**Mark to Market Calculation for AES Ohio’s**

**Master Standard Service Offer Supply Agreement**

**Objective**

This document summarizes the mark-to-market (MtM) calculation in support of the credit requirements for AES Ohio’s Master Standard Service Offer Supply Agreement for the Period from June 1, 2019 through May 31, 2022.

**Information for MtM Exposure Amount Calculation**

Table 1 contains the initial on-peak price marks, which are the Forward Market Prices on the closing day of the Solicitation, March 26, 2019, for each month during the 36-month Original Delivery Period from June 2019 through May 2022. Where publicly-available market quotes are available, a market quote will be used for each Billing Month. For any month for which a market quote is not available, AES Ohio will use a proprietary method that reflects forward market conditions for that Billing Month. The mark for each Billing Month will not change over the life of the contact. After the close of the competitive bidding process, Forward Market Prices will change.

Additionally, the on-peak and off-peak loads used to calculate the MtM Exposure Amount will be adjusted as needed to reflect the most current estimates by AES Ohio.

Over the course of the contract, Forward Market Prices will be compared to the mark for each Billing Month starting from the SSO Supply Agreement's Effective Date, as applicable, to determine the MtM exposure.

As indicated in Appendix C-2, the following parameters will be determined by AES Ohio:

1. The expected On-Peak SSO Load per Tranche (Table 2)
2. The expected Off-Peak SSO load per Tranche (Table 2)
3. Prevailing On-Peak Forward Market Prices for each month during the Original Delivery Period (Table 1); and
4. Ratios of Off-Peak to On-Peak monthly Forward Market Prices for each month during the Original Delivery Period (to be used to determine the Off-Peak Forward Market Prices from the On-Peak Forward Market Prices.) (Table 3)

The values listed in Table 1, Table 2, and Table 3 are those that AES Ohio intend to use for Appendix C-2 of the SSO Supply Agreement.

**Table 1: Initial Market Price Data**

The Initial Marks are the on-peak forward prices that are available on the day the auction closes. The following table displays the Initial Marks set on March 26, 2019 for AD Hub (RT) obtained from CME.

|  |  |
| --- | --- |
| **Table 1: Initial Market Price Data ($/MWh)** | |
| **Month-Year** | **On-Peak** |
| Jun-19 | 34.74 |
| Jul-19 | 39.69 |
| Aug-19 | 37.4 |
| Sep-19 | 36.88 |
| Oct-19 | 35.16 |
| Nov-19 | 34.56 |
| Dec-19 | 35.81 |
| Jan-20 | 43.12 |
| Feb-20 | 40.97 |
| Mar-20 | 36.22 |
| Apr-20 | 33.78 |
| May-20 | 35.58 |
| Jun-20 | 33.73 |
| Jul-20 | 39.27 |
| Aug-20 | 36.42 |
| Sep-20 | 34.83 |
| Oct-20 | 32.48 |
| Nov-20 | 32.13 |
| Dec-20 | 34.08 |
| Jan-21 | 42.41 |
| Feb-21 | 38.89 |
| Mar-21 | 34.83 |
| Apr-21 | 32.9 |
| May-21 | 33.74 |
| Jul-21 | 32.3 |
| Aug-21 | 37.9 |
| Sep-21 | 35.03 |
| Oct-21 | 32.6 |
| Nov-21 | 31.31 |
| Dec-21 | 31.12 |
| Jan-22 | 32.6 |
| Feb-22 | 41.32 |
| Mar-22 | 37.89 |
| Apr-22 | 34.45 |
| May-22 | 32.51 |

**Table 2: Monthly Loads per Tranche**

The monthly on-peak and off-peak loads per tranche are used when calculating the mark-to-market. These loads are subject to change by AES Ohio.

|  |  |  |
| --- | --- | --- |
| **Table 2: Monthly Loads per Tranche (MWhs)** | | |
| **Month-Year** | **On-Peak** | **Off-Peak** |
| Jun-19 | 1,756 | 1,592 |
| Jul-19 | 1,950 | 1,770 |
| Aug-19 | 2,130 | 1,638 |
| Sep-19 | 1,500 | 1,590 |
| Oct-19 | 1,562 | 1,345 |
| Nov-19 | 1,623 | 1,574 |
| Dec-19 | 1,639 | 1,928 |
| Jan-20 | 1,964 | 2,015 |
| Feb-20 | 1,516 | 1,506 |
| Mar-20 | 1,605 | 1,642 |
| Apr-20 | 1,317 | 1,355 |
| May-20 | 1,547 | 1,345 |
| Jun-20 | 1,756 | 1,592 |
| Jul-20 | 1,950 | 1,770 |
| Aug-20 | 2,130 | 1,638 |
| Sep-20 | 1,500 | 1,590 |
| Oct-20 | 1,562 | 1,345 |
| Nov-20 | 1,623 | 1,574 |
| Dec-20 | 1,639 | 1,928 |
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| Nov-21 | 1,623 | 1,574 |
| Dec-21 | 1,639 | 1,928 |
| Jan-22 | 1,964 | 2,015 |
| Feb-22 | 1,516 | 1,506 |
| Mar-22 | 1,605 | 1,642 |
| Apr-22 | 1,317 | 1,355 |
| May-22 | 1,547 | 1,345 |

**Table 3: Ratios of Off-Peak to On-Peak Prices**

The AD Hub monthly ratio of off-peak to on-peak prices used in calculating the MtM.

|  |  |
| --- | --- |
| **Table 3: Ratios of Off-Peak to On-Peak Prices** | |
| **Month-Year** | **Ratio of Off-Peak to On-Peak Price** |
| Jun-19 | 0.75 |
| Jul-19 | 0.66 |
| Aug-19 | 0.69 |
| Sep-19 | 0.62 |
| Oct-19 | 0.75 |
| Nov-19 | 0.74 |
| Dec-19 | 0.84 |
| Jan-20 | 0.98 |
| Feb-20 | 0.87 |
| Mar-20 | 0.78 |
| Apr-20 | 0.83 |
| May-20 | 0.54 |
| Jun-20 | 0.75 |
| Jul-20 | 0.66 |
| Aug-20 | 0.69 |
| Sep-20 | 0.62 |
| Oct-20 | 0.75 |
| Nov-20 | 0.74 |
| Dec-20 | 0.84 |
| Jan-21 | 0.98 |
| Feb-21 | 0.87 |
| Mar-21 | 0.78 |
| Apr-21 | 0.83 |
| May-21 | 0.54 |
| Jun-21 | 0.75 |
| Jul-21 | 0.66 |
| Aug-21 | 0.69 |
| Sep-21 | 0.62 |
| Oct-21 | 0.75 |
| Nov-21 | 0.74 |
| Dec-21 | 0.84 |
| Jan-22 | 0.98 |
| Feb-22 | 0.87 |
| Mar-22 | 0.78 |
| Apr-22 | 0.83 |
| May-22 | 0.54 |