

Task Team Recommendation Summary Template

Task Team	Question/Statement of Issue	Recommendation or Proposed Options	Key Assumptions or Decision Factors
AST-1	What is the basis for the Ancillary Services model?	Attachment G to the Stage 2 Filing remains intact as the Ancillary Services model. Some items may be modified or further refined as described below.	
AST-2	What are the Interconnected Operating Services (IOS) RTO West must acquire?	As provided in Attachment G to the Stage 2 Filing, the IOS are: <ul style="list-style-type: none"> ○ Regulation and Frequency Response ○ Load Following Up ○ Load Following Down ○ Spinning Reserve ○ Non-Spinning Reserve ○ Replacement Reserve ○ Congestion Redispatch ○ Supplemental Energy ○ Voltage Support ○ Black Start 	Stage 2 FERC Filing
AST-3	What are the Ancillary Services RTO West will provide to Scheduling Coordinators?	<ul style="list-style-type: none"> ○ Regulation and Frequency Response ○ Load Following ○ Spinning Reserve ○ Non-Spinning Reserve ○ Imbalance <u>Day-Ahead Redispatch Energy</u> ○ <u>Real-Time Balancing Energy</u> ○ Voltage Support ○ Black Start 	

--- DRAFT ---

Task Team	Question/Statement of Issue	Recommendation or Proposed Options	Key Assumptions or Decision Factors
		<ul style="list-style-type: none"> ○ Scheduling and Dispatch 	
AST-4	What are the Technical Requirements and Bid Characteristics of the IOS?	See the document posted on the RTO West site: Revision 2 of Chart Prepared By Rohan Soulsby on Technical Requirements and Bid Characteristics for IOS Suppliers (clean version)	
AST-5	How should Voltage Support be acquired by RTO West?	Voltage support could be viewed as both a contract service (maintaining the Nominal VAR output range) and a bid based service (when providing VARs outside the Nominal VAR range). If there are market power issues on bidding, use of the VAR capability curve and nodal energy prices could substitute for bids that are ostensibly based on opportunity cost.	
AST-6	Of the IOS, which can be bid (and paid accordingly, if selected for dispatch) as Capacity, Energy, and both Capacity and Energy?	<u>Capacity Only</u> <ul style="list-style-type: none"> ○ Regulation and Frequency Response <u>Capacity and Energy</u> <ul style="list-style-type: none"> ○ Load Following Up ○ Load Following Down ○ Spinning Reserve ○ Non-Spinning Reserve ○ Replacement Reserve <u>Energy Only</u> <ul style="list-style-type: none"> ○ Congestion Redispatch 	

--- DRAFT ---

Task Team	Question/Statement of Issue	Recommendation or Proposed Options	Key Assumptions or Decision Factors
		<ul style="list-style-type: none"> ○ Supplemental Energy <p>Note: Voltage Support and Black Start will be contract services (Voltage Support may be a special bid service as described above)</p>	
AST-7	Can ancillary services be provided from outside the RTO?	Yes. NERC Policy 1 provides for this, with certain exceptions: AGC and frequency dependent services, such as regulation and spinning reserves, cannot be supplied across asynchronous ties. Further, if there is a single point of failure that can affect the delivery of power, such as is the case with the Miles City DC tie between MAPP and WECC, provision of any reserves is a concern, since there is no certainty that reserves can be provided in instances like this.	
AST-8	Can closely related plants submit bids as if the plants were a single generator located at the same node?	RTO West's rules concerning what can be designated as a single "resource" for purposes of supplying IOS will allow entire plants or systems to be bid in as a single resource (thereby potentially giving plant or system operators some internal flexibility) so long as the impact of changing from one unit to another within the resource boundary is undetectable from a transmission	

--- DRAFT ---

Task Team	Question/Statement of Issue	Recommendation or Proposed Options	Key Assumptions or Decision Factors
		system operation standpoint (i.e., the resource is associated with a single specific node on the transmission system)	
AST-9	What is the number of bid stacks necessary to accommodate congestion management and the provision of ancillary services?	Currently, the AST believes one bid stack is sufficient. (A paper is being drafted to discuss whether more than one stack is needed.)	
AST-10	Which Ancillary Services can be provided through Self-tracking?	Self-tracking only applies to Regulation and Frequency Response, Load Following Up, and Load Following Down.	
AST-11	Will using a zonal approach with certain of the ancillary services mesh with the nodal congestion management model?	Yes. Reserves can be handled effectively through a zonal capacity bid process, with the energy price for delivered reserve energy being the nodal energy clearing price. It is recognized that the zones may vary with time as flows, congestion, etc. vary with time (e.g., on-peak versus off-peak, seasonally, etc.), but the AST recommends that the initial zones be the same as those currently defined and used under the Northwest Power Pool reserve sharing arrangement.	
AST-12	What type of control signal will be utilized?	During the real-time market, RTO West will use a "permissive dispatch" scheme to balance the system. RTO West will publish a forecast of nodal prices on a regular interval (e.g. every	

---DRAFT---

Task Team	Question/Statement of Issue	Recommendation or Proposed Options	Key Assumptions or Decision Factors
		<p>5 min. a forecast of nodal prices will be published which contains expected prices for each node on a 5 minute interval for the next 24 hours).</p> <p>Resources selected to provide IOS are required to track the forecasts of nodal prices and to dispatch their resources when the nodal price rises above the energy strike price contained in their bid. The exception to this is Regulation which will always be directly controlled by RTO West.</p>	