Monitoring Analytics, LLC
2621 Van Buren Avenue, Suite 160
Valley Forge Corporate Center
Eagleville, PA 19403
Phone: 610-271-8050
Fax: 610-271-8057

Monitoring Analytics

DATE:	**June 19, 2013**
TO:	**PJM Stakeholders**
FROM:	**Joseph E. Bowring**
	Jeffrey W. Mayes
SUBJECT:	**Unit Specific MOPR Review Modeling Assumptions**

The financial modeling assumptions for use in unit specific reviews under the Minimum Offer Price Rule (MOPR) should be the same modeling assumptions used to determine gross CONE for the RPM auction parameters and the calculation of revenues should be consistent, objective and verifiable.

1. Calculation of gross Cost of New Entry (CONE)

    a. Use of Nominal Levelization: Gross CONE is calculated as an annual nominal levelized value. A nominal levelized value is the same nominal value in each year. An alternative approach, real levelization, is based on an assumed escalation rate. The real levelized annual gross CONE values are lower than the nominal value in the first year and higher than the nominal value in the final year. The net present value of both revenue streams is the same.

    b. Asset Life: Gross CONE is calculated assuming a twenty-year asset life. Although asset life may refer to the expected service life of the unit, in the gross CONE calculation it accounts for the time frame within which a competitive investor expects to realize a return on and of investment.

    c. Residual Value: There is no residual value assumed in the gross CONE calculation. Assuming a residual value is equivalent to assuming a longer asset life.

    d. Exclusion of Sunk Costs: Gross CONE is calculated without sunk costs. All elements of project cost are relevant to the evaluation.

    e. Weighted Average Cost of Capital (WACC): The MOPR exception should be based on the actual cost of capital for the entity proposing to build the unit including the capital structure, the cost of debt and the cost of equity over the modeled life of the asset, excluding consideration of any subsidies provided to the project. The approach to WACC should be consistent, objective and verifiable. The WACC should be based on market data. The views of independent financial consultants with working knowledge of the cost of capital and of those entities actually providing capital to the industry should be considered in the development of the final rule.

    f. Components: Components of cost subject to review in a unit specific review should include, as applicable and available: a complete project description; environmental permits; vendor quotes for plant and equipment; evidence of actual costs of recent comparable projects; bases for electric and gas interconnection costs and any cost contingencies; bases and support for taxes, insurance, operations and maintenance ("O&M") contractor costs, and other fixed O&M and administrative or general costs; financing documents for construction period and permanent financing or evidence of recent debt costs of the seller for comparable investments; and the bases and support for the claimed capitalization ratio, rate of return, cost-recovery period, inflation rate, and other parameters used in financial modeling.

2. Calculation of Net Revenues

   a. Use of Forecast Net Revenues: The use of forecast net revenues is preferable to the use of historical net revenues. The approach to forecast net revenues should be consistent, objective and verifiable. The forecast net revenues should be based on forecast LMPs and fuel costs, including emissions costs, which are inputs to a model which simulates the operation of the specific unit, accounting for unit specific parameters including heat rate, start time, minimum run time and maximum number of starts. The forecasts of LMP and fuel costs should be provided by an external consultant or consultants who are in the business of making such forecasts and who can demonstrate that lending institutions rely on their forecasts. All of the unit specific operating assumptions should be clear and objectively based on equipment manufacturer information. Such revenue forecast should include the basis for the provision of ancillary services and the forecast of ancillary services revenues.

      The use of forward revenues may also be based on power supply contracts or tolling agreements.

   b. Use of First Year Net Revenues: In the net CONE calculation, net revenues are first year net revenues. Levelized net revenues are higher than first year net revenues and reduce the calculated net CONE. For clarification, this is not the issue of levelizing the gross CONE. In the calculation of the net CONE value on which the MOPR reference value is based, the gross CONE value is calculated on a nominal levelized basis. The first year net revenue is then subtracted from the first year gross CONE value to arrive at the net CONE value. In the net CONE calculation, the first year net revenue is currently calculated based on the average of the prior three years average net revenue.