

Identifying Bottlenecks: Concepts and Data

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Common Approaches

- Statistics on security constrained lines
 - TLRs
 - Power flow data
- Model simulations
- Market data
 - Wholesale price differences
 - Congestion revenue

Issues With Line Statistics

- TLRs
 - Over-scheduling or fundamental constraint?
 - Size and value of displacements not available
 - Only used in eastern interconnection
- Security loaded lines
 - Often transitory, respond to market forces
 - Appropriate security limits?
- Data often proprietary-no federal database

Issues in Simulations

- Quality of data for electrical models
- Results sensitive to economic assumptions
 - “Pipeline” models hard to defend
 - Competition
 - Treatment of administrative charges and rules
 - Defining the “baseline”
- Transparent analysis versus national security

Issues With Market Data

- Wholesale spot market price differences
 - Only available in ISOs
 - Inter-ISO differences could reflect more than bottlenecks
- Congestion cost and revenue statistics
 - Only available in ISO's
 - Inconsistent definitions

Assessment

- All have some utility for identifying transmission constraints
- None identify the appropriate fix
- Value of relieving bottlenecks is critical to management strategy-most indicators don't take that into account