sanchez, G., Optimal Operation of Multireservoir Systems Using an Aggregation-Decomposition Approach, IEEE Transactions on Power Apparatus and System, PAS-104 (1985), 8, pp. 2086-2092
- 6. Yu, Z., Sparrow, F. T., Bowen, B. H., A New Long-Term Hydro Production Scheduling Method for Maximizing the Profit of Hydroelectric System, IEEE Transactions on Power System, 13 (1998), 1, pp. 66-71
- 7. Duncan, R. A., Seymore, G. E., Striffert, D. L., Engberg, D. J., Optimal Hydrothermal Coordination for Multiple Reservoir River Systems, IEEE Transactions on Power Apparatus and System, PAS-104 (1985), 5, pp. 1154-1159
- 8. Maceira, M. E. P., Melo, A. C. G., Costa, A. P. C., Mercio, C. M., Gorenstin, B. G., Commercialization Risks in the Brazilian Market, Proceedings, IEEE Power Tech '99 Conference, Budapest, 1999, paper BPT99-495-13
- 9. Marwail, M. K. C., Shahidehpour, S. M., Coordination between Long-Term and Short-Term Generation Scheduling with Network Constraints, IEEE Transactions on Power System, 15 (2000), 3, pp. 1161-1167
- 10. Požar, H., Power and Energy in Electric Power Systems (in Croatian), Informator, Zagreb, 1983
- 11. ***, Hydroelectric Power Plant in Croatia (Ed. Z. Sever, Elektroprojekt Consulting Engineers Ltd.) (in Croatian), Croatian National Electricity, Zagreb, 2000

PDF VERSION [DOWNLOAD]

A METHOD FOR THE LONG-TERM SCHEDULING OF HYDROTHERMAL POWER SYSTEM WITH MULTIPLE USER RESERVOIRS





