NYISO VSS Payment Structure

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MIWG-SOAS
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KCC

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Voltage Support Service Overview

- Generators conduct testing of both their lagging and leading reactive power capability (MVAr) during the Summer Capability Period (May 1st – October 31st)
- Generators are compensated $3,919 per MVAr annually as demonstrated by their lagging reactive power test
- Generators must maintain a fully functioning AVR
- Generators must respond to requests from the NYISO for reactive power support (VSS Events)

Current VSS Program

- Program compensation has been unchanged since its beginning in 2002
- Compensation is based on lagging tests only
  - *Requests for leading support becoming more frequent than in past years*
- 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
- 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*
- The NYISO proposed using the CPI as the inflationary index on December 20th 2013
- The NYISO returned to the April MIWG with clarification on the proposed changes

Proposed VSS Program Changes

- VSS suppliers are currently compensated $3,919/MVAr as demonstrated by their Lagging test
  - *Total compensation for the VSS program to remain approximately the same*
  - *New VSS program would compensate based on Leading and Lagging capabilities at a rate of $2,592/MVAR*
    - 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.)

- 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*

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*

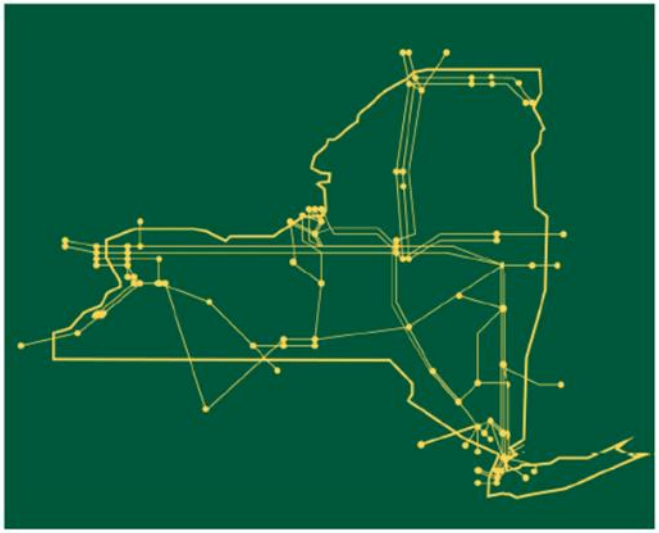
Proposed VSS Program Changes (contd.)

- 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*

Schedule

- 8/26 MIWG discussion
- 9/6 SOAS discussion
- 9/10 BIC discussion and vote
- 9/11 OC discussion and vote

The New York Independent System Operator (NYISO) is a not-for-profit corporation responsible for operating the state's bulk electricity grid, administering New York's competitive wholesale electricity markets, conducting comprehensive long-term planning for the state's electric power system, and advancing the technological infrastructure of the electric system serving the Empire State.



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Sample VSS Compensation

UNIT_NAME	Lagging MVAR	Leading MVAR	Annual Compensation
Generator 1	250	-250	$1,296,065
Generator 2	160	-170	$855,403
Generator 3	300	-200	$1,296,065
Generator 4	300	-100	$1,036,852
Generator 5	10	-5	$38,882
Generator 6	50	-20	$181,449
Generator 7	100	-200	$777,639
Generator 8	400	-20	$1,088,695
Generator 9	75	-15	$233,292
Generator 10	2	-1	$7,776

Sample AVR Outage

- **Sample Monthly Generator Payments for Generator 1**

Month	Monthly Compensation	AVR Status
January	$108,005.42	OK
February	$108,005.42	OK
March	$108,005.42	OK
April	$108,005.42	OK
May	$108,005.42	OK
June	$54,002.71	Out of Service
July	$54,002.71	Out of Service
August	$54,002.71	Out of Service
September	$54,002.71	Out of Service
October	$108,005.42	OK
November	$108,005.42	OK
December	$108,005.42	OK

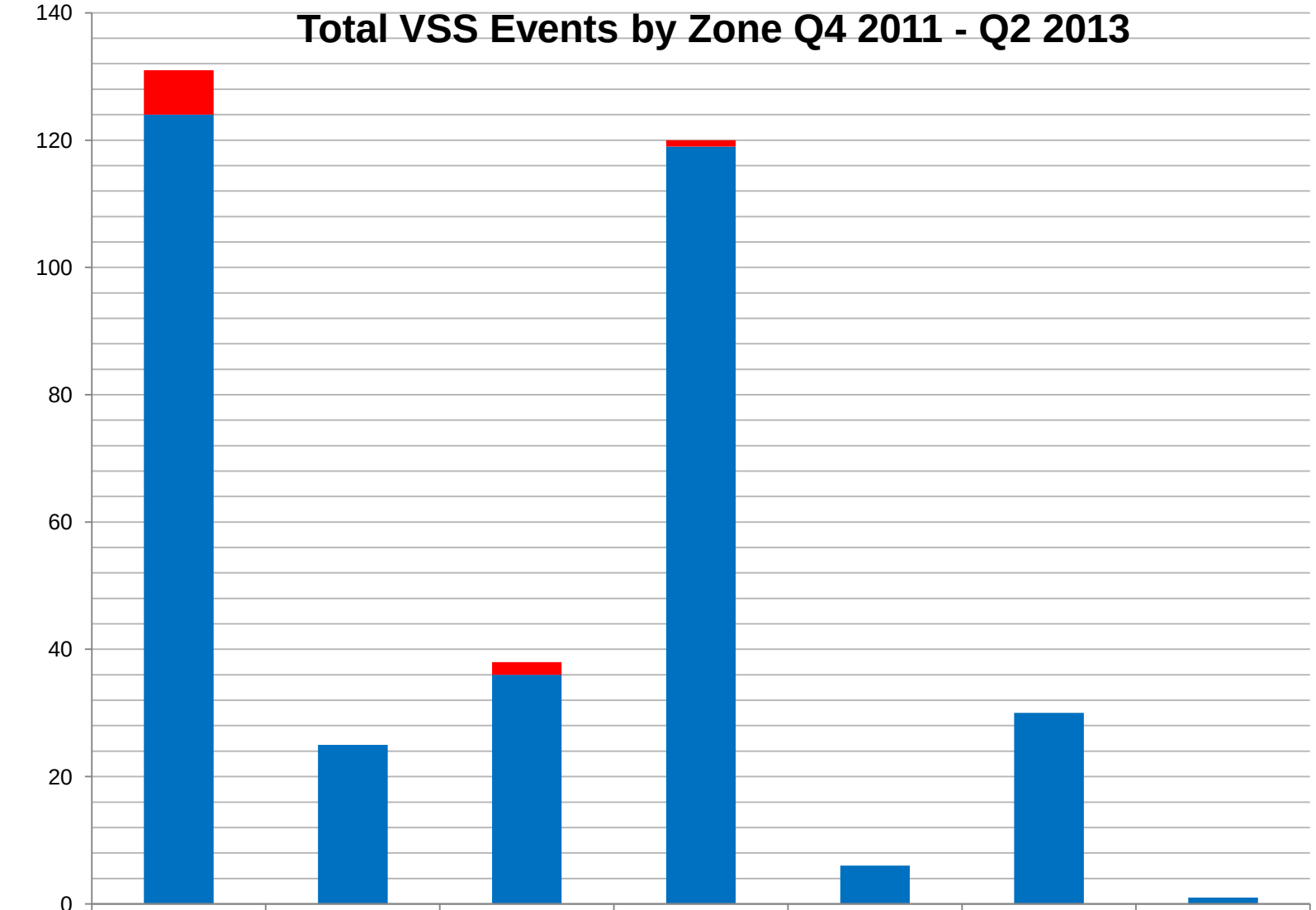
VSS Event Lagging and Leading Dates and Times

Lagging Event Dates	Lagging Event Time
Friday, January 13, 2012	17:02
Wednesday, July 11, 2012	14:34
Thursday, July 12, 2012	11:53
Thursday, July 12, 2012	11:56
Thursday, July 12, 2012	15:52
Tuesday, August 28, 2012	12:57
Friday, February 01, 2013	16:58
Saturday, February 02, 2013	9:53
Monday, June 24, 2013	*11:57*

- **All Leading VSS Events occurred between 21:00-8:00**

Lagging Total	Leading Total
10	341
Percentage Leading	97%

Total VSS Events by Zone Q4 2011 - Q2 2013



	A	B	C	F	G	H	J
Lagging	7	0	2	1	0	0	0
Leading	124	25	36	119	6	30	1