

ColumbiaGrid  
Reliability Small Group  
8/3/06 Meeting

Initial Draft of Reliability Functional Agreement “Elements”

Visibility

- Goal: Need to help identify prospective congestion problems between preschedule and real-time in order to avoid real-time reliability problems
- Problem:
  - Lack of specific information regarding what generation and load are going to do in real-time makes it impossible to analyze and use proactive tools (both for reliability coordinator and the transmission operator)
    - Load and generation information gaps both inside ColumbiaGrid footprint and outside ColumbiaGrid (interchange schedules)
      - An example, sometimes tags do not have specific enough information about the source of generation and load sinks or provide fragmented information
    - Lack of information about how transmission rights will be used
      - Examples
        - How much of reserved capacity will the transmission customer use?
        - How much firm transmission is going to be used or used as non-firm with redirected PORs and PODs?
    - Current tools do not provide enough granularity in the information that is provided and if supplemented to seek additional information, would be asking for it from wrong party
      - Facilitate collecting the right data so flow-based models can be used
      - Need to get relevant information from appropriate parties
  - Need to help transmission providers address issues with implementing their tariffs (in particular, curtailment)
  - Need to develop regional solutions to solve prospective congestion problems before they occur
- Solutions
  - Develop a framework that encourages voluntary economic solutions (generation and load)

- Examples:
  - Voluntary redispatch prior to real-time
  - Voluntary load curtailment prior to real-time
  - Voluntary generation curtailment prior to real-time
- Involuntary solutions
  - Prioritization of individual transmission schedules to be cut by the transmission provider (rather than pro rata cuts)

## Redispatch

### Stage 1 (summer of 2007)

Goal: Begin developing business practices and infrastructure to facilitate voluntary reliability redispatch that includes bids for increasing and decreasing federal and non-federal generation; specifically, assist BPA in development, implementation, and assessment of the summer of 2007 BPA redispatch pilot project.

Possible roles:

- Work with BPA technical team in setting up the pilot project, including
  - Tools
    - Updating and maintaining
  - Commercial arrangements
    - Contracts
    - Settlements
      - Billing
      - After-the-fact accounting for billing purposes
  - Business practices
  - Real-time protocols
  - After-the-fact evaluation reporting
  - Tests of the project
- Implementation responsibilities
  - Identifying candidate generators and solicit regional participation
  - Assist BPA in setting up contracts
  - Before the hour
    - Encourage participation based on current system status
    - Receive and process generation offers
    - Populate the redispatch tool with data from offers
      - Generation Offers
      - PUFs
      - Other
    - Provide updated information to BPA dispatchers
  - During the hour
    - Minimal role, support as necessary or requested
  - After the hour

- After-the-fact accounting for billing purposes
  - After-the-fact evaluation reporting
- Fall 2007
  - Lessons learned and recommendations

### Stage 2 (a)

Goal: Transition to ColumbiaGrid implementation of reliability redispatch for footprint (Functional Agreement signatories) control areas by developing business practices and infrastructure to facilitate voluntary reliability redispatch that includes bids for increasing and decreasing federal and non-federal generation and load

- General recommendations in Fall of 2007
  - Public process
- Feasibility assessment of regional effectiveness of ColumbiaGrid providing voluntary reliability redispatch service
- Further development based upon lessons learned from Stage 1
- Expand to more cutplanes/generators
  - Assessment of need and potential benefits of including specific cutplanes
  - Assess effectiveness of including generators outside of the Northwest
- Coordination of needed changes in business practices and tariffs
- Standardized communications protocols for actual implementation
- Net settlement procedures
- Procedures and decision-making rules for responding to multiple Balancing Authority requests
- Coordinate development of in-hour reliability redispatch predictive tool with PNSC
  - Communicate results of in-hour reliability redispatch to PNSC
  - Confirmation from PNSC of effectiveness of in-hour reliability redispatch

### Stage 2(b)

Goal: Transition to ColumbiaGrid implementation of congestion management using pre-real-time information for footprint control areas by developing business practices and infrastructure to facilitate hour-ahead voluntary redispatch that includes bids for increasing and decreasing federal and non-federal generation and load

- Feasibility assessment of regional effectiveness of ColumbiaGrid providing hour ahead redispatch service
- Explore possibility of accommodating hybrid response (e.g., first hydro, then thermal or other)
- Developing hour-ahead voluntary redispatch mechanism
  - Public process
- Expand to more cutplanes/generators
  - Assessment of need and potential benefits of including specific cutplanes
  - Assess effectiveness of including generators outside of the Northwest
- Coordination of needed changes in business practices and tariffs
- Standardized communications protocols for actual implementation

- Net settlement procedures
- Procedures and decision-making rules for responding to multiple Balancing Authority requests

### Outage Coordination

### Feasibility Work on Consolidation