

**Transmission Owner Position on  
Voltage Support Payments**

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# ***ICAP Demand Curve***

The ICAP demand curve needs to be adjusted at earliest possible time.<sup>1</sup>

- **Costs for capital equipment used to provide voltage support (VS) are included in estimate of net cost of entry used to derive ICAP demand curve.**
- **Therefore, projected VS revenues should be included as an offset in the estimate of the net cost of entry.**
- **Failure to do so leads to double-payment:**
  - *Once through the ICAP market.*
  - *Once through the VS market.*

<sup>1</sup> NYPA has not taken a position on this issue.

# ***Testing Requirements***

Generators wishing to qualify for VS payments must agree to follow ISO instructions at all times to provide or absorb reactive power (within their demonstrated capability to do so) and must demonstrate their lagging and leading capability through tests:

- **High-Load Lagging Capability Test** measures lagging capability at real power output levels that are consistent with high-load conditions.
  - *These are the times when lagging capability is most likely to be needed.*
- **Maximum Lagging Capability Test** measures maximum lagging capability.<sup>2</sup>
  - *This shows how much additional lagging capability can be made available if real power output is reduced.*
- **Low-Load Leading Capability Test** measures leading capability at real output levels that are consistent with light-load conditions.
  - *These are the times when leading capability is most likely to be needed.*

These tests would verify lagging/leading capability at the transmission or distribution system side of the transformer at the interconnection point.

<sup>2</sup> Niagara Mohawk has not taken a position on the need for this test.

# ***Testing and Other Requirements***

Generators would be required to demonstrate their full capabilities during these tests, which would be subject to ISO review.

- **Generators also must possess an AVR, keep it in service and notify the NYISO when it is not in service.**

Facilities that are not generators (and are not in the rate base) also would be permitted to provide VS.

- **Comparable testing requirements would be established so that their ability to provide lagging and leading VS would be determined under system conditions similar to those used to test generators.**
  - *All other requirements would also parallel requirements applied to generators.*
- **As long as testing procedures can be agreed upon relatively soon, tariff changes to authorize payment can follow.**
- **Need to consider whether some adjustment might be necessary if the facility receives TCCs for increasing transfer capability.**

# ***Payment to VS Providers***

Initially, VS providers would be paid:

- **One rate for lagging capability demonstrated using the High-Load Lagging Capability Test.**
- **Another (lower) rate for lagging capability demonstrated using the Maximum Lagging Capability Test, above that demonstrated through the High-Load Lagging Capability Test.**

These rates would be calculated with the objective of revenue-neutrality.

- **Under the current \$3919/MVAr rate, the ISO would pay \$72.5 million to VS suppliers if all of the estimated 18,500 MVAr of gross lagging capability the ISO estimates is eligible elected to participate.**
- **The rates to be used would be calculated so as to yield the same amount of revenue to current generators if all participated, given estimates of the amount of lagging capability that can be provided under the two tests.**
- **A ratio of 3:1 would initially be used to determine the two initial rates.**

## ***Payment to VS Providers (cont.)***

### Other payment issues:

- **Providers that are asked by the ISO to reduce real power output receive lost opportunity payments.**
- **Providers that do not perform as tested or unnecessarily place their AVR off service would be subject to loss of payment for VS.**

# ***Recalculation of Rates***

Some conditions under which these rates would be recalculated are as follows:

- **During the next year, the ISO would study the relative value of lagging capability demonstrated using the High-Load Lagging Capability Test to additional lagging capability demonstrated using the Maximum Lagging Capability Test.**
  - *If the results of that study indicate the relative value is substantially different than 3:1, rates would be recalibrated to reflect this while preserving revenue neutrality.*
- **If the ISO presents evidence of a reliability-based need for development of leading capability and an assessment of the relative value of leading to lagging capability, payment for leading capability may result.**
  - *Rates would then be adjusted to reflect the relative value of lagging to leading capability while remaining revenue neutral overall.*

# ***AC Dispatch***

Finally, the ISO would begin to investigate performing an AC dispatch in SCUC, RTC and RTD.

- **Because the program explicitly recognizes voltage constraints, it would solve for those constraints more efficiently.**
- **VS providers would not bid to provide or absorb reactive power, since they are receiving voltage capability-based compensation.**
  - *The FERC white paper deems bid-based reactive power markets to be 10-12 years into the future, once many issues can be adequately addressed, including market power issues.*

As part of its investigation, the ISO would assess the cost and time required to implement this.

- **Therefore, other portions of this proposal would be implemented independent of the schedule for this portion.**