

**NYISO**  
**SMD2 Readiness**  
**Cut-over and Fall-back Planning**

**MSWG**  
**November 4, 2004**

Presented by  
**Richard Dewey**

# Agenda

- **High-level Planning Overview**
- **Parallel Operations Plan Summary**
- **Cut-over Plan Details**
  - *Operations activities*
  - *Market activities*
  - *Settlements activities*
- **Fall-back Plan**
- **MP Consultation Schedule**

# Cut-over Plan / Activities

## ✦ **Designed to Minimize Impact**

- *Minimize risk to reliability*
- *Reduce market downtime*
- *Maximize opportunity for successful fall-back*

## ✦ **Parallel Operations / Bidding (Legacy and SMD2)**

- *Begins with Dispatch Day November 24 (DAM bids due HB 0500 November 23)*
- *Full MP participation is critical to ensure clean transition of MP data*
- *SMD2 bids should reflect realistic bids for settlement*
- *Provides opportunity for final stabilization*
- *Facilitates rapid fall-back (if required)*

## ✦ **Pre-deployment SMD2 OASIS Results Created During Parallel Operations Will Not be Posted**

# Cut-over Plan Impacts

## ✦ Market Impacts/Outages

- *Short MIS outages for data preparation/transfer*
  - Three planned outages: (1) early November; (2) prior to parallel operation; and, (3) November 30
  - Exact schedule/details to be announced

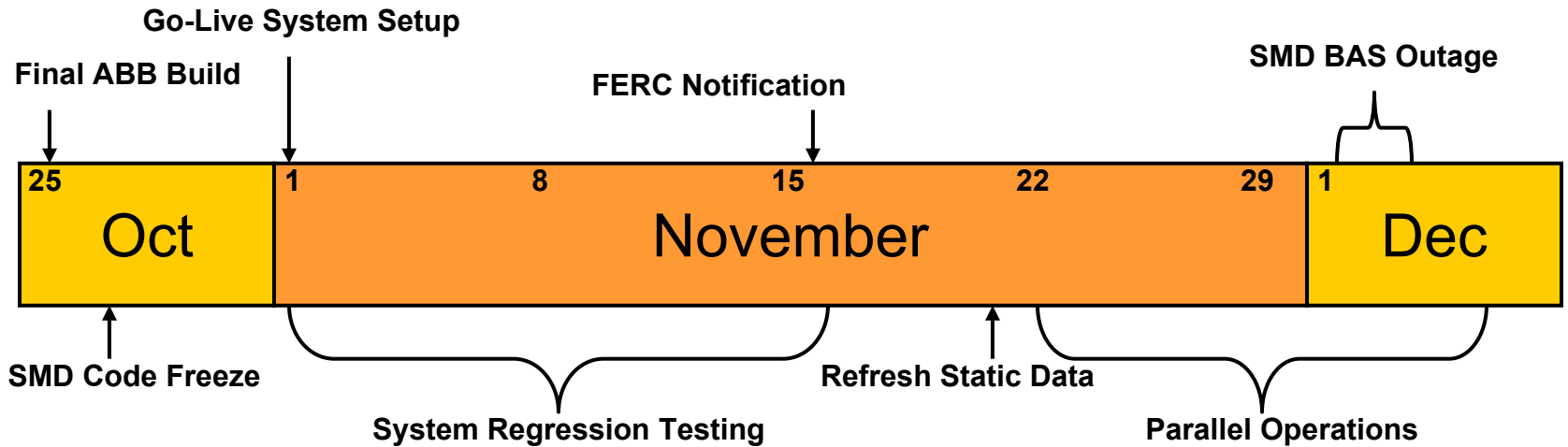
## ✦ Operational Impact

- *Short dispatch signal interruption at cut-over*

## ✦ Billing Outages

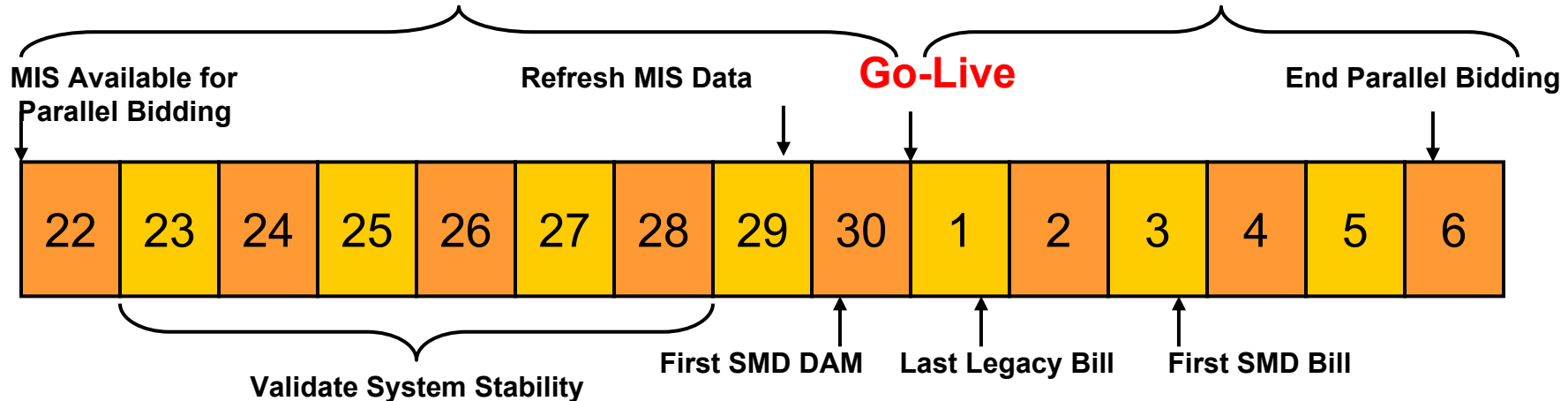
- *Longer outage for historical data translation*
- *Following posting of November 30 invoice*
- *First SMD2 invoice posted on December 3*
  - Specific schedule dependent on data conversion

# Cut-over Timeline



**SMD2 Bids Non-Binding up to DA & RT Markets for 12/1**

**Legacy Bids Non-Binding Unless Fall-back Occurs**



# SMD2 Remaining Test Activities

- ✦ **Final System Configuration**
  - *Convert systems from market trial configuration*
- ✦ **Ongoing Regression Testing**
  - *Ensure late fixes don't cause other problems*
- ✦ **Verification of Issue List Resolution**
- ✦ **Final ICCP Testing – Transmission Owners**
  - *Currently in progress*
  - *SMD2 model load test will require 15-minute outage; schedule to be determined*

# Parallel Operations Overview

## ✦ **Prior to Cut-over to SMD2 on December 1**

- *Legacy systems will secure grid, dispatch basepoints, determine schedules, and set prices*
- *SMD2 systems will be used to validate new system operation*
- *Bids placed in SMD2 system will be non-binding for markets up to Day-Ahead and Real-Time markets for December 1*

## ✦ **Following Cut-over to SMD2 on December 1**

- *SMD2 systems will secure grid, dispatch basepoints, determine schedules, and set prices*
- *Legacy system will be used only in event of fall-back*
- *Bids placed in Legacy system will be non-binding unless fall-back occurs following cut-over to SMD2*

# Parallel Operations Overview (Cont.)

- ✦ **MPs are Strongly Encouraged to Enter Realistic Bids in Each System**
  - *Day-Ahead, Real-Time, Transactions*
- ✦ **Operations Will Maintain Outage Schedules in both Systems During Parallel Operations**
- ✦ **No OASIS Postings for Parallel System**
  - *Schedules will be posted*
- ✦ **Day-Ahead Market Postings for Parallel System May Not Meet Customary Time Criteria**
  - *Primary Day-Ahead Market results will be posted timely*



# SMD2 Cutover Details

## Prepare for Parallel Operations

Date	Hour	Activity
Nov 21	To be scheduled	Legacy MIS Outage (2 hours) - MIS Data Transfer to SMD2 Systems
Nov 22	08:00	SMD2 System Available for Bidding - Legacy bids are financially binding before cut-over - Web address: <a href="https://marketplace2.nyiso.com">https://marketplace2.nyiso.com</a> - UL/DL address: <a href="https://bidpost2.nyiso.com/upload.html">https://bidpost2.nyiso.com/upload.html</a>
Nov 23	05:00	Legacy and SMD2 Day-Ahead Markets Close for Nov. 24
Nov 23	11:00	Legacy Day-Ahead Market Posts for Nov. 24
Nov 23	<15:00	SMD2 Day-Ahead Market Posts for Nov. 24 - Schedules posted, results not binding
Nov 24	To be scheduled	Commence SMD2 Parallel Operations

# SMD2 Cutover Details (Cont.)

## Parallel Operations – Prepare for Cut-over

<b>Date</b>	<b>Hour</b>	<b>Activity</b>
Nov 24 – Nov 29	Ongoing	<b>SMD2 Systems Continue to Operate in Parallel</b> <ul style="list-style-type: none"><li>- SMD2 market results not binding</li><li>- Operations staff continue to validate system readiness</li><li>- Bills will NOT be run for parallel operations</li></ul>
Nov 24 – Nov 29		<b>Market Participants Encouraged to Download Historical Market Data from DSS for Certain Invoice Periods</b> <ul style="list-style-type: none"><li>- November 2004, July 2004, November 2003</li><li>- Data may not be available for reconciliation in December</li></ul>
Nov 29	>15:00	<b>Daily Bill Posted for Nov. 28</b>
Nov 29	<00:00	<b>All Available Price Corrections Posted for November</b>
Nov 30	~00:00	<b>Legacy MIS Outage (2 hours)</b> <b>SMD2 MIS Outage (~5 hours)</b> <ul style="list-style-type: none"><li>- Final MIS data transfer from Legacy to SMD2</li></ul>

# SMD2 Cutover Details (Cont.)

## Cut-over Activities – Day-Ahead Market

Date	Hour	Activity
Nov 30	05:00	SMD2 and Legacy Day-Ahead Markets Close for Dec. 1
Nov 30	<11:00	SMD2 Day-Ahead Market Posts for Dec. 1 - Market results binding following cut-over to SMD2
Nov 30	<11:00	SMD2 OASIS Site Available - Day-Ahead market results binding following cut-over - Real-Time results available, not binding until cut-over - Web address: <a href="https://marketplace2.nyiso.com">https://marketplace2.nyiso.com</a> - UL/DL address: <a href="https://bidpost2.nyiso.com/upload.html">https://bidpost2.nyiso.com/upload.html</a>
Nov 30	<15:00	Legacy Day-Ahead Market Posts for Dec. 1 - Schedules posted, results not binding unless fail-back - Web address: <a href="https://marketplace.nyiso.com">https://marketplace.nyiso.com</a> - UL/DL address: <a href="https://bidpost.nyiso.com/upload.html">https://bidpost.nyiso.com/upload.html</a>
Nov 30	>15:00	Daily Bill Posted for Nov. 29
Nov 30	Ongoing	Legacy Real-Time System Continues to Secure Grid

# SMD2 Cutover Details (Cont.)

## Cut-over Activities – Real-Time System

Date	Hour	Activity
Nov 30	~13:00	Transmission Owner Conference Call; System Reliability
Nov 30	~14:00	TO / SOAS Conference Call; Market Readiness
Nov 30	20:00	Begin Ramp Toward Equivalent Schedules
Nov 30	22:00	Install SMD2 Model in ICCP Backup System
Nov 30	23:00	Institute Statewide Out of Merit (OOM)
Nov 30	23:40	TO Control Center Conference Call; Final Confirmation
Nov 30	23:45	Via TO Hotline, Announce Swap to SMD2 Basepoints and Switch-over to Backup ICCP System (SMD2 Model)
Dec 1	~00:00	<b>SMD2 “Go Live”</b> - SMD2 Real-Time Market Results Binding - Legacy Real-time Market Results Not Binding
Dec 1	02:00	Evaluate System Operation; Consider Putting State Back in Merit

# NYISO Address Guide

<b>Bidding</b>	<b>Current - 11/22/04 08:00</b>	<b>11/22/04 08:00 - 12/6/04 18:00</b>	<b>12/6/04 18:00 - Forward</b>
<b>Legacy Bidding</b>	Web : <a href="https://marketplace.nyiso.com">https://marketplace.nyiso.com</a> Upload / Download : <a href="https://bidpost.nyiso.com/upload.html">https://bidpost.nyiso.com/upload.html</a>		Unavailable
<b>SMD2 Bidding</b>	Unavailable	Web : <a href="https://marketplace2.nyiso.com">https://marketplace2.nyiso.com</a> Upload / Download : <a href="https://bidpost2.nyiso.com/upload.html">https://bidpost2.nyiso.com/upload.html</a>	

<b>OASIS</b>	<b>Current - 11/30/04 11:00</b>	<b>11/30/04 11:00 - ~ 12/1/04 00:00</b>	<b>12/1/04 00:00 - Forward</b>
<b>Public OASIS</b>	<a href="http://mis.nyiso.com/public">http://mis.nyiso.com/public</a>		
<b>DAM Postings</b>	Legacy Only	SMD2 Only	SMD2 Only
<b>RT Postings</b>	Legacy Only	Legacy Only	SMD2 Only

# SMD2 Cutover Details (Cont.)

## Cut-over Activities – Settlements

<b>Date</b>	<b>Hour</b>	<b>Activity</b>
Dec 1	>15:00	Daily Bill Posted on Legacy BAS for Nov. 30
Dec 1	18:30	DSS Outage Begins - Partial outage; CSV files available, No ad hoc queries
Dec 1	19:30	MISHIST / BAS Outage Begins - Access to historic MIS data (schedules) limited to Dec. - Historic OASIS data available
Dec 2	12:00	Full DSS Outage Begins
Dec 3	~00:00	DSS Outage Complete
Dec 3	>12:00	MISHIST / BAS Outage Complete - Daily bill for Dec. 1, backfill of historic MIS data started
Dec 3	>12:00	Meter Authorities upload meter data
Dec 3	>12:00	Daily bill for Dec. 1, backfill of historic MIS data started
Dec 7		Invoice Posted for Nov. 2004, July 2004, Nov. 2003

# Price Correction / Reservations

## ✦ Price Reservations

- *All price intervals will be reserved for up to 2 weeks following cut-over*
- *Five (5) day posting of price corrections still required*

## ✦ Price Corrections

- *Best effort will be made to include all available price corrections in legacy system prior to cut-over*
- *MISHIST/BAS outage following cut-over may prohibit some November price corrections from being included*
- *November 2004 initial settlement may not contain all price corrections; will need to be captured in 4-month true-up*

# SMD2 Fall-Back

- ✦ **Primary Objective in Making Fall-back Decision is Maintaining Power System Reliability**
- ✦ **Multiple Scenarios Have Been Considered**
  - *Reliability emergency; Immediate execution of plan*
  - *Market dysfunction; Planned migration to next DAM schedules (possibly at next 00:00)*
  - *Hybrid*
- ✦ **Depending on Decision Factors, Amount of Market Notification Might be Variable**
  - *The NYISO would strive for the maximum amount of notification possible*



# SMD2 Fall-Back (Cont.)

- ✦ **Process of Executing Fall-back is Similar Whether Emergency or Planned**
  - *Notify TO control centers, Market Participants*
  - *Reload legacy ICCP model; basepoints supplied from legacy EMS*
  - *Declare statewide Out of Merit (OOM)*
  - *Assess status of legacy market schedules, determine best time to resume NYISO markets*
  - *Perform controlled establishment of legacy schedules*
- ✦ **Settlement rules for period between cut-over and fall-back will depend on circumstances. Specific rules will be developed and shared with MPs.**

# Meeting Timeline to Go-Live

Oct 27 <sup>th</sup> /28 <sup>th</sup>	BIC/OC Meeting	SMD2 Readiness Review
Oct 29 <sup>th</sup>	MSWG Teleconference	LECG Market Trial 7 Analysis, Open Issues List, MP Test Scenarios
Nov 3 <sup>rd</sup>	SOAS Meeting CDAS Teleconference	Detail review of SMD2 Cut over - Fall Back plan
Nov 4 <sup>th</sup>	MSWG Meeting	Follow-up/Additional discussion on MSWG SMD2 Topics
Nov 10 <sup>th</sup>	MC Meeting	SMD2 Readiness Review, Market Advisors Assessment, Consultation with MPs on FERC initial Go-Live Notification
Nov 16 <sup>th</sup>	FERC Notification of intent to go-live	
Nov 17 <sup>th</sup> /18 <sup>th</sup>	BIC/OC Meeting	SMD2 Readiness Review
Nov 19 <sup>th</sup>	SMD2 Tech Conference	MP Technical Staff Conference on go-live logistics
Nov 22 <sup>nd</sup>	MSWG Teleconference 1:00pm - 3:00pm	Follow-up/Additional discussion on MSWG SMD2 Topics
Nov 26 <sup>th</sup>	SMD2 Teleconference 3:00pm – 4:00pm	MP Final Consultation on go-live
Nov 27 <sup>th</sup>	NYISO Forty-eight hour posting of effective date (go-live date)	
Nov 30 <sup>th</sup>	Multiple TO/SOAS Teleconferences	Review final readiness status; identify potential operational impacts
Dec 1 <sup>st</sup>	SMD2 Go-Live (Day-Ahead bids submitted for Dec 1 <sup>st</sup> on Nov. 30 <sup>th</sup> )	
Dec 2 <sup>nd</sup>	MC Meeting	SMD2 Day After Go-Live Update
Dec 3 <sup>rd</sup>	MSWG Teleconference 1:00pm - 3:00pm	SMD2 post-deployment consultation with MPs

Draft - For Discussion Only