



# ***Risk/Reward Group Update***

***Regional Representatives Group***

***24 June 2005***



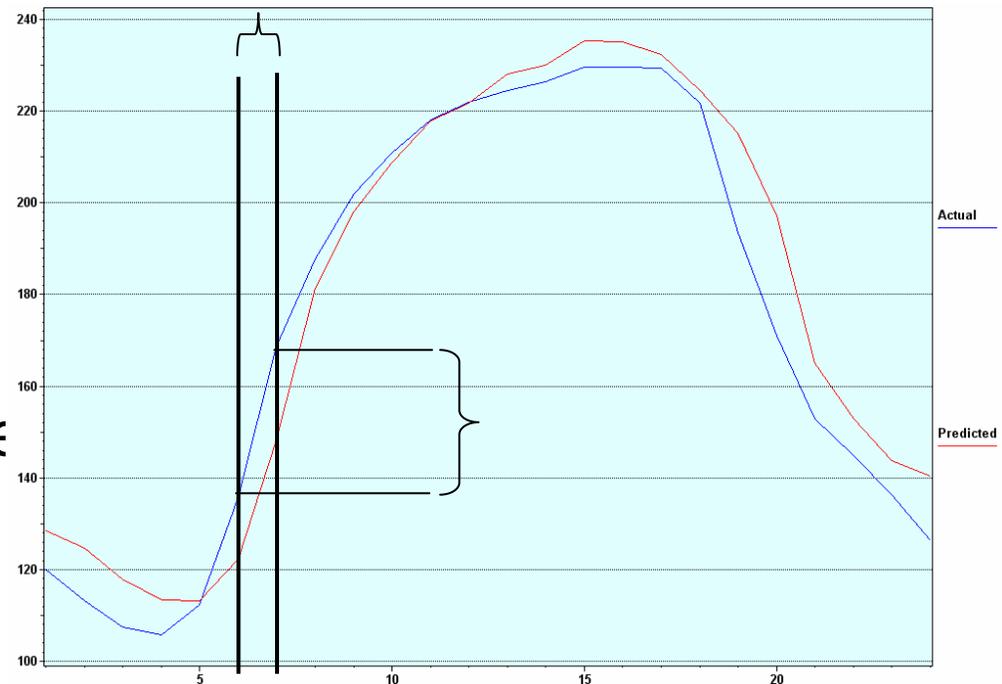
# ***Benefit Elements and Risk Factors***

- ***Regulating Reserves and Load Following***
- ***Production Cost Savings (increased dispatch efficiency)***
- ***Other impacts of De-pancaking***
- ***Contingency Reserves***
- ***Reliability Impacts***
- ***Increased Utilization of Existing Transmission***
- ***Transmission Construction Deferral***
- ***Market Monitoring***
- ***Other Qualitative and Risks***



# Regulating Reserves/Load Following

- **Studies performed by BPA**
  - Ability to respond efficiently to intra-hour load variations
  - 10 second load data analyzed
  - 10, 30 and 60 minute rolling averages
- **CCA evaluation**
  - PowerWorld Time Domain Simulation
  - Hourly load curve

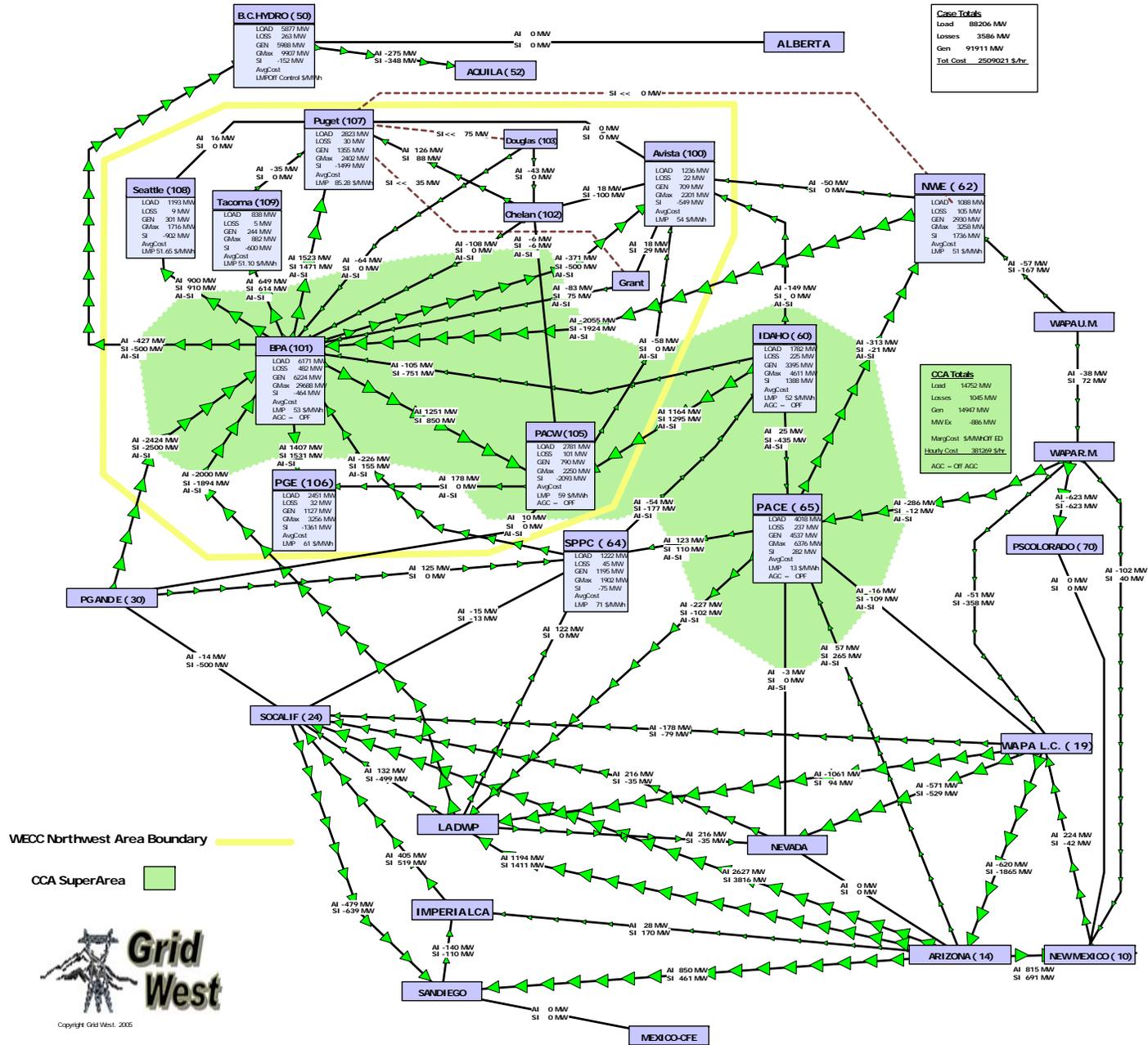




# ***Production Cost Savings***

- ***Balancing Market Efficiencies (CCA)***
- ***Reconfiguration Services Market***
- ***WECC data (June 14, 2004)***
- ***PowerWorld simulations***
  - Transmission utilization improvements (removing scheduling constraints)
  - Production cost savings resulting from the balancing market
- ***Simulation example – WECC 05LW1A***

# Western Interconnection Area-to-Area Interchange



# ***De-pancaking***

- ***Production cost savings resulting from removing rate pancakes***
  - GridView – evaluates production cost impacts that result from removing pancakes
  - Energy 2020
    - evaluates the impacts that market structure has on generation bidding strategies
    - simulates market dispatch subject to physical constraints



# ***Contingency Reserves***

- ***Henwood Study***
  - ***Tabors Caramanis Study***
- Survey responses indicate that increased reserve market scope is possible.***



# ***Reliability Impacts***

- ***LBNL cost estimates for outages (frequency and duration)***
- ***ICF method applied to August 2003 blackout (catastrophic)***



# ***Increased Utilization of Existing Transmission***

- ***Removal of transmission scheduling constraints***
- ***ATC gain through reconfiguration***
- ***Analytical Tools***
  - GridView
  - Energy 2020
  - PowerWorld



# ***Transmission Construction Deferral***

- ***Analyses***
  - Time value of deferred capital outlays
  
- ***Interviews***
  - Bridges quantitative and qualitative elements



# ***Qualitative Elements***

- ***Planning Process Improvements***
- ***Transmission Construction***
  - Cost allocation
  - Benefit allocation
- ***Market Innovation***
  - New technology evolution
- ***Dispute Resolution***



# ***Risk Factors***

- ***Cost Escalation***
- ***Cost Shifts***
- ***Service to Outlying Areas***
- ***Other items***



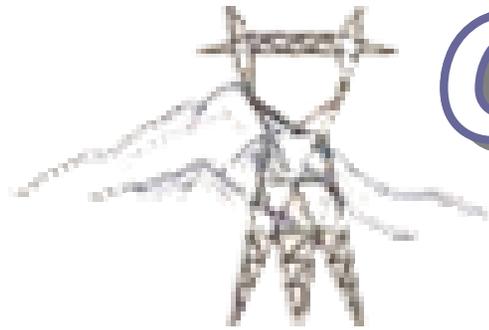
# ***Report Format***

- ***Survey Summary***
- ***Quantitative Output Matrix***
  - Impact elements
  - Range assumptions
  - Range of results
- ***Combined Whitepapers***
  - Quantitative
  - Qualitative
  - Risks
- ***Appendices***



# ***Meeting Schedule***

- ***June 30***
- ***July 7***
- ***July 12***
  
- ***Seminar – July 20-21***



***Grid***  
***West***