EKC - Electricity Coordinating Center Ltd.

Conventional and Renewable Energy Integration

Integration - Wind - Solar - Small Hydro - Distributed Generation

EKC offers comprehensive consultancy services in renewable energy sources integration covering technical, commercial and regulatory aspects of renewable projects.

Our advisory services include feasibility studies, detail and complex technical impact analyses, Grid Code compliance studies, Grid Code development, Compliance Test Protocols development etc.

Expansion of renewable energy and their integration in electric power systems led to ground breaking changes in technology, power system operation, market and economy creating new challenges in power sector. Recognizing vast potential of renewable resources, EKC has joined world's determination for clean and sustainable energy.

EKC has been providing support to its clients in their striving for successful, efficient and cost-effective implementation of the renewable energy potential. Our services in renewable energy sources integration projects range from delivering various technical analyses, to supporting activities contributing capability building of our clients.

High integration goals and rapid development of renewable sources require technical expertise in new technologies, as well as adequate regulatory framework. EKC offers comprehensive services covering technical, commercial and regulatory aspects of renewable projects important to our clients while acquiring their renewable assets.

Our knowledge of local and international codes and regulations is valuable to our clients, irrespective of whether they are electric power utilities, financial institutions or private investors and developers. Comprehensive experience in the power system development, combined with excellent knowledge of software tools allows EKC specialists to successfully resolve complex technical problems associated with integration of renewables in the power systems, or assess the Grid Code compliance.

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EKC has been supporting electric power utilities, financial institutions, private investors and developers in their striving to grasp the benefits of the renewable energy sources development and integration.

We are fully licensed with professional software tool which is used for often complex technical analyses associated with renewable energy sources integration.

In accordance with relevant ENTSO – E Network Code, EKC developed Compliance Test Protocols important in the commissioning stage of renewables integration projects.

EKC's expertise in resolving technical problems related to renewable energy integration is equally recognized by private sector and power utilities, as demonstrated in various projects including:

- Feasibility studies
- Integration of renewable source simulation model
- Load flow analyses – network element loadings, security assessment, power losses, voltage and reactive power control
- Short circuit contribution assessment
- Impact of intermittent renewable production on power system
- Transient and mid-term stability - stability assessment after large disturbances in power system
- Short-term and long-term voltage stability assessment
- Small signal stability assessment
- Assessment of power quality indices at the connection point – flicker, harmonic distortion, voltage harmonics etc.
- EMT simulations - switching transient overvoltage assessment
- Optimal PCC analyses
- Grid Code compliance

Having obtained vast experience from various countries, EKC is in position to provide advisory services in domain of the institutional strengthening by:

- Grid code development
- Workshops and knowledge share
- System reserve analyses
- Network security assessment
- Developing strategies
- Legislation enforcement

EKC's experience in relation to the renewable energy integration is important and widely implemented in our clients' mid and long term transmission and distribution system planning.

In accordance with ENTSO-E Network Code on Requirements for Grid Connection Applicable to all Generators, EKC developed Compliance Test Protocols essential for renewable energy sources commissioning. Implementation of Compliance Test Protocol should provide both, secure connection of new power generating facilities and safe operation of the power system. The main objective of the Compliance Test Protocol is to specify all tests and pass criteria for examination if new power generating facility complies with the Grid Code.

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