



# Southwest Power Pool: Winter 2016-2017

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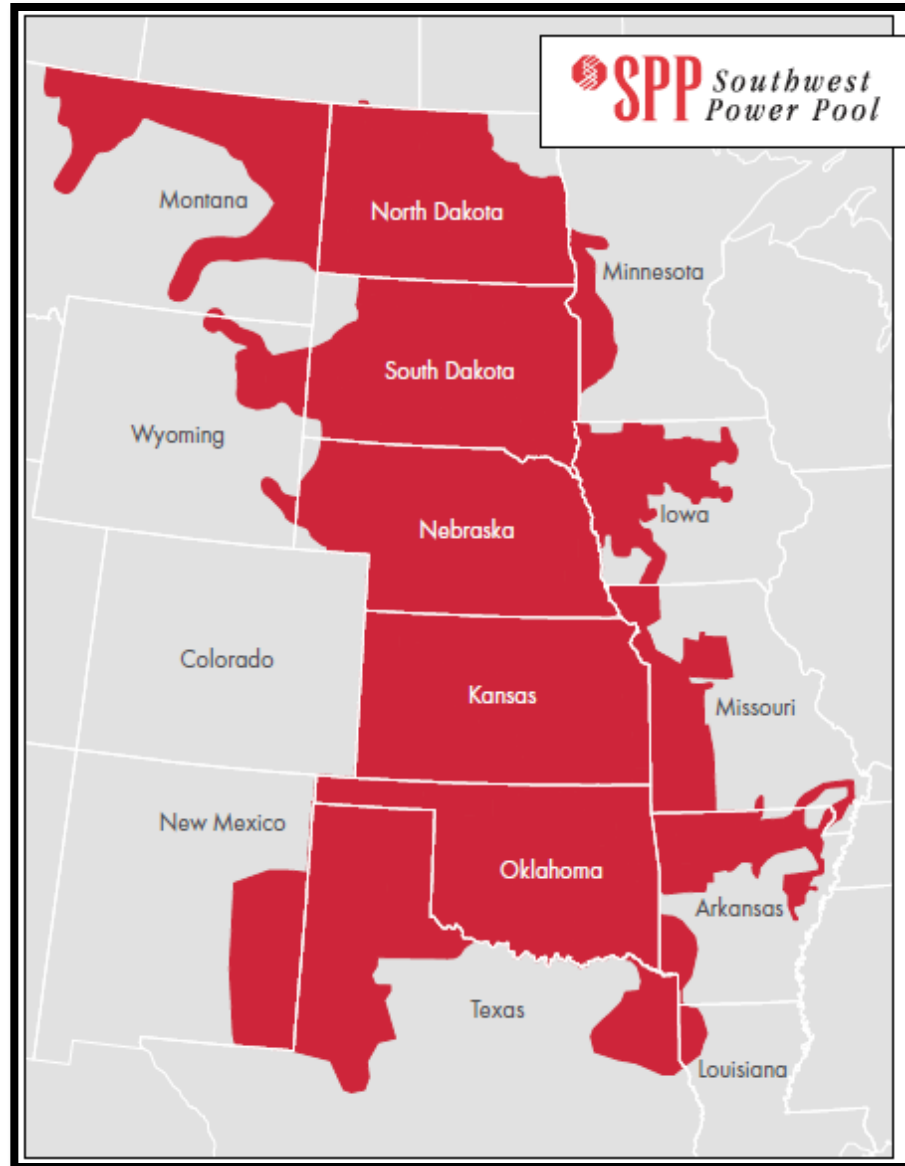
# SPP Winter 2016-2017 Operations

- SPP's Footprint
  - Preparedness
  - Challenges
- Market and Reliability Enhancements
- Procedures and Training
- Enhanced Situational Awareness



# SPP's Footprint

- Footprint extends Canada to Texas
- Winter effects can occur sooner
- SPP Balancing Authority Winter Preparedness workshop moved forward to September for 2016
  - Occurred in December in 2015



# SPP 2016 Winter Preparedness Workshop

- Hosted at SPP's Corporate Campus September 13
- Attended by SPP stakeholders in person and via teleconference
- Schneider Electric presented a 2016-2017 Winter Season Weather Outlook for SPP
- SPP Operations Planning Update
  - Forecasted Winter Load peak near 38,000 MW in January 2017
  - Anticipated outages and derates for Winter 2016/2017
  - Lessons Learned from Winter 2015-2016 Events
  - Vendor to develop full icing forecast by November

# New and Ongoing SPP Footprint Challenges



Must Run Resources for Williston  
Load Pocket, North Dakota

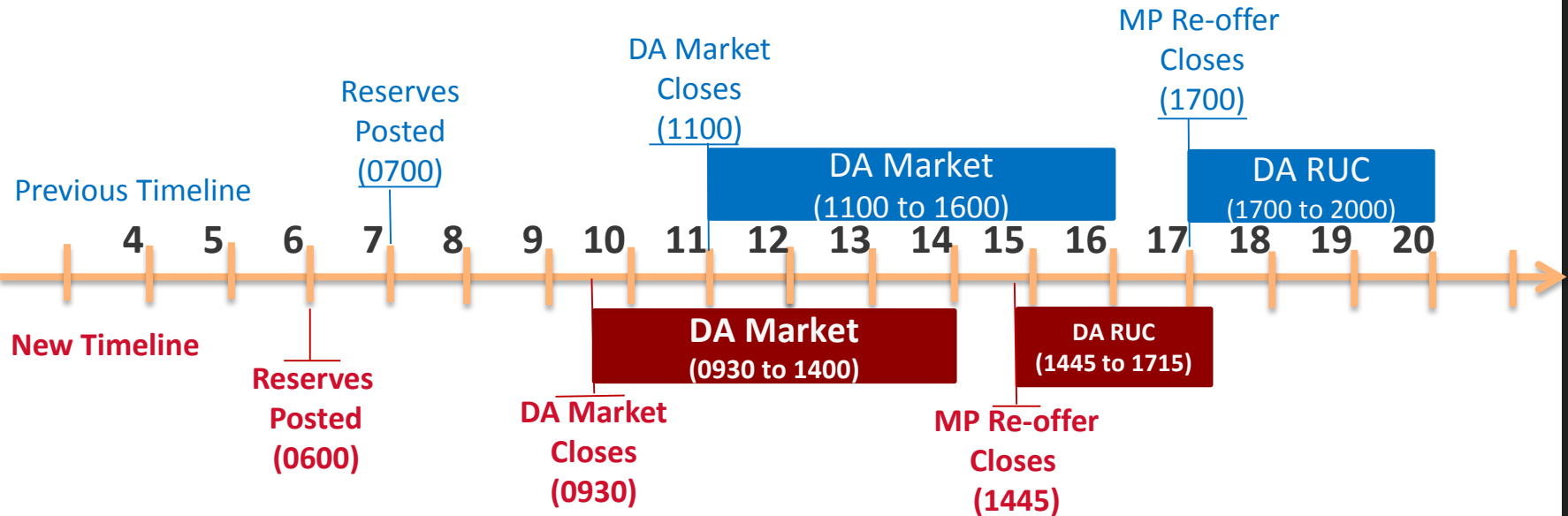


Trending toward a higher gas  
baseline



Increased wind generation  
impacting congestion and reliability

# SPP Marketplace Timeline Changes



- Timeline moved forward to better align with Gas Industry nomination cycles
  - Became Effective September 30 for the October 1 Operating Day
- Increased correspondence and planning with Gas Industry representatives

# Market and Reliability Enhancements

- Real-time must-offer requirement helps ensure fuel assurance
- Short-term Reliability Unit Commitment (ST-RUC) began in March 2016
  - 15 minute study intervals
  - Quicker response to system deviations
- Extended Day Ahead RUC (DA-RUC) study window
  - Now includes balance of Current Day
- Market Clearing Engine solver software update increased system performance

# Procedures and Training

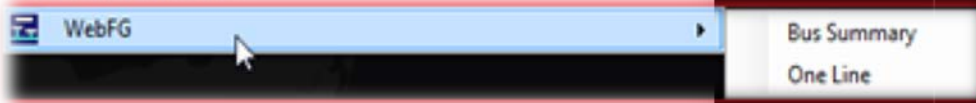
- Enhanced procedures and training for:
  - Severe Weather Alerts
  - Fuel Limitations Awareness
  - Conservative Operations
  - Load Shed
    - Stakeholder testing every seven weeks
- New Dispatcher Training Simulator
- Renovated, interactive Crew Training Room



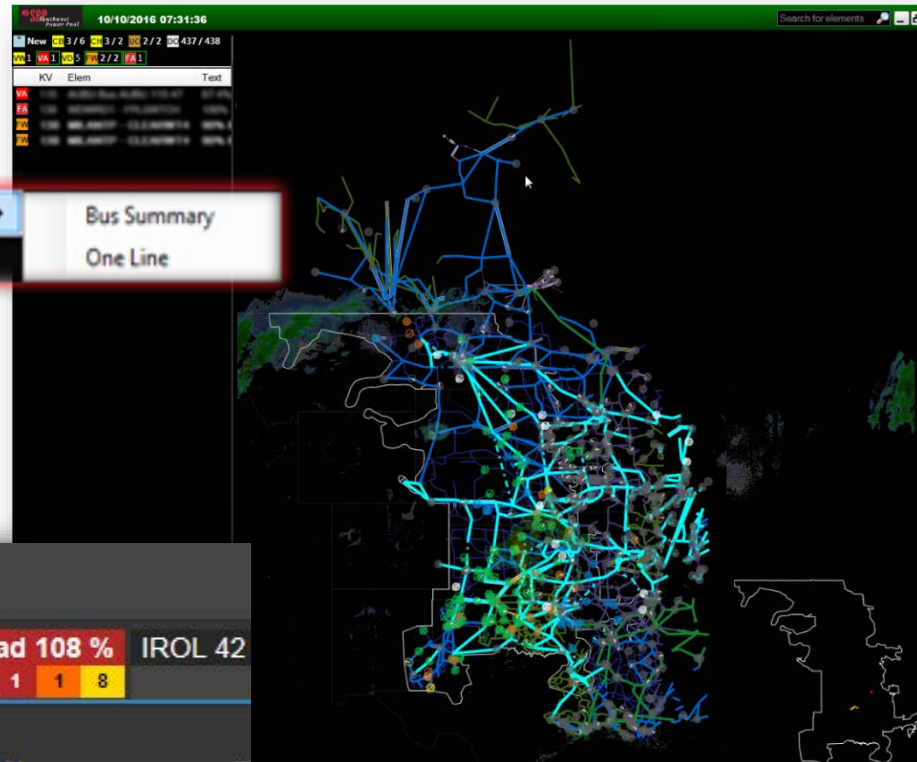


# Enhanced Situational Awareness – Macomber Map

- Weather radar and alerts
- Navigate to EMS from map



- Navigate to map from multiple situational awareness displays



Flowgates

Internal Flowgates **Load 108 %** IROL 42

Flags	N	IDC	Area	Name
	📍	1943	CRGE	WOWPFLATNOW
	📍	20937	SPS	TEMP90_20937
	📍	21732	WR	TEMP97_21732



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SEVENTY-FIVE YEARS OF  
RELIABILITY THROUGH RELATIONSHIPS