

A large, light gray sunburst graphic is positioned on the left side of the slide, extending from the top left towards the center. It consists of numerous triangular segments of varying lengths radiating from a central point.

# **2015 Winter Readiness Assessment Midcontinent ISO**

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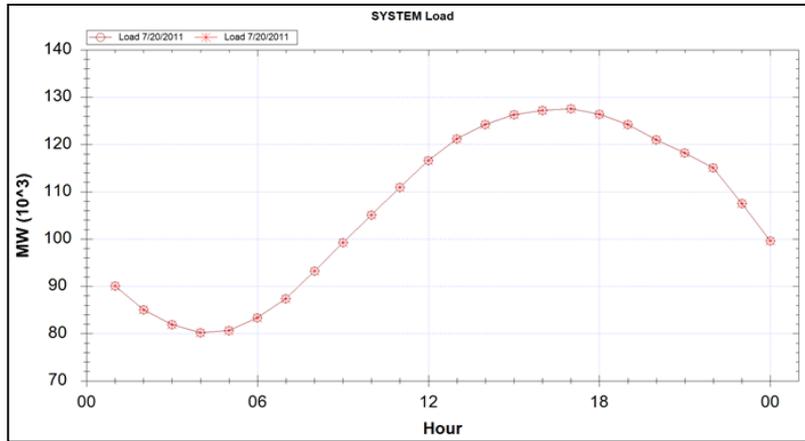
**November 19, 2015**

# Executive Summary

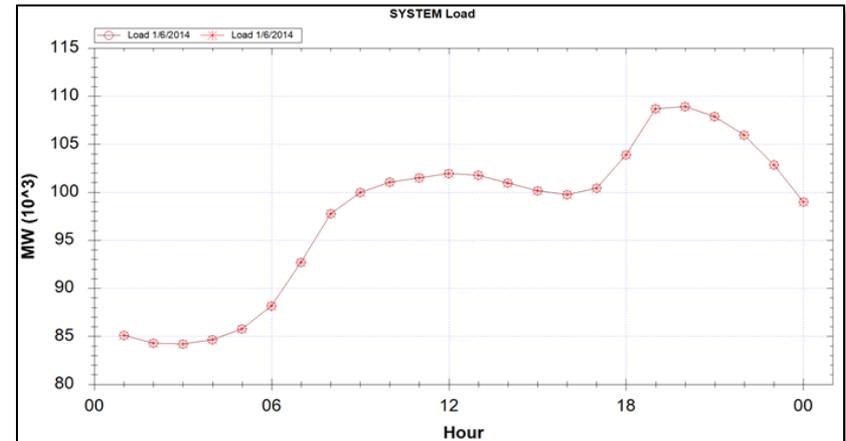
- Seasonal Assessments are performed with stakeholders to review projected demand and resources to assess adequacies and risks for near-term seasons.
- MISO forecasts to have sufficient Reserve Margin going into winter 2015. Winter Assessment results were presented at Winter Readiness Workshop on October 26<sup>th</sup>.
- Winter peak conditions pose unique challenges, as highlighted by the Polar Vortex in January 2014.
- Enhancements implemented after the Polar Vortex have proven to be beneficial and several are anticipated to be implemented in the near future.
- These enhancements, along with high levels of winter reserves, favorably position MISO to meet winter needs.

**Traditionally MISO is a summer peaking system, but winter peak conditions pose different challenges – the Polar Vortex highlighted these challenges.**

### Summer Peak Load Trend



### Winter Peak Load Trend



### Winter Peak Load Challenges:

- Morning load pick-up
- Generation forced outages due to extreme cold
- Generation delayed start due to extreme cold
- Increased fuel related outages

# Market Enhancements implemented after Polar Vortex have proven to be beneficial and several are anticipated to be implemented in the near future.

## Gas-Electric Coordination

- Communication Coordination
- New & Improved Operator Tools
- Pipeline and Price Monitoring

## Enhanced Fuel Assurance Transparency

- Cause codes added for weather and fuel related issues in outage system
- Fuel Survey

## Market Performance

- Extended Locational Marginal Pricing (ELMP)
- SPP Market-to-Market
- Emergency Pricing\*
- Seasonal Resource Adequacy Enhancement Assessment\*
- Ramp Product\*

\* Future Enhancements

## MISO's primary focus has been to enhance our situational awareness around Gas-Electric Coordination.

Operational Contact List for Pipelines (35 Pipelines)

Continuing Winter Generator Survey on Fuel Contracting Practices and Backup Fuels

Sharing of MISO Public Data with Pipelines

Enhanced MISO Communication System (MCS) to expand communications to include Pipelines

Expanding Monthly Pipeline Operations Call

# Natural Gas plays a critical role in our day-to-day operations; therefore, having enhanced and coordinated real-time visibility is prudent.

- Leveraging MISO Pipeline Notification Website
- Monitoring Market Conditions
  - Intercontinental Exchange, Platts, & Bentek Subscriptions
- Distributing Gas Industry News and Updates
- Expanding involvement with Gas Industry Events and Conferences
- Providing Gas Industry Internal Training

The screenshot displays the Platts Gas Daily website interface. At the top, it features the Platts logo and the title 'GAS DAILY'. The date is 'Tuesday, August 25, 2015'. The main content area includes several news articles:
 

- Southern's plan to buy AGL wins kudos**: Discusses Southern Company's \$12 billion plan to acquire AGL Resources.
- Energy stocks take further beating**: Reports on the Dow Jones Industrial Average's decline.
- Obama eyes steps to boost distributed energy**: Mentions the White House's plan to support clean energy.
- NYMEX slips on production strength**: Notes the NYMEX September natural gas futures contract price.

 Below the news, there are sections for 'Daily price survey (MMBtu)' and 'Gas Daily Supplements'. The price survey table lists various regions and their corresponding gas prices.

Orders	Deals	Options	UPS	Basis	Mid-Cont	West	Gulf	East	NYMEX	Balmo
<input type="checkbox"/> Hold Orders (inactive) <input type="checkbox"/> Live Only										
Product	Hub		Strip	RFQ	+	-	Sell	Qty	Bid	
NG Firm Phys, FP	Michcon		Same Day		+			1800	2.705	
NG Firm Phys, FP	NBPL-Ventura		NxDay Intra							
NG Firm Phys, FP	NGPL-Midcont Pool		Same Day		+					
NG Firm Phys, FP	NNG-Demarc		Same Day							
NG Firm Phys, FP	NNG-Ventura		Same Day							
NG Firm Phys, FP	Panhandle		Same Day		+					



**This winter, MISO will have a sufficient reserve margin, but will continue to proactively prepare for extreme conditions that may arise.**

Transmission Analysis

NERC Winter Readiness Webinar

MISO Winter Readiness Workshop

Winterization Coordination planned for MISO  
Winter Readiness Workshop

Fuel Survey

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