Manual 21

“Rules and Procedures for Determination of Generating Capability”
Redline Changes

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• Revisions proposed as result of periodic review:
  – Revisions needed to clean-up outdated language and ensure language follows current processes
  – Minor revisions needed to correct grammar, spelling, punctuation, consistency of terms, and document references
• Revisions needed to clarify the terms and rules for testing
• *Italicized text denotes wording changes/additions to manual that delineate rules more explicitly*
• **Bolded text denotes additions or changes to the manual**
• **Installed Capacity (ICAP)**
  
  – Installed Capacity (ICAP) is equivalent to:
    
    • *the sum of the summer CAPMODs to date in the RPM system*
    • *the claimed installed capacity in PJM eGADS*
    • *Summer Net Capability as defined in Manual 21, Section 2.2*
  
  – Verification Tests are required
    
    • Summer (June, July, August)
    • Winter (December, January, February)
    • For any CAPMOD increase
      
      – Can use a recent verification test (*no greater than 12 months old*)
      – *If no recent test proves the increased capability, a new test is required within 30 days of the CAPMOD effective date*
  
  – **Acceptance Test** (formerly where a summer/winter verification test was sufficient)
    
    • *Must be conducted prior to the unit’s initial CAPMOD effective date in the PJM Capacity Markets*
• Capacity Interconnection Right Limitations
  – Installed Capacity (ICAP) is limited by Capacity Interconnection Rights (CIRs)
  – If CIRs were issued on a revenue meter basis
    • *Testing must occur simultaneously on all units behind the revenue meter*
  – CIRs will be retained if:
    • *the largest Corrected Net Test Capacity of the prior three years’ summer verification tests meets or exceeds the CIR level of the generating unit*
    • Otherwise, the CIRs will be lowered by the shortfall
  – Any increases to CIRs can only be attained by initiating an Interconnection Request and executing an ISA (or WMPA)
• Late Data Submittal Charges
  – **New deadline for summer and winter verification tests are:**
    • **Summer** – September 20; formerly September 30
    • **Winter** – March 20; formerly March 31
      – Intended to coincide with PJM eGADS data reporting deadlines for those months
  
• Impacts of test results
  – **Verification tests must be conducted within the respective test period**
    • **Summer** – June 1 through August 31
    • **Winter** – December 1 through February 28 (29)
  – **Out of period tests must be conducted after the test period but within the respective season**
    • **Summer** - September 1 through November 30
    • **Winter** – March 1 through May 31
  – **Failure to submit a test**
    • Failure to report an outage or derating for a failed test will result in a Generation Resource Rating Test Failure Charge per Manual 18
• Net Capability
  – If station, auxiliary or process load is apportioned across multiple units at a plant:
    • During the test this load must be apportioned such as it is under summer (winter) conditions
    • This is to prevent load shedding on a unit to ensure a successful test
  – If Net Capability is limited by water or fuel availability:
    • Net Capability should be based on head, streamflow and/or fuel availability (RAA, Schedule 9.C)
  – Added section for storage (non-hydro)
    • One hour verification test
      – Keep in mind, during performance assessment hours the Maximum Run Time parameter will be implemented for a minimum of 24 hours for all technology classifications (although exceptions must be requested [via the IMM] prior to the start of each delivery year)
  – Split the hydro section into two sections
    • Pumped storage
    • Run of River
• Summer conditions:
  – shall reflect the 50% probability of occurrence (approximated by the mean) of ambient site conditions coincident with the last 15 years’ summer PJM peaks.
  – Site conditions shall be based on plant records or local weather bureau records coincident with the dates and times of the last 15 years’ summer PJM peaks, updated no less than every five years.

• If a generating unit’s performance is affected by summer conditions, generating unit tests should be corrected for summer conditions where applicable
  – These parameters include, but are not limited to:
    • Ambient temperature
    • Ambient relative humidity
    • Temperature of condenser intake water
    • Temperature of once-through or open cooling systems
    • Performance of cooling towers
    • Combustion air inlet cooling

• If a unit is limited by head, streamflow or fuel availability, Net Capability should be adjusted for head, streamflow or fuel availability expected under summer conditions (RAA, Schedule 9.C)
• Calculating Capacity Values for Wind and Solar Capacity Resources
  – Removed the word “Intermittent” and replaced it with “Wind and Solar”
    • Manual 18 delineates intermittent units as:
      – Wind
      – Solar
      – Run of river hydro (no pooling, storage or dispatch capability)
      – Storage
      – Landfill gas units
  – Removed the explicit wind and solar class averages from the manual
    • **Posted on the PJM Resource Adequacy Reports webpage**
      – Calculation procedures, if any, will be delineated in the posted documents
Manual 21 Implementation Timeline

• Planning Committee first read (redline) – 10/6/2016
• Markets & Reliability Committee first read (redline) – 10/27/2016
• Planning Committee endorsement – 11/3/2016
• Markets & Reliability Committee endorsement – 11/17/2016
• Implementation Date – 1/1/2017