Contribution of Scientists of BNTU into the Development of Energetics in the Republic of Belarus and Perspectives of Collaboration with German Partners

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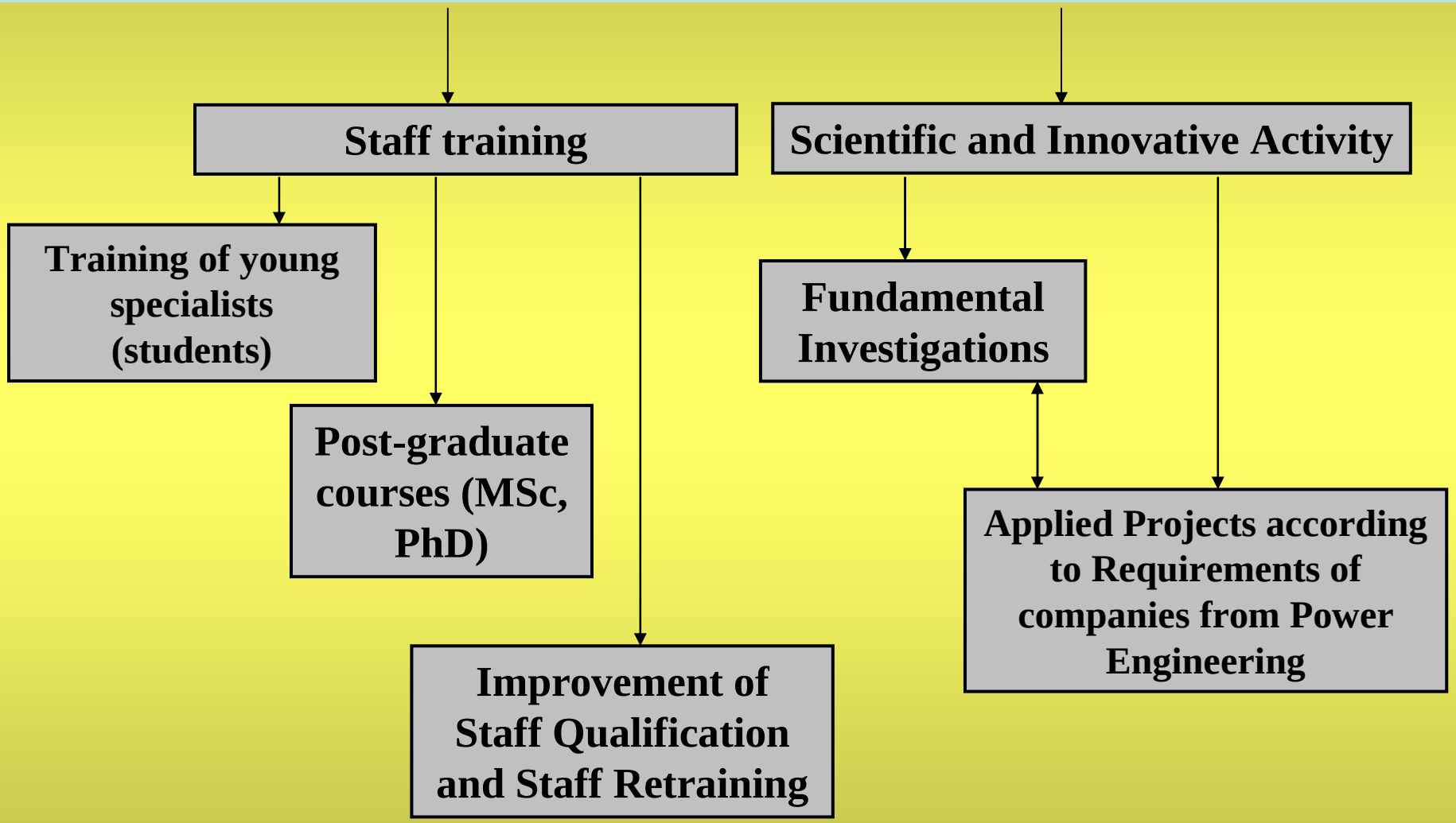
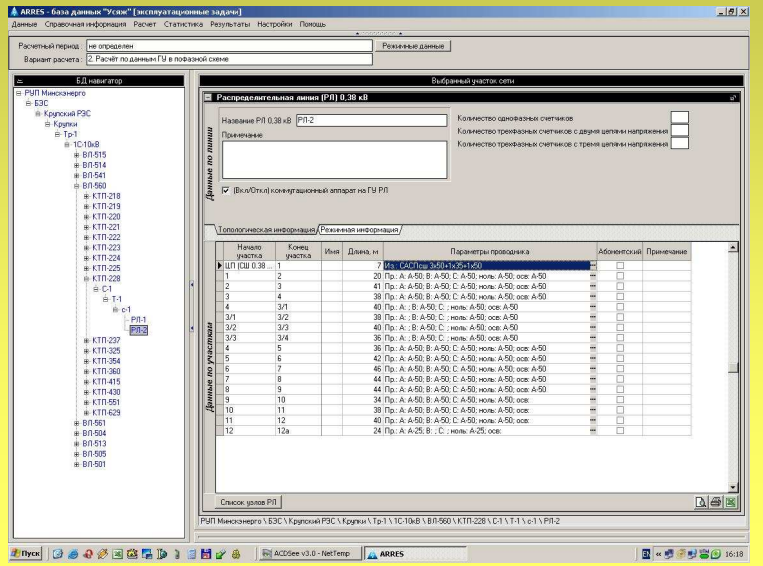
MAIN TASKS of the UNIVERSITY



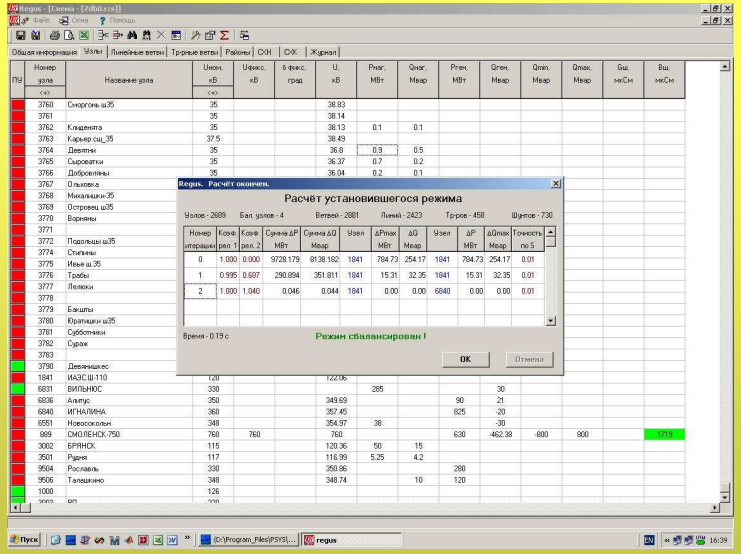
Main Directions in Scientific and Innovative Activity

- **Reduction of Energy Losses, development of software to predict the energy losses in electrical systems, optimization of systems performance;**
- **Investigations of the reliability and stability of the performance of electrical systems;**
- **Increase of the Reliability of Energetic System;**
- **Increase of the Reliability of Equipment at Power Stations;**
- **Effectiveness of Heat Energy Supply;**
- **Bio-Energy and Renewable Energy Recourses.**

The PC–program has been developed for calculations and analysis of the system and losses of electrical energy in the distribution electrical nets 0.38 kV



PC-program is devoted for the simulation and investigations of modes of electrical nets 35-750 kV during their maintenance and design of power systems

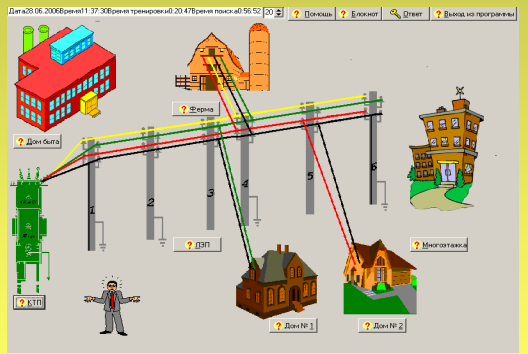


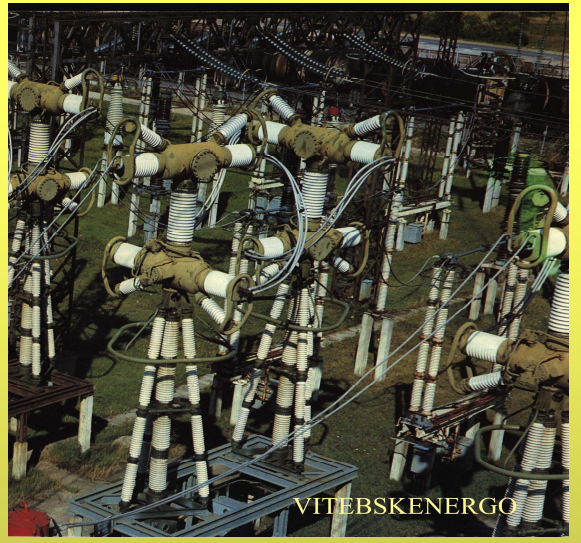
-Development of software for the investigations of adaptive micro-processors for current protection

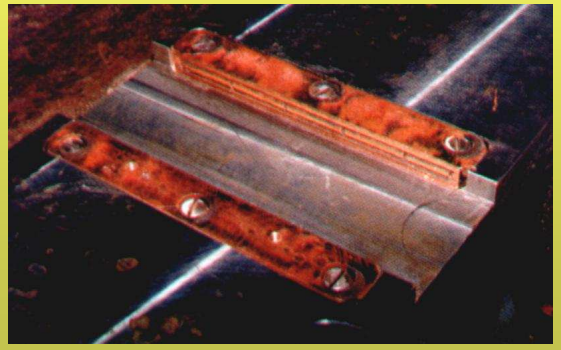
-Development of methods to predict the risk of brake-down of electrical systems and measures to avoid dangerous situations. E.G. the reliability and work stability of developing Atomic station

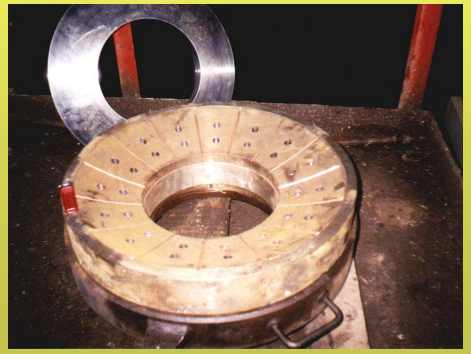
-Development of theory and methods to increase electrodynamics durability and aerodynamic stability of current conducting constructions with flexible wires in energetic systems

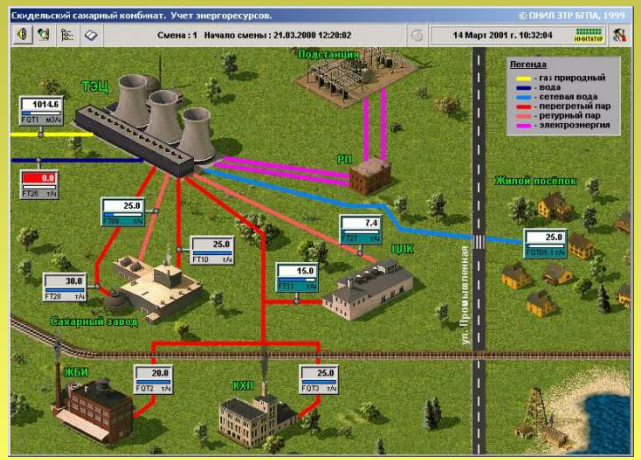
-Application of macroheterogeneous composite materials to normalize thermo-mechanical state of steam turbine units

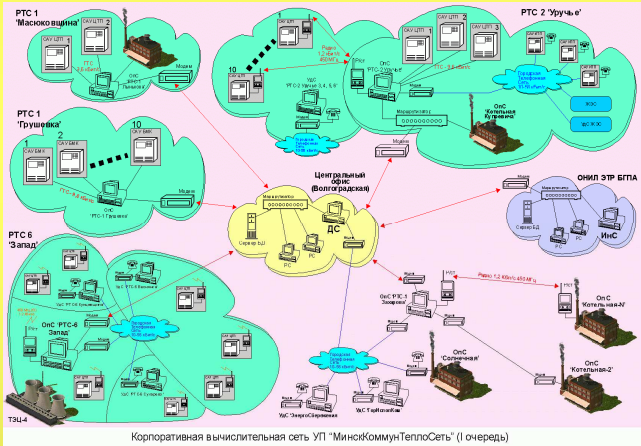








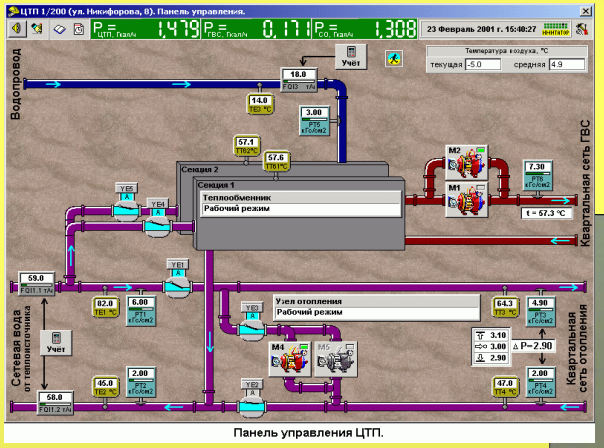




Корпоративная вычислительная сеть УП "МинскКоммунТеплоСеть" (I очередь)

Automation of technological processes of heat supply

Applied projects fulfilled are devoted to the development and introduction into the industry and in power engineering of automotive control systems of technological processes. Application of theses systems allow to cut the consumption of thermal energy by 10…15%



Панель управления ЦТП.

Control systems for heat supplying nets

Possible areas of collaboration

-Organization of a joint center in Minsk to train specialists from power engineering in new areas of energetics (renewable energy, bioenergy etc);

-Assistance in the equipping of laboratories with modern devices and equipment;

-Organization practical courses in Germany for students from power engineering faculty (especially for atomic power station);

-Joint training post-graduated students;

-Joint fulfillment of research projects according to requirements of Belarusian and Germany companies.

THANK YOU