Decision on Multi-Stage Generation Modeling Enhancements
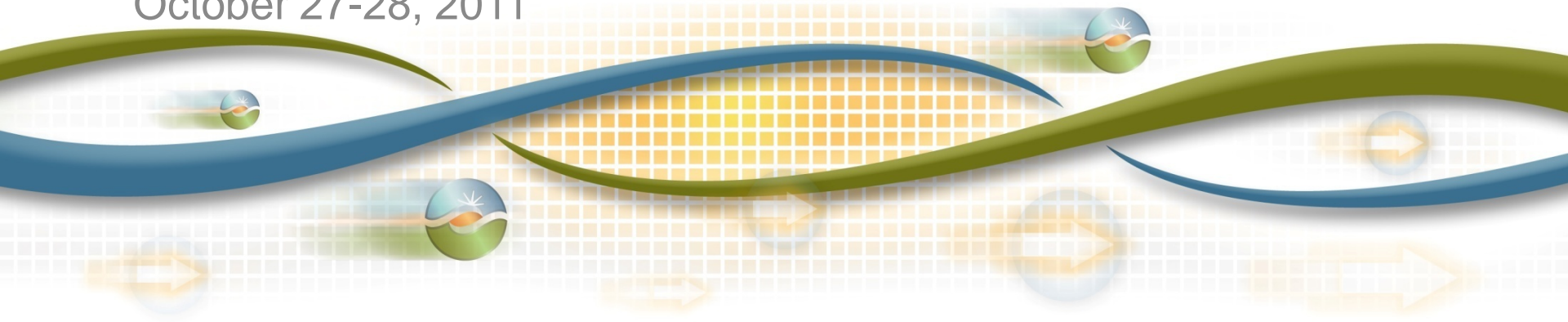
Greg Cook

Director, Market Design & Infrastructure Policy

Board of Governors Meeting
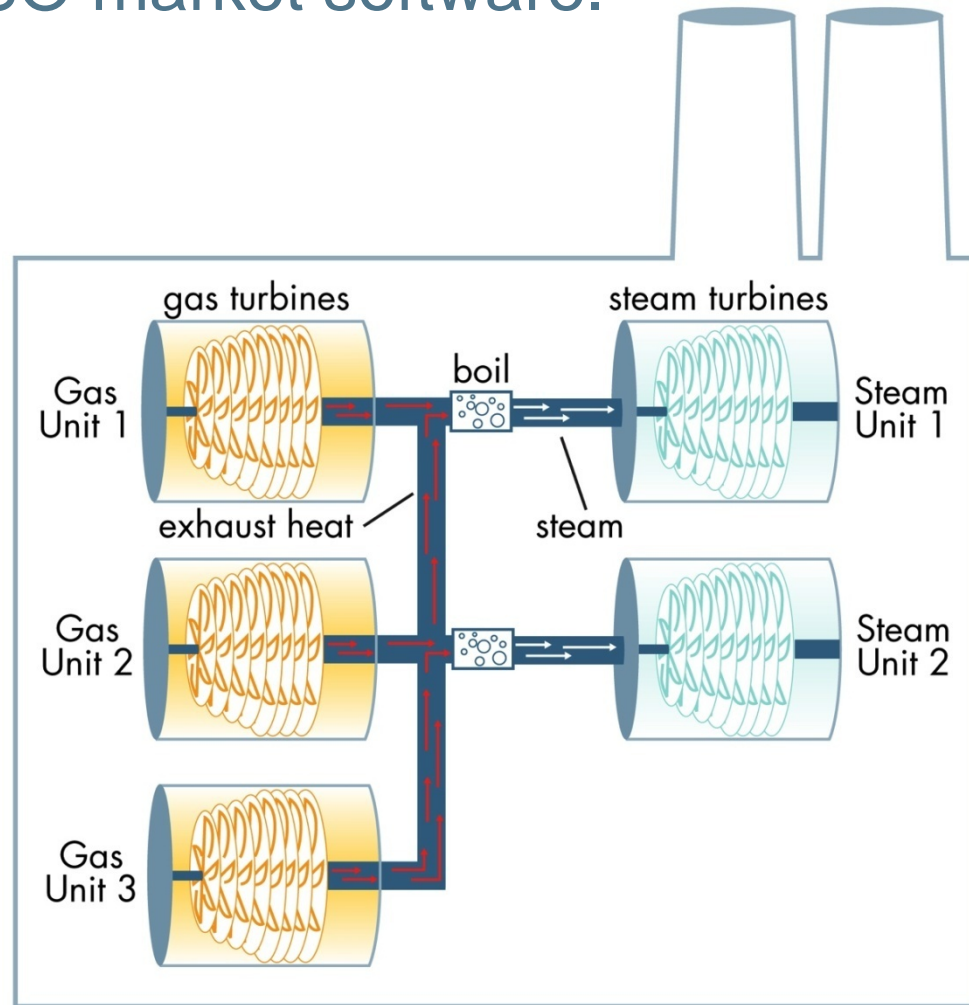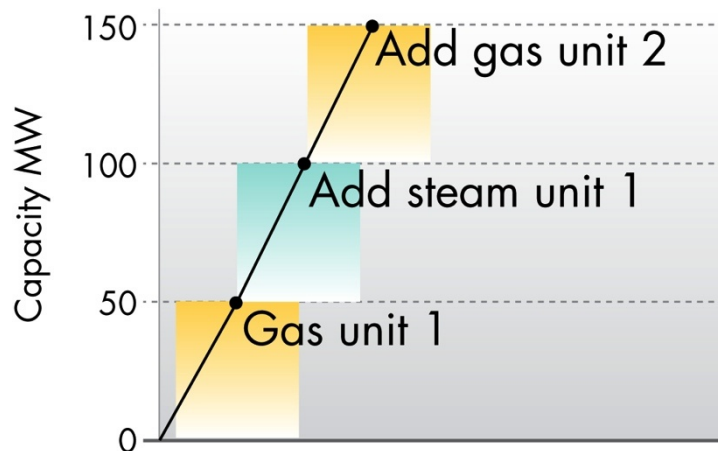
General Session

October 27-28, 2011

Multi-stage generation resources are flexible but complex to model in the ISO market software.

- *Multi-stage generation unit modeling enables economic dispatch based on bids and operating constraints of each configuration*

Experience has enabled the identification of several enhancements for more efficient real-time dispatch.

Current	Proposed
3 configurations in the real-time market	6 configurations in the real-time market
No bids required below RA capacity	Bids required down to minimum operating level
Maintain same configuration for day-ahead and real-time self-schedules	Different configurations allowed for day-ahead and real-time self-schedules
1 ramp-rate for each configuration	2 ramp-rates for each configuration
No minimum load cost recovery if unit does not reach dispatched configuration	Allow minimum load costs of configuration reached

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Multi-Stage generation enhancements scheduled to be phased in over the next several months.

2011		2012		
NOV	DEC	JAN	FEB	MAR

Self-scheduling flexibility & increase in ramp rates

| Market simulation | Deployment | | FERC decision Implementation | |

Number of real-time configurations & minimum load cost accounting

Implementation

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Management recommends the Board approve the proposed enhancements to the multi-stage generation modeling.

- Enhancements will provide several benefits:
  - More efficient real-time dispatch
  - Increased participation of multi-state generation resources
  - Increase the ability of the ISO to reliably operate the grid

- Stakeholder feedback on the recommended changes has been positive with limited concerns

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