

Nodal Advisory Services

Experienced professionals, proven solutions, trusted results



ABB's Nodal Advisors are experienced professionals who provide innovative, customized and cost-effective approaches to solve your business issues.

We apply ABB's industry-leading software and intelligence to a wide range of consulting services in the areas of:

- Electricity market modeling
- Planning and portfolio optimization
- Transmission systems constraints
- Regulated and merchant generation
- Strategic studies and public service proceedings
- Expert witness testimony

Our internationally-recognized team is a trusted resource for electric utilities, system operators, independent power producers, regulators, consultants, analysts and industrial electric users worldwide. The Nodal Advisors perform both zonal and nodal analysis using ABB Ability™ PROMOD® market simulation software and Simulation Ready Data.

PROMOD provides a deterministic hour-by-hour representation of generation and transmission system operations. It is the most comprehensive and reliable market simulation software available and is used by over 100 clients including utilities, transmission owners and developers, independent system operators (ISOs), regional transmission organizations (RTOs), regulators (including FERC),

power marketers, traders, universities and consultants. ABB's Simulation Ready Data is the industry-leading database of detailed information required to model the wholesale power markets across the US and Canada.

Each of the interconnected pools is individually dispatched, as in the real marketplace, and is also allowed to make economic energy exchanges with neighboring pools, subject to interconnection capacity. Monte Carlo stochastic simulation is available.

The energy industry is constantly changing. Major factors influencing the energy industry today include:

- Federal regulations and state renewable portfolio standards
- Low natural gas prices
- Wind, solar PV, and distributed generation
- Energy efficiency and demand response
- Environmental regulations
- Cost allocation for transmission expansion
- The emerging role of grid energy storage

ABB's Nodal Advisors can help you develop and test innovative and successful business strategies to address these uncertainties.

Nodal Advisory Services offerings



Transmission system studies

- Curtailment risk for renewables
- Financial transmission rights valuation (FTR/TCC/TCR/CRR)
- Transmission expansion cost/benefit analysis
- Line outage management
- Available transmission capacity analysis
- Loss factor calculations
- Binding constraints



Power markets and economic analysis

- Locational marginal price (LMP) forecasting
- Energy market simulation & analysis
- Zonal market prices
- Production cost modeling
- Energy and ancillary service cooptimization
- Market-based planning
- Risk assessment (transmission and generation outages)
- Market efficiency studies



Generation and portfolio applications

- Unit dispatch and profitability assessment
- Generation retirement/retrofit/repower analysis
- Asset valuation
- Project siting and sizing
- Power purchase/sale evaluation
- Contract modeling
- Fuel forecasting and budgeting



Strategic studies and system analysis

- Renewable integration studies
- Environmental regulation
- Reliability analysis (LOLE and EUE calculations)
- Demand response & energy efficiency
- Energy storage revenues & system benefits
- Market rule change impacts
- ISO/RTO cost/benefit analysis and cost allocation
- ISO/RTO change in membership/footprint