Slice Product Review Operations Subgroup Meeting
September 28, 2005
Issues Outline:

1) Slice Load Variability / Uncertainty
   a) Slice flexibility (share of system capability with realtime change rights) creates load uncertainty
      i) Non-Slice Requirements load is predictable as a function of weather
      ii) Slice delivery is less predictable due to the market influence and customer resource diversity
      iii) Preschedule – Realtime changes (revisions to operational limits can necessitate Slice schedule changes)
   b) Increased uncertainty results in Hydro Duty Scheduler setting aside a "cushion" of system capacity for potential realtime Slice load changes
      i) "cushion" amount varies by scheduler
      ii) "cushion" amount varies based upon system operation
      iii) maintaining an additional "cushion" reduces the ability to optimize use of the system
      iv) Can we identify and measure occurrences of this uncertainty (from all causes)?
   c) Lower water year vs. high water year
      i) Do the impacts of load variability/uncertainty change in low vs. high water years?
         (1) In low water years, does the impact diminish or increase?
         (2) In high water years, does the impact diminish or increase?
   d) Economic analysis
      i) Can the impact of load variability/uncertainty be identified and measured (approximated) and then treated as an economic impact or financial settlement?

2) Optimization / Efficiency
   a) Offering and implementing Slice should not diminish BPA's role in optimizing the system for regional benefit
      i) This benefit should be a priority over other uses of Slice
      ii) Has the diversity created from Slice improved regional benefit in terms of surplus marketing?
         (1) Can the affect of the diversity be measured or quantified?
      iii) How is optimization measured?
      iv) Should it come off the top?
   b) What does "System Optimization" mean?
      i) Maximum energy production?
      ii) Maximum dollar value?
      iii) Most efficient capacity use?

iv) Are all of the above equal (prioritize)?

c) How is optimization implemented?
   i) Long term planning .vs. short term planning .vs. realtime operations
      (1) Columbia Vista (currently short-term, will include long-term in the future)
      (2) NRTO (realtime)
d) Are near term daily and hourly optimization issues the same as capacity issues?
e) What are the Measureables?

3) Contract Amendments
   a) Clarity in contractual operational rights/risks
      i) Need to quantify contract/exhibit changes better as to the impact on operational rights and risk mitigation value.
   b) Address exhibit J disconnection from contract body
      i) Reduce/eliminate on-going re-negotiation via Exhibit J
         (1) Assure changes don't contradict or alter overall intent of the agreement
         (2) Include non-slice presence in negotiation?
         (3) Include operational provisions within the body of the agreement?
      ii) Ensure clarity so BPA understands what is being sold and customers understand what they are purchasing

4) Capacity Issues
   a) Priority of use
      i) Requirements Capacity
         (1) Regional reliability
         (2) Resource Integration
            (a) By BPA, or BPA and Slicers equally?
         (3) In-region Sales
      ii) Surplus Capacity
         (1) Regional reliability
         (2) Resource Integration
            (a) By BPA, or BPA and Slicers equally?
         (3) In-region Sales
         (4) Extra-regional sales

Issues Outline:

b) Capacity is a critical element of Slice
   i) Next hour changes are important to the value of the current Slice product from the customers' perspective
   ii) It is extremely difficult to accurately quantify capacity
      (1) Theoretical vs. actual capability disconnect
         (a) Customers have rights to theoretical capacity
         (b) PBL has rights to actual capacity
      (2) What is the definition of capacity?
   iii) Do we agree (is it clear) what BPA sold under Slice in terms of capacity?
   iv) Measureables – Forecasting and tracking capacity limits and use
c) Requirements load vs. surplus capacity
   i) Should Slice capacity be broken down into different components/limits/??
      (1) Requirements Load peaking component
      (2) Surplus capacity component
         (a) Is it a sale?
            (i) In region
            (ii) Outside region
d) Temporal Aspects of Capacity
   i) Capacity is dynamic based on changing system conditions and configuration
   ii) Capacity available depends upon definition being used (Instantaneous, 1-hr, 8-hr, etc)
      (1) Sustainability is a major factor
   iii) Lead-time of the forecast/estimate of capacity
      (1) Week ahead
      (2) Day ahead
      (3) Hour ahead
   iv) Can we, and how should we calculate, communicate, and schedule capacity?
e) Firmness
   i) Requirements capacity vs. system vs. surplus capacity/certainty
   ii) Capacity is currently firmed-up on current and next hour for Slice customers, but not for PBL
      (1) With existing contract implementation, hourly limits are not changed in realtime for current or next hour
      (2) For PBL hourly basepoints must be approved by TBL then implemented by COE and BOR

5) Is the Slice product considered a Resource or a load?

Issues Outline:

a) Different perspective from BPA and customers
b) BPA views Slice schedules as a load, customers view the flexibility within the limits as a resource
c) PBL operates the system as a whole, with Slice schedules integrated into the overall load obligation

6) Tiering of rates and resources, and the impacts to Slice
   a) Separation or division between Tier I and Tier II resources and load obligations
      i) How will this work?
   b) Equitable sharing of Tier II resource integration capability among customer groups
   c) Implication to Slice – How do Tiered resources impact the Slice treatment of:
      i) Capacity
      ii) Operations
      iii) Costs Shifts
      iv) Risks
   d) What is the relationship of integrating Tier II resources on Slice limits/rights/operations?

7) Off-the-top Obligations
   a) Off-the-top Obligations are met before meeting preference requirements load
   b) What is the impact of BPA integrating renewable resources?
      i) Does this come off-the-top for Slice?
   c) How will integration of other (non renewable) resources impact Off-the-top Obligations?

8) BPA's Role in NW Regional Reliability
   a) Insure shock absorber role
      i) "emergency backstop" concept
   b) What should BPA's function be in providing a backstop?
      i) Statutory/regulatory requirements
      ii) Political requirements or expectations
   c) Impact on slice capacity
   d) Slice/rate/benefit/consequence

Issues Outline:

9) Re-dispatch
   a) Constraint Schedule Management (CSM)
      i) What is this going to look like in the future?
      ii) How would Slice be implemented if it were not a "System" sale (Nodal concept)?
   b) Is Hydro system optimized for Transmission system or Power system use, or both(?)
      i) Capacity used for transmission – system optimization
   c) Impacts on slice capacity
      i) How do we incorporate or implement re-dispatch within Slice?
   d) Transmission support
      i) Impacts on Regional & Slice scheduling

10) Volume Runoff Risk Transfer
   a) As a benefit to BPA
      i) Is it working as anticipated?
      ii) Is the risk benefit affected by the Slicers' ability to increase other load products *(block step-ups)?*