EKC - Electricity Coordinating Center Ltd.
Software Solutions
Provider of widely used software solutions for power systems and electricity market analyses

EKC provides software solutions for electric power systems network models processing, load flow and transmission capacity calculations (NTC-based, flow-based), as well as electricity markets (balancing mechanism, market coupling).

MERLIN software was recommended by UCTE (now ENTSO-E) Secretariat in 2007.

TPCtool software and TNA software were recommended by CAO Freising in 2012.

Our success:
… reliable and highly competent consultant who delivers at agreed commitments in professional and collegial manner …

EKC's close cooperation with various customers (TSOs, power production companies, traders, auction offices, regulators and others) expanded our profound understanding of their technical issues. Having recognized their needs for practical solutions of very complex problems, EKC made numerous software solutions in the form of practical software applications widely used in Continental Europe. In that process, we have established strong and long-lasting partnership with software company DMS, with whom we realised some of our software products projects.

EKC software applications cover wide range of our customer needs:

- Transmission network model processing, model validation, conversion into different formats: UCTE, RAW, CIM/CGMES (software MERLIN, TNA)
- Load flow calculations, security analyses, transmission capacity calculations (NTC, Flow-based), short-circuit calculations (software TPCtool, PSA, TNA),
- Web-based simulation of regional balancing market (software BETSEE)
- Web-based simulation of NTC-based and Flow-based Market Coupling (software MaCSIM).

Our software applications are professional, reliable, practical and fast tools that match specific needs of energy sector stakeholders. EKC software tools are widely used throughout the Continental Europe. They have also been successfully used at several national and regional power system and electricity market projects.

In strong partnership with well-regarded software houses, EKC developed software for efficient resolution of complex transmission system tasks:

- TNA
- TPCtool
- MERLIN
- BETSEE
- MaCSim

ENTSO-E CGMES Attestation of Conformity of the software **TNA** Version 2

TNA - Transmission Network Analyzer

TNA is software designed by EKC and DMS for all network model operations including validating, fixing and merging and converting the load flow data sets, load flow and contingency calculations, NTC calculation, Flow-based calculations, as well as short circuit analyses. TNA embraces all functions of EKC software Merlin and PSA, plus other extensive options and functions. TNA supports working with UCT and CIM xml data formats. It also provides conversion between UCT, CIM xml/CGMES and RAW formats, in all directions.

TPCtool - Technical Parameters Calculation Tool

TPCtool is developed for models processing, load flow and PTDF/Maxflow calculation, designed for CEE Central Allocation Office in Freising (Germany) for 8-TSOs flow-based coordinated auctions. Software is designed for the procedures of automatic validation and merging of network models, and the calculation of PTDF/MF values, at yearly, monthly and daily (D-2) time horizon. TPCtool calculates the technical parameters for the flow-based coordinated auctions, investigated for the implementation in the region of Central-East Europe.

MERLIN - Conversion and merging utility

This software application allows bidirectional conversion of data between UCTE data format and PSS/E raw format, as well as merging of several models into one. MERLIN is recommended by the ENTSO-E (UCTE) Secretariat and is widely used by more than half of European TSOs.

BETSEE - Balance Energy Tool for Southeast Europe

BETSEE is used for the administration of offers for trade of electricity at intra-day time horizon, at the inter-TSO balancing purposes by the Southeast European TSOs. Platform is based on the exchange of hourly electricity products, placed to the common availability list. Web-based platform for the Southeast European inter-TSO balancing market, is used as a prototype for the development of Regional Balancing Mechanism (RBM).

MaCSim - Market Coupling Simulator

This software tool was developed by EKC and DMS Group as a web based software tool for performing the simulations of day-ahead market coupling of electricity markets. Supports both NTC-based and Flow-based market coupling. The platform is developed as a prototype used as a testing environment for TSOs, NEMOs and Regulators.

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