

# Wind Power Rules

MSWG

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# Issues

- Applicability & Effective Date
- Capacity
- Day-Ahead
- Real-Time

# Applicability & 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 in 2006

# Capacity

- 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

- 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).
  - Wind resources must report DA turbine outages
- Wind Farms bidding into the Day-Ahead Market will face same market rules as any other generator:
  - Will be paid for DA scheduled Energy
  - Will follow normal RT balancing rules. Deviations from the DA schedule will be settled at RT prices.

# Real-Time

- Will be paid for all energy produced
  - 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 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 be considered price takers
- In 2006, NYISO will use persistence as a forecast of output
- 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

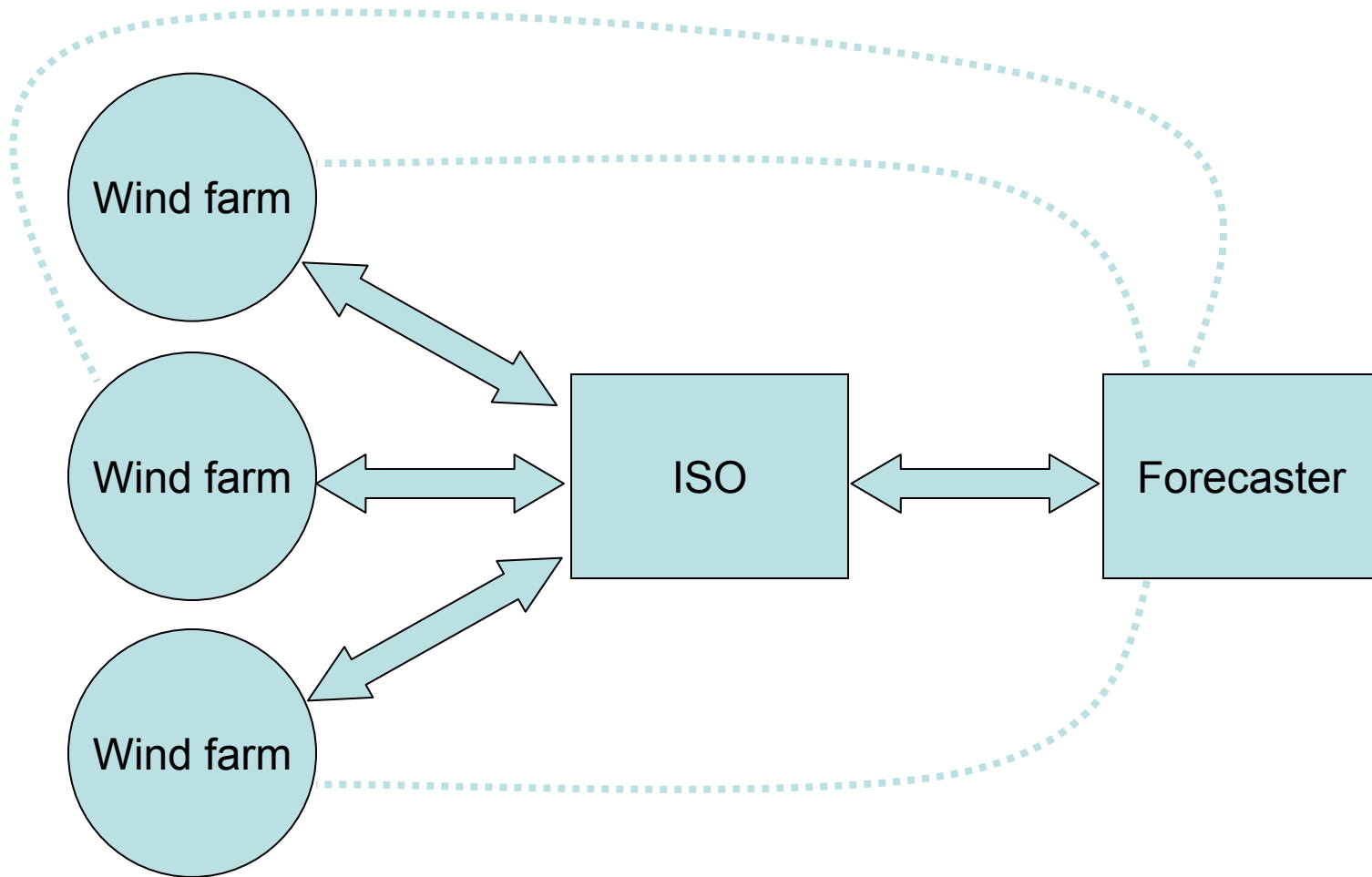
- The ISO will obtain a forecast of the expected energy production rate of each wind farm.
  - Day-Ahead initially
  - Staged implementation – RT in 2007 or later.
  - Persistence assumed in RT until RT forecast is operational
- The ISO will use an external expert to produce the forecasts.
- Costs (some 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
  - May 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.



# Probable Architecture



**The Southwest Power Pool's (SPP) Markets and Operations Policy Committee (MOPC) has approved an amendment exempting wind and other weather-dependent resources from schedule deviation penalties.**

**The original proposal submitted by the SPP Market Working Group would have imposed penalties to wind projects whose generation varies by more than 10% from the forecast. The forecast could either have been provided manually up to 20 minutes ahead of time, or automatically by polling of actual wind project generation every five minutes, with that instantaneous output reading applying to the period beginning ten minutes later and lasting for the next five minutes.**

**Xcel Energy proposed an amendment to eliminate the deviation penalties, and made an excellent presentation discussing why such penalties are inappropriate for weather-dependent resources, according to Rick Walker of Sustainable Energy Strategies. He said the Empire District Electric Co. and Oklahoma Municipal Power Authority both made very favorable comments in support of Xcel Energy's amendment and wind energy in general. The committee voted 18-7 for Xcel Energy's amendment, with one member abstaining.**

**Walker said, "This vote sends a very positive message to the wind industry that it has allies in SPP that want to see continued development of wind energy in the region due to its low cost and environmental benefits. It shows that they are beginning to understand that there are differences between wind generation and traditional fossil-fueled sources of generation that require some out-of-the-box thinking to develop rules or protocols that neither favor nor impede development of any type of generation resource."**

**Schedule deviation penalties were originally put into place to provide an incentive for dispatchable generators to schedule generation accurately. However, with weather-dependent resources such as wind and solar power, the incentive can't work as intended and merely imposes additional costs on the generator.**

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