

# Limited Energy Storage Resource (LESR) Market Integration Update

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*November 3, 2008*

## Background – Purpose of Initiative

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- ◆ On July 1, 2008 NYISO provided preliminary information on Limited Energy Storage Resources (LESR)
- ◆ The objective is to incorporate LESR technology as a resource capable of providing Regulation Service in the NYISO Markets on a comparable basis with other regulation resources while meeting all existing reliability criteria
- ◆ November 3, 2008 – Status Update

## **Review of Next Steps – 7/1/2008 Meeting**

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- ◆ Present market rule proposal at 7/1 MIWG and 7/29 SOAS - **Complete**
- ◆ Review, clarify and/or propose updates to NPCC - **Complete**
- ◆ Propose project to complete software development and implementation – **Project appears on the 2009 implementation schedule**
  - Develop tariff revisions and proceed through committees

## Reliability Council Update

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- ◆ NPCC is in the review/approval process of changing the A-6 criteria which would clarify that sustainability is applicable only to 10 and 30 minute reserves. Each Control Area is required to meet CPS criteria.
  
- ◆ Change was jointly developed by NYISO and ISONE
  - Received widespread support at TFCO
  - Expect final approval from NPCC Board in early 2009

# LESR: Market Integration Update

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- ◆ Creation of a Regulation Only Supplier that:
  - *Will provide only Regulation Service*
  - *Converts energy but does not offer it, energy output is only incidental to the provision of regulation*
- ◆ Scheduling of regulation service will be comparable to other suppliers of regulation service
- ◆ AGC/RTD functionality will be modified:
  - To recognize the LESR capabilities and limitations
  - Manage LESR energy levels
- ◆ Settlements will generally be consistent with those of other Suppliers. LESR specific modifications to address LESR limitations may be necessary.

## **LESR: Market Integration Update - RTD Scheduling**

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- ◆ LESR energy level will be managed by RTD to maintain regulation capability to the extent possible by charging/discharging the LESR as necessary.
  - For all intervals with a valid real-time regulation bid, RTD will manage the LESR energy level.
  - During these intervals the Regulation Capacity offer will be reduced in proportion to the energy level of the LESR.
- ◆ Energy management will NOT occur when the ISO is experiencing shortage conditions as defined by the regulation demand curve.
  - LESR will be base pointed at zero and will receive a zero regulation schedule.
- ◆ LESRs will be scheduled at zero energy and regulation during any RTD-CAM actions when regulation is also suspended.

## **LESR: Market Integration Update - AGC Scheduling**

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- ◆ AGC will be modified to allocate control error to maximize the capabilities of all regulation resources
- ◆ Unique characteristics of LESRs will be addressed by AGC
  - AGC will not allocate control error to an LESR that cannot respond due to its current energy status
  - AGC will utilize LESRs, provided that the ACE allocation improves the energy position of the LESR
  - In situations where the LESR energy is limited such that the LESR is unable to respond in one specific direction necessary i.e. charge or discharge, AGC will utilize the LESR last to respond in opposition to that direction
  - Otherwise current AGC allocation is used to distribute ACE

# LESR: Market Integration Update - Settlement

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- ◆ LESRs:
  - ◆ May offer into both DA and RT markets
  - ◆ Will be paid for Regulation Capacity scheduled by ISO in the DAM and RT with payments scaled by its Performance Index (PI)
  - ◆ Will be responsible for buying out against DA regulation positions when RTD is scheduling them for energy discharge / recharge.
    - ◆ DAMAP is **not** provided during these periods.
  - ◆ Will pay the hourly time weighted LBMP for their net energy which includes AGC ACE allocations
  - ◆ Provide no bids for energy scheduled either to recharge or discharge, and as any exchange of energy is incidental to the provision of Regulation Service, RRA payments and charges (Rate Schedule 3) will not apply
- ◆ Settlements during shortage conditions as defined by the regulation demand curve
  - Will be responsible for buying out against DA regulation positions
  - Replacement regulation costs are provided a DAMAP. The DAMAP will be scaled by any uninstructed energy deviations using the PI.
- ◆ LESRs will be charged the fixed portion of RS 1 as are Generators.
  - Charge will be based on all injected energy from the LESR.

# Next Steps

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- ◆ Provide MIWG with updates on requirements that impact MP's.
  - E.g. – credit or metering requirement issues
- ◆ Present Tariff recommendations for MIWG review
- ◆ Continue development of software requirements for internal NYISO review and approval
- ◆ Develop project plan

The New York Independent System Operator (NYISO) is a not-for-profit corporation that began operations in 1999. The NYISO operates New York's bulk electricity grid, administers the state's wholesale electricity markets, and provides comprehensive reliability planning for the state's bulk electricity system.

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