

## SCHEDULE 3 to Collateral Annex

### **Mark to Market Value Calculation Methodology**

The following process will be used to calculate the initial marks and to update the marks on each business day for the standard product contracts. Quotes for peak power and/or off-peak power in the NiHub zone will be obtained from four sources. These sources are ICAP, NYMEX, Amerex, and Prebon.

- 1) The updated mark for a month will be equal to the average mark for that month over all sources from which a quote is available. If a monthly quote is available from any source, only the monthly quote or monthly quotes shall be used. Where quotes provide a bid and ask, the average shall be used.
- 2) Where a quote for an individual month is unavailable from any of the sources, but the month is quoted as part of a “packaged” quote from one or more sources (e.g., January 2011 is only available in the form of a January/February 2011 “packaged” quote):
  - (i) if the other month/months of the package quote is/are also unavailable from any of the sources, the marks for all months of the package will be calculated by multiplying the packaged quote by the ratio of the mark for the corresponding month from the previous business day to the corresponding calculated package quote from the previous business day (except for the calculation of the initial marks, where the ratios used will be those in the corresponding Table below instead of the ratios from the previous business day);
  - (ii) if the other month/months of the package quote is/are available, the mark for the month will be set such that the average of the month and the other month(s) (weighted for either the peak or off-peak hours as applicable) equals the packaged quote (see calculation example for package to month below).
- 3) Where a quote for any month is not available as a monthly quote or as part of packaged quote from any of the sources, but the month is quoted as part of a “calendar” quote from one or more sources (e.g., January 2011 is only available in the form of a Cal 2011 “calendar” quote):
  - (i) if none of the other months / packages of the calendar quote are available, the marks for all months of the calendar period will be calculated by multiplying the calendar quote by the ratio of the corresponding month / package quote from the previous business day, or if none was available the value for the corresponding month/ package developed for the previous business day in accord with this subsection, to the corresponding calculated calendar quote from the previous business day. In the case of packages, the packages will subsequently be broken down into the separate months as described in 2

- above. (For the calculation of the initial marks, the ratios for months and package to calendar quotes used will be those in the corresponding Table below instead of the ratios from the previous business day);
- (ii) if one or more of the other months / packages of the calendar quote is/are available, the marks for the missing months / packages will be set such that the relative scaling of the missing months and the available month(s) (weighted for either the peak or off-peak hours as applicable) equals the calendar quote (see calculation example below for calendar to package). Subsequently, the scaled value for all missing months would be broken down into months/or packages using the relationships between the month/package to calendar ratios in the table below (see calculation example below for calendar to month/package). In the case of packages, the packages would then be broken down into the separate months as described in 2 above.
- 4) Where a quote for a delivery month is neither available as: a) a monthly quote; b) part of a packaged quote; or c) part of a calendar quote from any source, the mark from the previous business day will be used.

Quotes from the sources will be examined to identify quotes that are out of line and potentially invalid or are in obvious error. Sources will be asked to either correct or verify data that is anomalous and/or inconsistent with that provided by other sources or is in obvious error. If the data cannot be verified in time for the daily mark, the anomalous data will be discarded.

The ongoing marks will be calculated each business day beginning the day after the initial marks are provided and continuing until May 31, 2011.

The Current Mark-to-Market Value will be computed by multiplying the difference between the initial marks and the updated marks derived as described herein by the appropriate energy volumes.

The following ratios are illustrative only. Actual ratios to be used will be provided and announced to bidders prior to the date when bidders are required to submit the Master Agreement.

**Table 1\***

**\* illustrative ratios**

**Ratios to be used for July-August packaged quote**

<b>Month</b>	<b>Peak Ratio</b>	<b>Off-Peak Ratio</b>
July	0.9809	0.9584
August	1.0200	1.0400

**Table 2****Ratios to be used for October-December or Q4 packaged quote**

<b>Month</b>	<b>Peak Ratio</b>	<b>Off-Peak Ratio</b>
October	X.XXXX	X.XXXX
November	X.XXXX	X.XXXX
December	X.XXXX	X.XXXX

**Table 3****Ratios to be used for January-February packaged quote**

<b>Month</b>	<b>Peak Ratio</b>	<b>Off-Peak Ratio</b>
January	X.XXXX	X.XXXX
February	X.XXXX	X.XXXX

**Table 4****Ratios to be used for March-April packaged quote**

<b>Month</b>	<b>Peak Ratio</b>	<b>Off-Peak Ratio</b>
March	X.XXXX	X.XXXX
April	X.XXXX	X.XXXX

**Table 5****Ratios to be used for converting calendar quote to monthly/package quote**

<b>Month / Package</b>	<b>Peak Ratio</b>	<b>Off-Peak Ratio</b>
January / February	102.5000	X.XXXX
March / April	95.0000	X.XXXX
May	90.0000	X.XXXX
June	100.0000	X.XXXX
July / August	125.0000	X.XXXX
September	97.0000	X.XXXX
Q4	90.0000	X.XXXX

## Calculation Examples (package to month):

Situation 2(i) package only - Example 1: There are no peak quotes available on the day the initial marks are calculated for July 2010 or August 2010. However, there is a peak July/August 2010 packaged quote available of \$54/MWh or if the July/August package quote is not available a July/August 2010 package quote of \$54/MWh has been developed in accord with step 3 above. The peak mark for July 2010 is set at  $\$54 * 0.9809$ , or \$52.97/MWh. The peak mark for August 2010 is set at  $\$54 * 1.0200$ , or \$55.08/MWh.

Situation 2(i) package only - Example 2: There are no peak quotes available on day x during the contract for July 2010 or August 2010. However, there is a peak July/August 2010 packaged quote available of \$53/MWh or if the

July/August package quote is not available a July/August 2010 package quote of \$53/MWh has been developed in accord with step 3 above. The peak marks from day x-1 for July 2010 and August 2010 were \$53.50/MWh and \$56.50/MWh respectively. The day x peak mark for July 2010 is set at  $(53.50*53)/((53.50*368) + (56.50*336))/(368+336) = \$51.62/\text{MWh}$  and the day x peak mark for August 2010 is set at  $(56.50*53)/((53.50*368) + (56.50*336))/(368+336) = \$54.51/\text{MWh}$ .

Situation 2(ii) package and part of package: There are no peak quotes available for August 2010. However, there is a peak July/August 2010 package quote available of \$55/MWh or if the July/August package quote is not available a July/August 2010 package quote of \$55/MWh has been developed in accord with step 3 above and a peak July 2010 quote of \$53/MWh. The peak mark for August 2010 is set at  $[(55*(368+336))-(53*368)]/336 = \$57.19/\text{MWh}$ .

Calculation Examples (calendar to month/package):

Situation 3(i) calendar only - Example 1: There are no peak quotes available on the day the initial marks are calculated for any month or package in 2011. However, there is a peak 2011 calendar quote available of \$41.5/MWh. A July/August package quote for 2011 will be calculated as  $125% * 41.5$  or \$51.875/MWh. The initial marks for July 2011 and August 2011 would then be developed as illustrated in the package to month calculation example (Situation 2(i) Example 1). The same methodology would apply to other packages listed in the table for converting calendar quotes to monthly/package quotes. For May 2011, the initial mark would be set as  $90% * 41.5$  or \$37.35/MWh. The same methodology would apply to other months individually listed in the table for converting calendar quotes to monthly/package quotes.

Situation 3(i) calendar only - Example 2: There are no peak quotes available on day x for any month or package in 2011. However, there is a peak 2011 calendar quote available on day x of \$42.5/MWh. On day x-1, a July/August package quote for 2011 was calculated as \$53.00/MWh and the calendar quote on day x-1 was \$43.0 /MWh. The ratio for day x-1 is  $53/43$  or 1.2326. The day x package value for July/August 2011 would then be developed as  $1.2326*42.5$  and would be 52.39/MWh. The marks for July 2011 and August 2011 would then be developed as illustrated in the package to month calculation example (Situation 2(i) Example 2). The same methodology would apply to other months/packages for converting calendar quotes to monthly/package quotes. When a month is not part of a package, the calculated value from this step is the mark for the month.

Situation 3(ii) calendar plus package: Peak quotes are available on day x for January/February 2011 only and the quote is \$41MWh. There is also a calendar 2011 quote of \$40/MWh. The March/April quote for 2011 would be calculated as follows (assuming for simplicity the following number of peak hours in each month):

Example Peak Hours

Jan/Feb 700  
 March April 700  
 May 350  
 June 350  
 July/August 750  
 Sep 350  
 Q4 1000  
 Calendar 4200

Calculate calendar peak hour total excluding Jan/Feb as  $\{(4200*40) - (700*41)\}$  or 139,300. Calculate the March/April share using Table 5 ratios and example hours as  $\{95*700/(95*700+90*350+100*350+125*750+97*350+90*1000)\} * 139,300$  or 26,414. Dividing by 700 hours in March/April produces a March April package value of \$37.73/MWh. The marks for March 2011 and April 2011 would then be developed using the package value of \$37.73 as illustrated in the package to month calculation example (Situation 2(i) Example 2). The same method would be applied to any situation where a calendar quote and some but not all months/packages were available. While the example uses the ratios in Table 5, the method will be applied using day x-1 ratios for monthly/package values. Hence if on day x-1, the July/August package value was 122% of the day x-1 calendar quote, the ratio used for July/August would be the 122% from day x-1 and not the 125% from the table.