

### **2005 Firm Transmission Rights Release Quantity Assumptions**

On Branch Groups (BGs) where the necessary historical data is not available or where adjustments have been made to the calculated Firm Transmission Right (FTR) release amounts the ISO is providing the following explanation on our assumptions. The standard methodology that the ISO uses for calculating FTR release amounts is as follows:

- Determine Available Transmission Capability (ATC) for all Branch Groups, by direction, for each hour over the past year
- Take the 8784 (increase of 24 hours over the normal 8760 due to 29 days in February 2004) hours of ATC and rank them from highest value to lowest value
- Determine the ATC at the 99.5% availability level (special consideration for planned maintenance hours)
- The value at 99.5% is the number of FTRs for Sale, if this number is zero then no FTRs are released.
- $TTC/OTC - ETC = ATC$  (NFU & FTRs)

The ISO was unable to use the methodology described above for a number of branch groups due either to anticipated changes to line capacity that would have encompassed much of the time period to be auctioned, to past changes to line capacity for which there was less than a full year of operational and market data, or other reasons. For those BGs that the ISO did not use the exact process as described above, we have described our process below, for your information.

#### **Blythe      SP15 to LC2**

The ISO calculated the release for the 2005 FTRs on the Blythe BG outbound direction by determining the 99.5 percentile value on the Load Duration Curve for the load at Blythe, and subtracting that value from 168 MW.

#### **COI      NP15 to NW1 and NW1 to NP15**

For each hour from November 1, 2003 to October 31, 2004, the ISO calculated the ATC in each direction. Since this historical data still contained ETCs we had to add back the hourly reservation quantities during each hour for the existing rights slated to expire after 12/31/2004. The ISO then used these adjusted hourly ATCs to calculate an ATC duration curve and determine the 99.5% value.

#### **Path 15      ZP26 to NP15**

The addition of another line to Path 15 and expiration of existing rights required methodological changes in calculating release quantities on Path 15 (S-N) for the 2005 FTR auction. To simulate the addition of the third Path 15 line the ISO took each hour from November 1, 2003 to October 31, 2004, calculated the ATC in

the northbound direction, and then increased the hourly ATCs by  $\frac{1}{2}$ , assuming that the addition of a third line to the two-line path would result in a corresponding ATC increase of 50%. The ISO then used these adjusted hourly ATCs to calculate an ATC duration curve and determine the 99.5% value. The last step for the ISO was to add back the hourly reservation quantities during each hour for the existing rights slated to expire after 12/31/2004 to determine the adjusted FTR release amount.

**Path 26 ZP26 to SP15**

For each hour from November 1, 2003 to October 31, 2004, the ISO calculated the ATC in the northbound direction and then added back the hourly reservation quantities during each hour for the existing rights slated to expire after 12/31/2004. The ISO then used these adjusted hourly ATCs to calculate an ATC duration curve and determine the 99.5% value for deriving the FTR release amount.

**Palo Verde AZ3 to SP15/SP15 to AZ3**

The ISO has proposed releasing a transmission reliability margin (TRM) on the Palo Verde branch group through 2005. Because there does not exist any historical data with a TRM imposed on the Palo Verde branch group and the value of the capacity reserved under the TRM may fluctuate from hour to hour, the ISO calculated the hourly ATC on Palo Verde in each direction, and reduced that hourly quantity by 25%, constructing the ATC duration curve, and calculated the 99.5% value to determine the FTR release amount. The 25% reduction is only an approximation, and not a projected value for the TRM. For further information on TRM please refer to the Scheduling procedure S-322 which can be found at;

<http://www.caiso.com/docs/2003/07/17/200307171250053760.pdf>.