



Immature Unit Educational Document

In PJM cost development guidelines, an immature unit is a unit with less than 7 years of history. There is currently no clear procedure for calculating maintenance history for an “immature unit”. New or Immature units may have no way of determining VOM when initially entering market; currently they would negotiate a value.

References to PJM Documents

[Manual 15: Cost Development Guidelines](#) details the standards for determining cost components for markets where products or services are provided to PJM at cost-based rates, as referenced in Schedule 1, Section 6 of the PJM Operating Agreement. Generation Owners use Manual 15 to develop their cost based offers. Manual 15 provides detail instructions on how to calculate or use FERC accounts to determine VOM costs for various types of units when they are providing energy or ancillary services. Manual 15 mentions immature units in the Fossil Steam Unit Cost Development and Combustion Turbine (CT) and Diesel Engine Costs guidelines:

Units with less than 7 years of history are considered immature. Such units can be assigned their calculated Maintenance Adder and/or Start Cost Maintenance Adder, or a forecast values, subject to evaluation pursuant to the Cost and Methodology Approval Process.¹

If any unit in a block is at least seven years old, then all like units on the block may be considered mature.²

Immature units are also mentioned in other PJM manuals but not in reference to the cost offer. An immature unit is defined as a unit having between zero and five full calendar years of operating experience for reliability calculations.³ Also the equivalent demand forced outage rate of an immature unit is the weighted combination of its historical and class-average rates.

The Open Access Transmission Tariff also mentions immature units to address Generator Forced Outage rates. Generator Forces outage rates for existing mature generating units based on data submitted by generation owners, and for immature and proposed units based upon forecast rates related to unit types, capabilities and other pertinent characteristics.⁴

¹ Page 30 Manual 15: Cost Development Guidelines Section 4: Fossil Steam Unit Cost Development Revision 17, Effective Date: 06/01/2011 <http://www.pjm.com/~media/documents/manuals/m15.ashx>

² Page 39 & 46 Manual 15: Cost Development Guidelines Section 6: Combustion Turbine (CT) and Diesel Engine Costs

³ Manual 22: Generator Resource Performance Indices Section 2: Definitions

⁴ 845 OATT