<u>For Discussion at 10/25/2012 MRC</u>

<u>OATT ATTACHMENT K-APPENDIX; OA SCHEDULE 1</u>

6.7 Data Submission

(a) Potential participants in any PJM Reliability Pricing Model Auction shall submit, together with supporting documentation for each item, to the Market Monitoring Unit *and the Office of the Interconnection* no later than *one hundred twenty (120) days* prior to the posted date for the conduct of such auction, a list of owned or controlled generation resources by PJM transmission zone for the specified Delivery Year, including the amount of gross capacity, the EFORd and the net (unforced) capacity.

(b) Except as provided in subsection (c) below, potential participants in any PJM Reliability Pricing Model Auction in any LDA or Unconstrained LDA Group that *request a unit specific Avoidable Cost Rate* shall, in addition, submit the following data, together with supporting documentation for each item, to the Market Monitoring Unit no later than *one hundred twenty (120) days* prior to the *commencement of the offer period for* such auction:

i. If the Capacity Market Seller intends to submit a non-zero price in its Sell Offer in any such auction, the Capacity Market Seller shall submit a calculation of the Avoidable Cost Rate and Projected PJM Market Revenues, as defined in subsection (d) below, together with detailed supporting documentation.

ii. If the Capacity Market Seller intends to submit a Sell Offer based on opportunity cost, the Capacity Market Seller shall also submit a calculation of Opportunity Cost, as defined in subsection (d), with detailed supporting documentation.

(c) Potential auction participants identified in subsection (b) above need not submit the data specified in that subsection for any Generation Capacity Resource:

i. that is in an Unconstrained LDA Group or, if this is the relevant market, the entire PJM Region, and is in a resource class identified in the table below as not likely to include the marginal price-setting resources in such auction; or

ii. for which the potential participant commits that any Sell Offer it submits as to such resource shall not include any price above: (1) the *applicable default* level identified below for the relevant resource class, less (2) the Projected PJM Market Revenues for such resource, as determined in accordance with this Tariff.

Nothing herein precludes the Market Monitoring Unit from requesting additional information from any potential auction participant as deemed necessary by the Market Monitoring Unit, including, without limitation, additional cost data on resources in a class that is not otherwise expected to include the marginal price setting resource *as outlined in section II.G of Attachment M-Appendix*. Any Sell Offer submitted in any auction that is inconsistent with any *agreement or* commitment made pursuant to this subsection shall be rejected, and the Capacity Market Seller shall be required to resubmit a Sell Offer that complies with such *agreement or* commitment *within one (1) business day of the Office of the Interconnection's rejection of such Sell Offer*. If the Capacity Market Seller does not timely resubmit its Sell Offer, *fails to request a unit-specific Avoidable Cost Rate by the specified deadline, or if the Office of the Interconnection determines that the information provided by the Capacity Market Seller in support of the requested unit-specific Avoidable Cost Rate or Sell Offer is incomplete, the Capacity Market Seller* shall be deemed to have submitted a Sell Offer that complies with the commitments made under this subsection, with a default *offer* for the *applicable* class of resource *or nearest comparable class of resource* determined under *this sub*section (c)(ii). The obligation imposed under section 6.6(a) shall not be satisfied unless and until the Capacity Market Seller submits (or is deemed to have submitted) a Sell Offer that conforms to its commitments made pursuant to this subsection or subject to the procedures set forth in section 6.4 and section II.H of Attachment M - Appendix.

The default retirement and mothball Avoidable Cost Rates ("ACR") referenced in *this sub*section (c)(ii) are as set forth in the tables below for any auction conducted ~~after September 1, 2009 for any Delivery Year~~ through the 2012/~~-~~2013 Delivery Year. To determine the default retirement and mothball ACR values for the 2013/~~-~~2014 ~~and~~ through 2016/2017 ~~subsequent~~ Delivery Years, the Office of the Interconnection shall multiply the ACR values for the immediately preceding Delivery Year by a factor equal to the most recent ten-calendar-year annual average rate of change in the applicable Handy-Whitman Index of Public Utility Construction Costs or a comparable index approved by the Commission ("Handy-Whitman Index"), as calculated by the Office of the Interconnection and posted to its ~~W~~web~~-~~site.~~; provided, however, that after the Handy-Whitman indexing methodology has been employed to determine the default ACR values for the RPM Auctions for three consecutive Delivery Years, the Office of the Interconnection shall: i) review the default ACR values to determine whether any changes other than those produced by such methodology are warranted for subsequent Delivery Years (including seeking the analysis and advice of the Market Monitoring Unit on such matter) and report its conclusions to the Members in writing no later than four months after the Base Residual Auction for the third such Delivery Year; and ii) file with FERC resulting changes, if any, to this section no later than seven months after such Base Residual Auction, to be effective for the Base Residual Auction for the following Delivery Year; provided further, that nothing herein precludes the Office of the Interconnection from filing with FERC changes to the default ACR values or any other provision of this section prior to the deadline stated in the previous clause, or at any other time.~~ Capacity Market Sellers shall use the one-year mothball Avoidable Cost Rate shown below, and as adjusted by the Handy-Whitman Index as described above, unless such Capacity Market Seller satisfies the criteria set forth in section 6.7(e), in which case the Capacity Market Seller may use the retirement Avoidable Cost Rate. PJM shall also publish on its Web site the number of Generation Capacity Resources and megawatts per LDA that use the retirement Avoidable Cost Rates.

Technology Classes Not Likely to be the Marginal Price Setting Resource						
Technology	~~**2010-2011 Mothball Avoidable Cost Rate ($/MW-Day)**~~	~~**2010-2011 Retirement Avoidable Cost Rate ($/MW-Day)**~~	~~**2011-2012 Mothball Avoidable Cost Rate ($/MW-Day)**~~	~~**2011-2012 Retirement Avoidable Cost Rate ($/MW-Day)**~~	**2012/-2013 Mothball Avoidable Cost Rate ($/MW-Day)**	**2012/-2013 Retirement Avoidable Cost Rate ($/MW-Day)**
Nuclear	~~N/a~~	~~N/a~~	~~N/a~~	~~N/a~~	N/a	N/a
Pumped Storage	~~$20.77~~	~~$29.17~~	~~$21.72~~	~~$30.50~~	$22.71	$31.89
Hydro	~~$71.01~~	~~$92.87~~	~~$74.24~~	~~$97.10~~	$77.62	$101.52
Sub-Critical Coal	~~$170.48~~	~~$188.98~~	~~$178.24~~	~~$197.58~~	$186.35	$206.57
Super Critical Coal	~~$176.13~~	~~$192.65~~	~~$184.15~~	~~$201.42~~	$192.53	$210.59
Waste Coal - Small	~~$224.83~~	~~$272.31~~	~~$235.06~~	~~$284.70~~	$245.75	$297.65
Waste Coal – Large	~~$83.15~~	~~$100.45~~	~~$86.94~~	~~$105.02~~	$90.89	$109.80
Wind	~~N/a~~	~~N/a~~	~~N/a~~	~~N/a~~	N/a	N/a

Maximum Avoidable Cost Rates by Technology Class						
Technology	~~**2010-2011 Mothball Avoidable Cost Rate ($/MW-Day)**~~	~~**2010-2011 Retirement Avoidable Cost Rate ($/MW-Day)**~~	~~**2011-2012 Mothball Avoidable Cost Rate ($/MW-Day)**~~	~~**2011-2012 Retirement Avoidable Cost Rate ($/MW-Day)**~~	**2012/-2013 Mothball Avoidable Cost Rate ($/MW-Day)**	**2012/-2013 Retirement Avoidable Cost Rate ($/MW-Day)**
CC- 2 on 1 Frame F	~~$30.92~~	~~$43.86~~	~~$32.33~~	~~$45.85~~	$33.80	$47.94
CC- 3 on 1 Frame E/Siemens	~~$34.33~~	~~$46.48~~	~~$35.89~~	~~$48.60~~	$37.52	$50.81
CC – 3 or More on 1 or More Frame F	~~$26.76~~	~~$37.16~~	~~$27.98~~	~~$38.85~~	$29.26	$40.62
CC-NUG Cogen. Frame B or E Technology	~~$114.93~~	~~$154.43~~	~~$120.16~~	~~$161.45~~	$125.62	$168.80
CT - 1st & 2nd Gen. Aero (P&W FT 4)	~~$24.57~~	~~$32.68~~	~~$25.69~~	~~$34.17~~	$26.86	$35.73
CT - 1st & Gen. Frame B	~~$24.28~~	~~$32.41~~	~~$25.38~~	~~$33.87~~	$26.54	$35.42
CT - 2nd Gen. Frame E	~~$23.08~~	~~$30.89~~	~~$24.13~~	~~$32.29~~	$25.23	$33.76
CT - 3rd Gen. Aero (GE LM 6000)	~~$55.87~~	~~$82.36~~	~~$58.42~~	~~$86.10~~	$61.07	$90.02
CT - 3rd Gen. Aero (P&W FT - 8 TwinPak)	~~$29.30~~	~~$43.20~~	~~$30.64~~	~~$45.17~~	$32.03	$47.23
CT - 3rd Gen. Frame F	~~$23.69~~	~~$34.12~~	~~$24.77~~	~~$35.68~~	$25.90	$37.30
Diesel	~~$26.29~~	~~$33.39~~	~~$27.49~~	~~$34.91~~	$28.74	$36.49
Oil and Gas Steam	~~$65.21~~	~~$79.39~~	~~$68.18~~	~~$83.01~~	$71.28	$86.78

Commencing with the Base Residual Auction for the 2017/2018 Delivery Year, the Office of the Interconnection shall determine the default retirement and mothball Avoidable Cost Rates referenced in section (c)(ii) above, and post them on its website, by no later than 150 days prior to the commencement of the offer period for each Base Residual Auction. To determine the default retirement and mothball ACR values for the 2017/2018 Delivery Year, the Office of the Interconnection shall multiply the default retirement and mothball ACR values for the 2011/2012 Delivery Year, set forth in the table below, by a factor equal to the annual average rate of change in the July Handy-Whitman Index values published in 2012. These values become the new adjusted base default retirement and mothball ACR values, which shall then be multiplied by a factor equal to the most recent ten-calendar-year annual average rate of change in the applicable Handy-Whitman Index, taken to the fifth power, as calculated by the Office of the Interconnection and posted to its website.

To determine the default retirement and mothball ACR values for the 2018/2019 and subsequent Delivery Years, the Office of the Interconnection shall multiply the adjusted base default retirement and mothball ACR values for the immediately preceding Delivery Year by a factor equal to the most recent annual average rate of change in the Handy-Whitman Index. These values become the new adjusted base default retirement and mothball ACR values, as calculated by the Office of the Interconnection and posted to its website. These resulting adjusted base values for the Delivery Year shall be multiplied by a factor equal to the most recent ten-calendar-year annual average rate of change in the applicable Handy-Whitman Index, taken to the fifth power, as calculated by the Office of the Interconnection and posted to its website; provided, however, that after the Handy-Whitman indexing methodology has been employed to determine the default retirement and mothball ACR values for the RPM Auctions for the 2017/2018 through 2020/2021 Delivery Years, the Office of the Interconnection shall: i) review the default retirement and mothball ACR values to determine whether any changes other than those produced by such methodology are warranted for subsequent Delivery Years (including seeking the analysis and advice of the Market Monitoring Unit on such matter) and report its conclusions to the Members in writing no later than September 1, 2017; and ii) file with FERC resulting changes, if any, to this section no later than December 1, 2017, to be effective for the Base Residual Auction for the 2021/2022 Delivery Year; provided further, that nothing herein precludes the Office of the Interconnection from filing with FERC changes to the default retirement and mothball ACR values or any other provision of this section prior to the deadline stated in the previous clause, or at any other time.

PJM shall also publish on its website the number of Generation Capacity Resources and megawatts per LDA that use the retirement Avoidable Cost Rates.

Maximum Avoidable Cost Rates by Technology Class		
Technology	**2011/2012 Mothball Avoidable Cost Rate ($/MW-Day)**	**2011/2012 Retirement Avoidable Cost Rate ($/MW-Day)**
Combustion Turbine - Industrial Frame	$24.13	$33.04
Coal Fired	$136.91	$157.83
Combined Cycle	$29.58	$40.69

Combustion Turbine - Aero Derivative	$26.13	$37.18
Diesel	$25.46	$32.33
Hydro	$68.78	$89.96
Oil and Gas Steam	$63.16	$76.90
Pumped Storage	$20.12	$28.26

After the Market Monitoring Unit conducts its annual review of the table of default *Avoidable* Cost Rates included in section 6.7(c) above in accordance with the procedure specified in section II.H of Attachment M – Appendix, it will provide updated values or notice of its determination that updated values are not needed to Office of the Interconnection. In the event that the Office of the Interconnection *determines that the values should be updated*, the Office of the Interconnection shall file its *proposed* values *with the Commission by no later than October 30th prior to the commencement of the offer period for the first RPM Auction for which it proposes to apply the updated values*.

(d) In order for costs to qualify for inclusion in the Market Seller Offer Cap, the Capacity Market Seller must provide to the Market Monitoring Unit *and the Office of the Interconnection* relevant *unit-specific* cost data concerning each data item specified as set forth in section 6 *by no later than one hundred twenty (120) days prior to the commencement of the offer period for the applicable RPM Auction*. If cost data is not available at the time of submission for the time periods specified in section 6.8, costs may be estimated for such period based on the most recent data available, with an explanation of and basis for the estimate used, *as may be further specified in the PJM Manuals*. Based on the data and calculations submitted by the Capacity Market Sellers for each existing generation resource and the formulas specified below, the Market Monitoring Unit shall calculate the Market Seller Offer Cap for each such resource, and notify the Capacity Market Seller *and the Office of the Interconnection in writing* of its determination *pursuant to section II.E of Attachment M-Appendix*.

i. Avoidable Cost Rate: The Avoidable Cost Rate for an existing generation resource shall be determined using the formula below and applied to the unit's Base Offer Segment.

ii. Opportunity Cost: Opportunity Cost shall be the documented price available to an existing generation resource in a market external to PJM. In the event that the total MW of existing generation resources submitting opportunity cost offers in any auction for a Delivery Year exceeds the firm export capability of the PJM system for such Delivery Year, or the capability of external markets to import capacity in such year, the Office of the Interconnection will accept such offers on a competitive basis. PJM will construct a supply curve of opportunity cost offers, ordered by opportunity cost, and accept such offers to export starting with the highest opportunity cost, until the maximum level of such exports is reached. The maximum level of such exports is the lesser of the Office of the Interconnection's ability to permit firm exports or the ability of the importing area(s) to accept firm imports or imports of capacity, taking account of relevant export limitations by location. If, as a result, an opportunity cost offer is not accepted from an existing generation resource, the Market Seller Offer Cap applicable to Sell Offers relying on such generation resource shall be the Avoidable Cost Rate less the Projected Market Revenues for such resource (as defined in Section 6.4). The default Avoidable Cost Rate shall be the one year mothball Avoidable Cost Rate set forth in the tables in section 6.7(c) above unless Capacity Market Seller satisfies the criteria delineated in section 6.7(e) below.

iii. *Projected PJM Market Revenues:* Projected PJM Market Revenues *are* defined by section 6.8(d), for any Generation Capacity Resource to which the Avoidable Cost Rate is applied.

(e) In order for the retirement Avoidable Cost Rate set forth in the table in section 6.7(c) to apply, *by no later than one hundred twenty (120) days prior to the commencement of the offer period for the applicable RPM Auction,* a Capacity Market Seller must submit to the Office of the Interconnection and the Market Monitoring Unit a written sworn, notarized statement of a corporate officer representing that the Capacity Market Seller will retire the Generation Capacity Resource if it does not receive during the relevant Delivery Year at least the applicable retirement Avoidable Cost Rate because it would be uneconomic to continue to operate the Generation Capacity Resource in the Delivery Year without the retirement Avoidable Cost Rate, and specifying the date the Generation Capacity Resource would otherwise be retired.