



# Midwest ISO Ancillary Services Markets

## ATC Quarterly Customer Meeting

● May 17, 2007

## ○ **Midwest ISO Ancillary Services**

- ISO administered Ancillary Services Markets vary, but most include:
  - \*Regulation and Response Service
  - Contingency Reserves
    - \*Spinning
    - \*Supplemental (non-spinning)
  - Regulation and Contingency Reserves are often referred to as Operating Reserves

*\*Currently specified as “Schedules” under the Midwest ISO Energy Market Tariff*

# ○ Ancillary Services

## ■ Contingency Reserves

- Used to provide energy for managing power flows and meet demand on the system due to a sudden and unexpected loss of a generation or transmission resource

## ■ How is this accomplished?

- Generation resources hold back or reserve a specified percentage of their generation capacity to meet the emergency need
  - Spinning Reserves
  - Supplemental Reserves (non-spinning)
- Demand Response Resources
  - Load that can be curtailed or interrupted
  - Behind-the-meter generation facilities

## ○ Benefits

- Provide incentive for the investment needed for short-term system reliability.
- Enable Demand Response Resources to participate in the Market.
- Encourage investment in flexible generation resources which will reduce need to take out-of-merit actions to maintain reliability.
- Reduce operating reserve costs and put downward pressure on energy prices.

## ○ Market Projects Underway

### ■ Footprint-Wide Contingency Reserve Agreement

- Midwest ISO will administer a coordinated contingency reserve sharing deployment system currently managed by three separate entities

### ■ Balancing Authority Functional Alignment

- Midwest ISO will assume Control Performance Standards and Disturbance Control Standard responsibilities to manage Regulation and Contingency Reserves Markets

### ■ Ancillary Services Markets

- Regulation and Contingency Reserves Markets
- Project will result in simultaneous co-optimization of Energy and Ancillary Services Markets

## ○ Steps to Market Launch

### ■ Contingency Reserve Sharing Group

- Pre-cursor to market implementation

### ■ Balancing Authority Functional Alignment

### ■ Ancillary Services Markets Project Team

- Market Design and Business Rules
- Infrastructure and Technology
- Deliverability Test
  - Assess need for reserve zones and minimum reserve levels

### ■ FERC Filings

- Tariff changes to support ASM

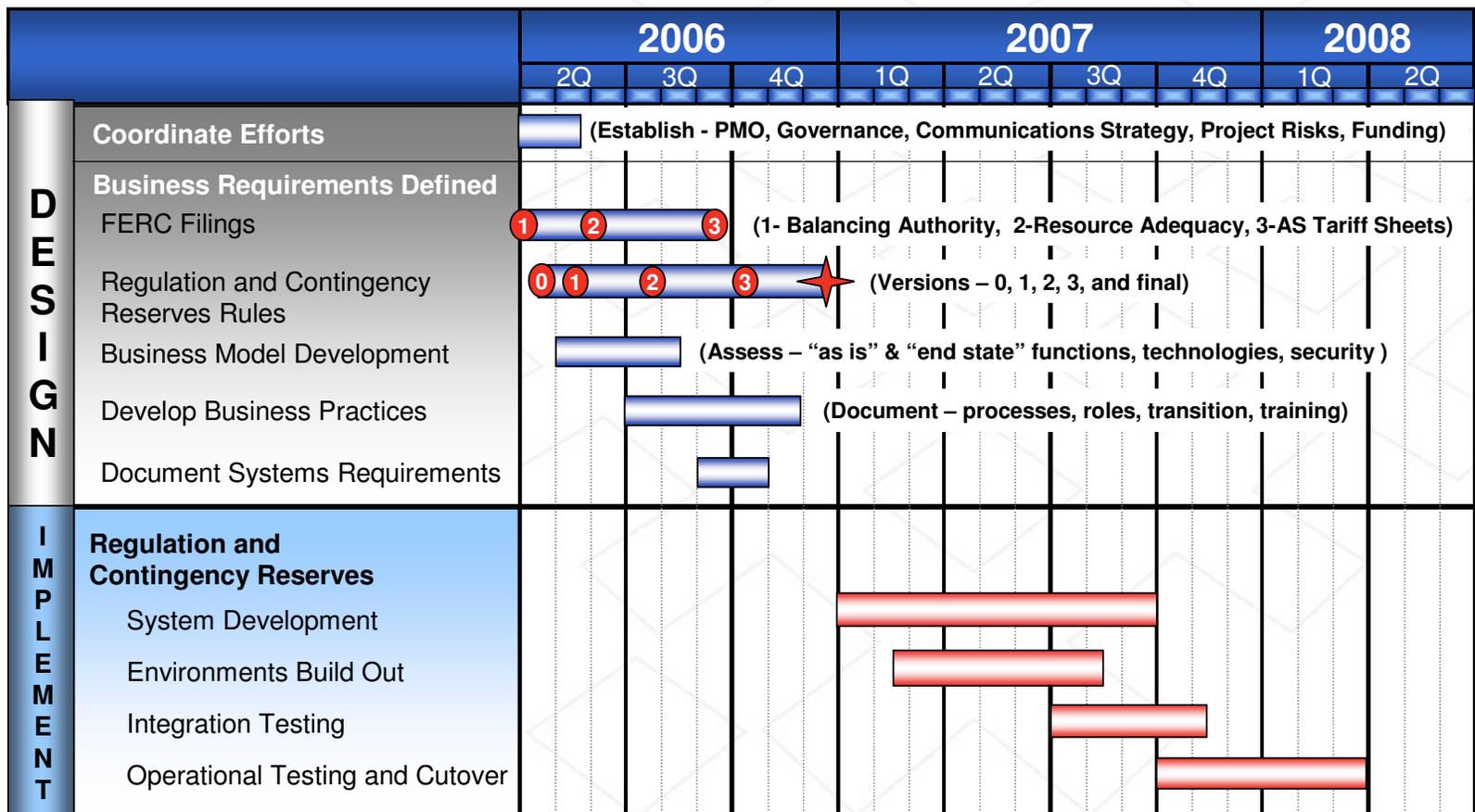
# Ancillary Services

## Business Rules

### ■ Market Monitoring

- Similar to Market Monitoring Protocols codified in Module D of the EMT, conduct in ISO-administered A/S Markets that may warrant mitigation include physical withholding, economic withholding and uneconomic production
- The “conduct-and-impact” mitigation framework will not need to be modified to accommodate ISO-administered A/S Markets.

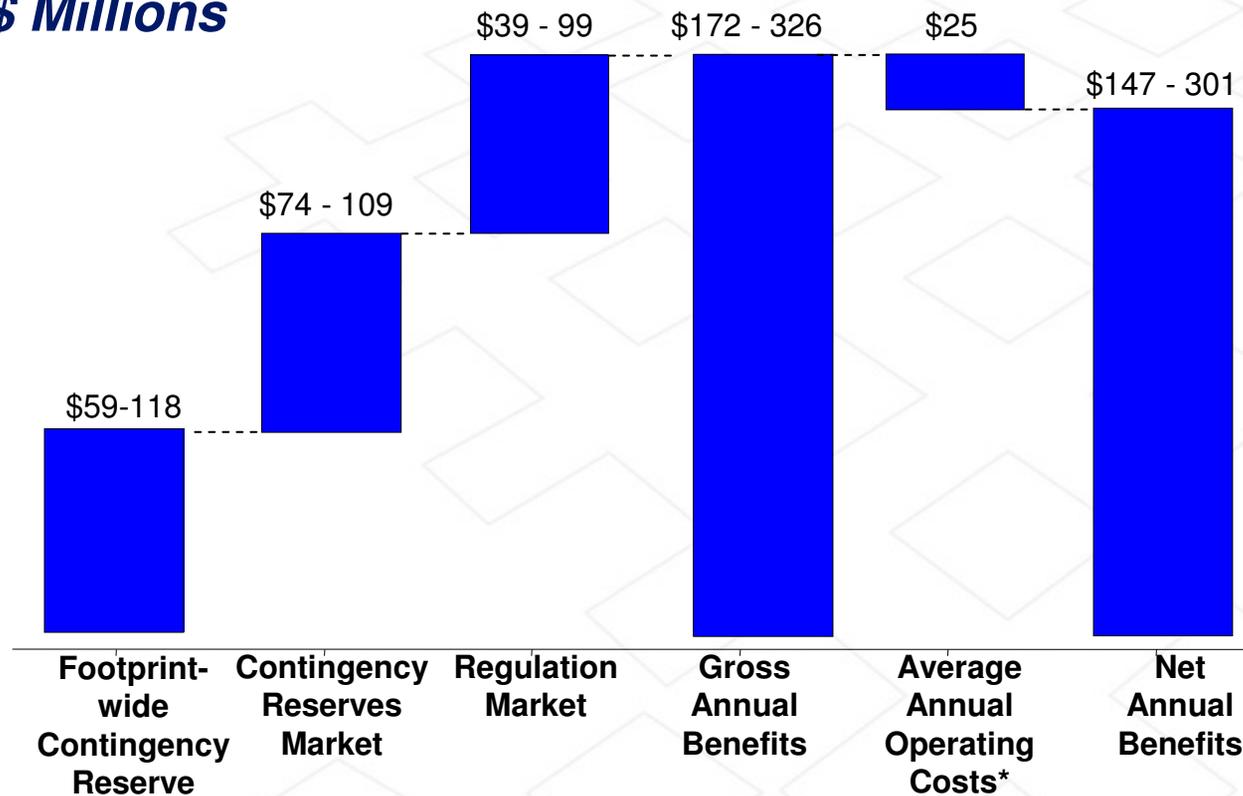
# Project Milestones



# Implementation Benefits

## *Estimated Annual Benefits*

***\$ Millions***



\* Includes amortization of startup costs calculated using \$65 million estimated project cost, amortized over seven years at 5%

## ○ More Information

### ■ ASM Project Update Meetings

- Open Stakeholder Forum
- Held Monthly
- Documents and Meeting Schedule –  
[www.midwestmarket.org](http://www.midwestmarket.org)
  - Documents | Ancillary Services Market Project

### ■ Watch for future announcements on Training Opportunities