

NYISO VSS Payment Structure

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BIC-OC

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Voltage Support Service Overview

- ◆ VSS is a voluntary cost based service
- ◆ VSS suppliers maintain a fully functioning AVR and respond to requests from the NYISO for reactive power support (VSS Events)
- ◆ Generators are compensated \$3,919 per MVar annually as demonstrated by their Lagging reactive power test
 - *Leading tests are required once every three calendar years*

Current VSS Program

- ◆ Compensation is based on lagging tests only
 - *Requests for leading support becoming more frequent than in past years*
 - *Successful Leading tests are required to receive compensation*
- ◆ Generators with an AVR that is nonfunctional for more than 30 days and do not take corrective action within 30 days of the AVR being out of service are disqualified as VSS suppliers

History of Proposed VSS Payment Change

- ◆ Initial proposal made at September 27th 2013 MIWG
 - *Compensation based on Leading and Lagging capability at a rate of \$2,592/MVAr*
 - *AVR outage no longer results in automatic disqualification*
- ◆ Additional VSS Event data presented at the November 1st 2013 MIWG
 - *Market Participants requested the NYISO consider adding an inflationary index to the VSS payment rate and to make Leading tests required on an annual basis*
- ◆ At the December 20th MIWG the NYISO proposed using the CPI as an inflation index for the VSS compensation rate
 - *The NYISO was asked to come back with additional information on how the CPI would be applied*

History of Proposed VSS Payment Change (cont.)

- ◆ The NYISO returned to the April MIWG with clarification on the proposed changes
 - *The annual average CPI would be applied annually to the VSS compensation rate*
 - *Compensation would be based on the gross lag and lead capability*
- ◆ At the August 26th MIWG the NYISO proposed increasing the Leading test period to include January-April, and extending the submission deadline for Operational Data to November 15th

Proposed VSS Compensation Rate

- ◆ The NYISO reviewed studies concerning Fixed VAR compensation and Variable VAR compensation
- ◆ The Fixed VAR compensation study related only to Steam Turbines
 - *Applying this study methodology to other types of generators would not be feasible for the NYISO*
- ◆ The Variable VAR compensation was deemed to be infeasible due to its complexity and the resources needed to implement such an approach

Proposed VSS Program Changes

- ◆ VSS suppliers are currently compensated \$3,919/MVAr as demonstrated by their Lagging test
- ◆ New VSS program would compensation based on Leading and Lagging capabilities at a rate of \$2,592/MVAr
 - *Total compensation for the VSS program to remain approximately the same for the first year*
 - *Generators would submit gross MVAr data, and if available net MVAr data*
 - *Compensation would be based on gross Lead and Lag data, if gross data was not available then compensation would be based on net Lead and Lag data*

Proposed VSS Program Changes (contd.)

- ◆ VSS Compensation Rate would be inflated annually by the Consumer Price Index (CPI)
 - *CPI is the same inflation index used for the ICAP Demand Curve*
 - *The actual annual CPI average would be used, rather than the projected CPI*

Proposed VSS Compensation Calculation

$(\text{Lagging MVAR} + |\text{Leading MVAR}|) * (\$2,592 * \text{CPI}) = \text{Annual VSS Payment}$

$(\text{Annual VSS Payment} / 12) * \text{AVR Status} = \text{Monthly Payment}$

Lagging MVAR = Approved Lagging test value

Leading MVAR = Approved Leading test value

AVR Status = 1 for fully functional AVR or 0.5 for non-functional AVR

Proposed VSS Program Changes (contd.)

- ◆ Lagging and Leading reactive capability tests will be required annually
 - *Currently Lagging tests are required annually and Leading tests are required at least once every three years*
 - *Leading test period expanded to January 1st – October 31st*
 - *Operational data may be submitted to the NYISO any time before November 15th*

Annual Leading Testing

- ◆ Prior to the 2010 change to Leading test frequency the variance of year to year tests were three times greater than Lagging tests
- ◆ Since 2010 Leading test to test variance has increased to 5 times greater than Lagging tests
- ◆ 76% of Generators tested their Leading reactive power capacity in 2013
 - *Only 21% were required to test their Leading capability in 2013*

Proposed VSS Program Changes (contd.)

- ◆ Currently a VSS supplier would be disqualified if they failed to commence timely repairs or notify the NYISO of an AVR outage
- ◆ Fully functional AVR required for full payment
 - *Failure to commence timely repairs within 30 days of an AVR outage will result in that VSS supplier receiving one half of its monthly payment*
 - The VSS supplier would receive full monthly payment when its AVR returned to full functionality
 - *Failure to notify the NYISO of an AVR outage will result in disqualification as a VSS supplier*
 - *A fully functional AVR is still required for VSS testing*

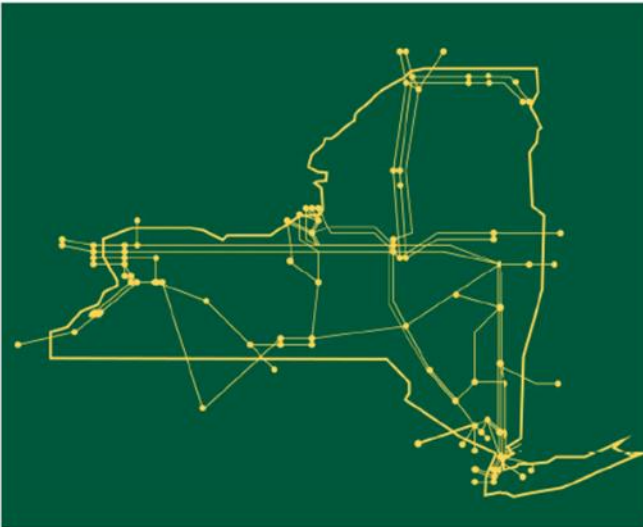
Projected New VSS Cost

- ◆ Expected 5%-15% increase in demonstrated Leading reactive power capability
- ◆ Estimated \$0.01/MWh increase in RS-2 charge in first year of the new VSS rate from the previous year
 - *RS-2 charge has ranged between \$0.34-\$0.44/MWh since 1999*
 - *Projected RS-2 charge expected to be below \$0.44/MWh until at least 2020*

Schedule

- ◆ **11/12 BIC discussion and vote**
- ◆ **11/13 OC discussion and vote**
- ◆ **11/20 MC discussion and vote**

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