Background on Economic Dispatch in the Northeast

- Security Constrained Economic Dispatch predates the ISO’s in the Northeast
  - New York Power Pool administered centralized economic dispatch going back to the 1960’s.
  - NEPOOL operated a least cost economic dispatch without regard to ownership that included features that do not exist in the ISO markets today
    - Optimization of maintenance outages
    - Pumped Storage Optimization
    - Economic transfers over the LIPA/NU 1385 cable

- ISO Markets introduced changes to Security Constrained Economic Dispatch
  - Recognize increased independent ownership of generation
  - Optimization of energy, regulation and reserves based on bid prices (NY)
  - Introduction of Locational Marginal Pricing

- Changes under ISOs have also presented some hurdles
  - Increased complexity of software /Increased cost of development
  - Difficult to modify for market requirements
  - Pricing errors/anomalies from software upgrades
Areas for Future Progress

- **Generator Unit Representation**
  - Improved Combined Cycle Modeling
  - Gas Turbine Dispatch
    - Reliability in NY requires that GT capability be available in summer peak periods
    - SMD2 implementation continued over-reliance on GT’s through reserve pick-ups
  - Reduction in Impact of Unit Base Point Dragging
    - Generators off basepoints have led pricing and dispatch issues (contributes to excessive use of GT’s) and require continued consideration of additional incentives/enforcement

- **Optimization of PARs**
  - Simulating PARs correctly will improve efficiency of dispatch

- **Improved Transactions/Dispatch Between the Markets**
  - Improved flexibility to accommodate scheduling over new inter-ties
  - When interface capability is limited over multiple scheduling nodes, capability should be allocated on the basis of economic value of flows
  - Scheduling lead times should be reduced
Controllable Line Scheduling – Example of 1385

- Key Shortcoming is inability to allow economic scheduling over additional inter-ties
- Cross Sound Cable multi-party scheduling implemented in June 2005
- Scheduling over the 1385 Cable between Long Island and Southwest Connecticut is still pending:
  - Under NYPP/NEPOOL operation economic energy was regularly scheduled over 1385 in both directions
  - After introduction of the ISOs schedule was set at zero for 1385
  - Introduction of NYISO Controllable Line Scheduling Software in June 2005 should have facilitated timely economic scheduling over 1385 and new external transmission facilities
  - ISOs continue to delay implementation impeding reliability and market efficiencies.
- Inability to integrate new external facilities into the market on a timely basis is one of the remaining seams issues that suggest further efforts at integration or consolidation of dispatch systems may be warranted.