

NEPLAN Consulting – Analysis – Services – Expertise

Electric Systems Consulting and Services Analysis & Solutions Based on Expertise & Experience

BCP Busarello + Cott + Partner is part of the international NEPLAN®-Consulting group. The NEPLAN®-Consulting group offers a wide range of power system studies and consultancies. More than 600 projects all over the world have already been successfully realized.

The NEPLAN®-Consulting group conducts studies to evaluate energy markets, solve electric system design, planning and operations related problems, perform system engineering, and provide equipment application expertise. We help you to optimize the value of your energy assets and transactions, and to better design, plan and operate your transmission, distribution, industrial systems, and/or merchant plant integration projects. Our services include:

Merchant Project Siting

- > Energy locational marginal price analysis
- > Capacity value assessment
- > Value of ancillary services
- > Forward price discovery
- > Transmission constraint evaluations
- > Value of transmission congestion relief

Market and Individual Asset Evaluation

- > Valuation of generating and transmission assets
- > Market risk assessment, profit and lost potentials
- > Project due diligence activities
- > Physical transmission access capability

Feasibility/System Impact/Facility Upgrading

- > Load flow, contingency, short circuit, and stability analysis for the interconnection of merchant projects
- > Interconnection configuration and conceptual designs
- > System reinforcement option and cost assessment

Transmission Capability Analysis

- > Transmission constraint identification and mitigation
- > Simultaneous transfer limit calculations
- > ATC calculation with consideration of TRM/CBM

System Dynamics and Control

- > Transient and dynamic stability analysis
- > Control tuning, design, and interactions
- > SSR, SSTI, transient torque, torsional interaction
- > Voltage instability

Transient Analysis and Insulation Coordination

- > Arrester rating, energy requirements and location
- > Switching transients, equipment BIL, BSL
- > Phase-to-ground & phase-to-phase clearances
- > Contamination performance
- > Circuit breaker recovery voltage

Harmonic Analysis

- > Harmonic filter design, filter performance and rating
- > AC/DC harmonic filters, including active filters
- > Network harmonic flow

Distribution System Planning

- > Budget constrained planning
- > Two-Q (Quality & Quantity) Engineering
- > Distribution network evaluation
- > Distributed resource interconnection

Reliability

- > Probabilistic system planning
- > T&D system reliability evaluation
- > Substation RAM studies
- > Integrated generation and transmission planning
- > Failure mode, effect, fault tree analysis

Protective Relaying and Controls

- > Protective system design and relay coordination
- > Adaptive relaying, fault location
- > Phasor estimation, power quality, high impedance fault detection
- > Integration of protection, control and monitoring
- > Wide-area disturbance protection and control

HVDC

- > AC/DC interactions, and planning
- > Conversion of AC lines to DC
- > Dynamic performance & control requirements
- > AC/DC filter design
- > Reactive power requirements
- > Equipment specification

Flexible AC Transmission (FACTS)

- > Planning: location, type and size
- > Dynamic performance & control requirements
- > Control design, interactions
- > Static VAR systems: SVC, GTO-based SVC

Education & Training

- > Short 3-5 day courses, regional or at customer site
- > 1 day NEPLAN introduction