

EKC - Electricity Coordinating Center Ltd. Power Generation and Electricity Market

Challenges and opportunities of the restructured power sector

EKC's Electricity Market services comprise:

- Power system modeling for generation/load balancing analyses & simulations of day-ahead electricity market
- Balancing market impact analysis
- Assessment of the future power generation & market conditions
- Economic assessment of generation
- Economic assessment of transmission projects
- System adequacy analyses
- Development of the methodologies & software, training, presentations

Restructuring of the power sector opened lots of challenges to the business environment. Profound knowledge of electric power systems is essential for resolving technical issues and turning them into opportunities for sector participants. EKC has been supporting its clients to address the challenges and capitalize on the new opportunities of power sector restructuring in liberalized business environment.

EKC has been in the centre of all technical activities in Southeast Europe associated with the process of electricity market development and harmonisation of the national technical rules with the procedures adopted in the EU Internal Electricity Market. This enabled EKC to become a credible advisor to many Power Utilities and Transmission System Operators in system development, electricity market and system operation related aspects.

EKC's expertise covers spectrum of topics related to power systems, including electricity market and energy economy:

- Development in electric power sector
 - Generation master plans development
 - Conventional and renewable energy integration
 - Transmission, distribution and interconnection system development
- Demand analyses and forecasts

We support our clients in their striving to successfully resolve complex technical issues caused by the electricity market liberalization, while at the same time capitalizing on the opportunities generated by the power sector restructuring.

EKC is leader in development, updating and maintain of the electricity market models in countries of the Southeast Europe.

EKC is fully licensed with following software tools largely applied in electricity market & adequacy studies:

- ANTARES 
- GTMax 

- Demand side management solutions
 - Assessment of functionalities
 - Demand side management technologies
 - Market effects and impact on demand behaviours, business plans and programme design
- Power plants feasibility and ranking respecting different market design and regulatory solutions
- Energy efficiency measures and effects
- Sustainable development in electric power sector
 - Cost benefit analysis of grid development projects according to ENTSO-E CBA methodologies

Wide list of services in the field of market implementation, network access and system operation include:

- Market simulation & generation / load balancing studies
- Congestion management and cross-border trade mechanisms
- Balancing mechanisms

EKC electricity market models are developed with the aim to provide:

- analysis of load/generation/exchange balance for country and regional cases
- analysis of electric power systems in terms of surplus and deficits, cross border exchange and power flow management
- analysis of the generation mix (renewables and conventional) as a consequence of various climate, hydrology and temperature conditions
- optimisation of various generation facilities
- future prices analysis based upon the marginal costs method and sensitivity analysis for various prices of primary resources
- analysis of potential benefits of cross-border balancing cooperation

EKC's particular attention is dedicated to balancing market services and analyses of potential revenues from auxiliary services in environment with increasing participation of renewables with stochastic nature of generation, and by taking into account:

- power system control principles
- balancing market principles with variety of market products
- national balancing market development
- cross-border balancing cooperation

EKC power system advisory services are established on the extensive experience and technical expertise in domain of electricity market and economic analysis, transmission and distribution systems, system monitoring and control. Our analytical services are delivered using professional software tools and are often supported by software developed in-house or in the partnership with highly regarded software manufacturers.



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