

*Erohin P. M., Neuymin V. G., Aleksandrov A. S., Maksimenko D. M.*

## **Modeling FACTS devices for power flow and optimal power flow studies.**

The paper describes modeling FACTS devices for power flow problems. Has been proposed universal model for any connections to the serial and parallel devices –UPFS, IPFS, GPFS. The model is implemented in the industrial software system – RastrWin.

*Key words:* *Modeling, FACTS, power flow, STATCOM, SSTATCOM.*

*Erohin Peter Mikhailovich*, Dr. Sc., Professor, Advisor to the Deputy Chairman of the System Operator of the Unified Power System (JSC «SO UPS»).

E-mail: [epm@ural.so-ups.ru](mailto:epm@ural.so-ups.ru)

*Neuymin Vladimir Gennadyevich*, PhD. tech., docent, Deputy Director of Department of Scientific and Technical Center of the Unified Power System «Energy Management Systems» (Branch of JSC «STC UPS» «EMS»).

E-mail: [vlad@niipt-ems.ru](mailto:vlad@niipt-ems.ru)

*Aleksandrov Alexander Sergeevich*, PhD. tech., Head of Electrical Calculations of Department of Scientific and Technical Center of the Unified Power System «Energy Management Systems» (Branch of JSC «STC UPS» «EMS»).

E-mail: [ustas@niipt-ems.ru](mailto:ustas@niipt-ems.ru)

*Maksimenko Dmitry Mikhailovich*, programmer of Department of Scientific and Technical Center of the Unified Power System «Energy Management Systems» (Branch of JSC «STC UPS» «EMS»).

E-mail: [maksimenko@niipt-ems.ru](mailto:maksimenko@niipt-ems.ru)