Market Rules for Wind Power

Straw Proposal
For discussion
Market Structures Working Group
September 12, 2005

Issues

- Effective Date
- Capacity Market
- Day-Ahead Market
- Real-Time Market
- Wind power forecast
- Instrumentation, maintenance & reporting

Effective Date

- The NYISO proposes that new rules for intermittent resources replace the existing rules in Articles 4 and 5 and Rate Schedule 3-A of the services tariff.
- The NYISO is not proposing that existing facilities be grandfathered under existing intermittent rules. The new rules would apply to all Intermittents
- The NYISO will be proposing a stakeholder process with a goal of FERC acceptance as early in 2006 as is possible

Capacity Market

- Wind resources will be able to offer unforced capacity in the capacity market.
- NYISO reviewing an alternate method of determining unforced capacity based on peak hours availability.
  - Seasonally determined based on seasonal peaks
  - Similar treatment under consideration for Special Case Resources and hydro resources.
- Unlike other generating resources, wind resources with a capacity obligation will not be required to participate in the Day-Ahead Market.
  - This is the current rule

Day-Ahead Market

- Wind resources (including those with a capacity obligation) may, but need not, offer energy in the Day-Ahead ("DA") market.
- A forecast of the Energy expected to be generated by wind resources not bidding DA will be provided by a professional forecaster for use in the DA market software (SCUC).
  - Expected forecast error may also have to be considered
    - Day-Ahead (43-hour) MAE ≈ 14%
  - Wind resources must report DA turbine outages

Day-Ahead Market Settlements

- Wind Farms bidding into the Day-Ahead Market will face same market rules as any non-wind generator
  - Will be paid for DA scheduled Energy
  - Will follow normal balancing rules – deviations from the DA schedule will be settled at RT prices.
  - Undergeneration charges will apply.

Real-Time Operation

- Normally wind farms will produce what they can.
- In an over-gen situation, presenting reliability problems for the ISO or TO Operator, the ISO may require that a wind farm back down or cease energy production – the wind farm must comply.
  - No difference from other Generators

Real-Time Market Settlements

- Wind farms bidding only into the Real-Time ("RT") Market
  - Will need to schedule expected real-time output but will be paid for all energy produced
  - Will not face under generation charges
    - Comparable to treatment of PURPA units, GTs at 70% of their output, 499 MWs of Con Ed steam units and start-up and shut-down periods for steam units
  - Will not be economically dispatched
    - Will be required to be price takers
  - In 2006, NYISO will produce RT basepoints equal to last actual output (persistence)
  - When the wind forecast project is complete, NYISO will use a combination of persistence and forecast wind production to develop actual and advisory basepoints

Wind Power Forecast

- The ISO will obtain a forecast of the expected energy production rate of each wind farm.
  - Day-Ahead initially
  - Staged implementation – RT in 2007 or later.
  - Persistence assumed in RT until RT forecast is operational
- The ISO will use an external expert to produce the forecasts.
- Costs (some or all) of the professional forecaster will be borne by wind farms
  - Percentage to be charged still under review

Instrumentation, Maintenance, and Reporting

- Wind farms will be required to install and maintain meteorological instrumentation to enable forecasting and tracking.
  - Communication pathway will be comparable to those used by other generators
  - Mat become an interconnection requirement
- Wind farms will be required to report the capacity of wind turbines that are out of service or otherwise derated in the same manner as other generators.
  - This will be required Day-Ahead even if unit does not bid Day-Ahead.