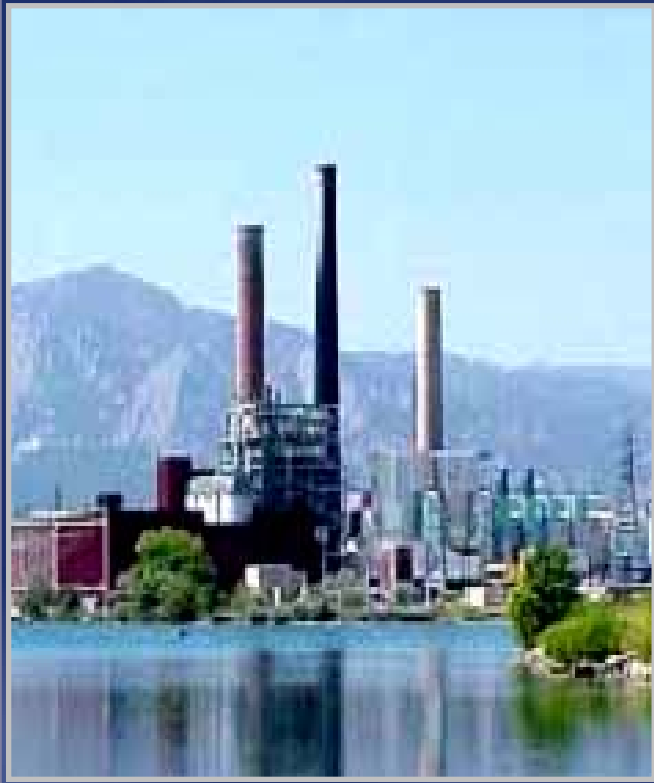




STB RETAC Meeting
March 6, 2008



The Coal Supply Chain:

A Western Utility Perspective

Susan Arigoni
Vice President, Fuels
Xcel Energy



**Northern States
Power Company-
Minnesota**

**Northern States
Power Company-
Wisconsin**

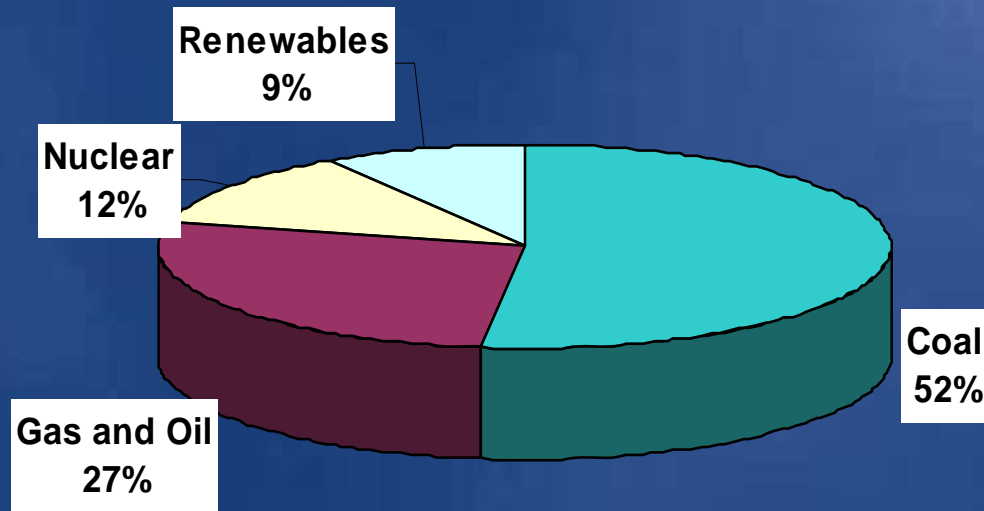
**Public Service
Company of
Colorado**

**Southwestern
Public Service**

**5th Largest Combination
Electric and Gas Utility
(based on customers)**

Electric Customers	3.3 million
Gas Customers	1.8 million

Xcel Energy Generation Fuel Mix



Xcel Energy's Commitment to Coal

- 32 million ton annual consumption
- 5th largest consumer in the U.S.
- 750 MW new coal-fired facility on line 2009



Xcel Energy's Reliance on Coal

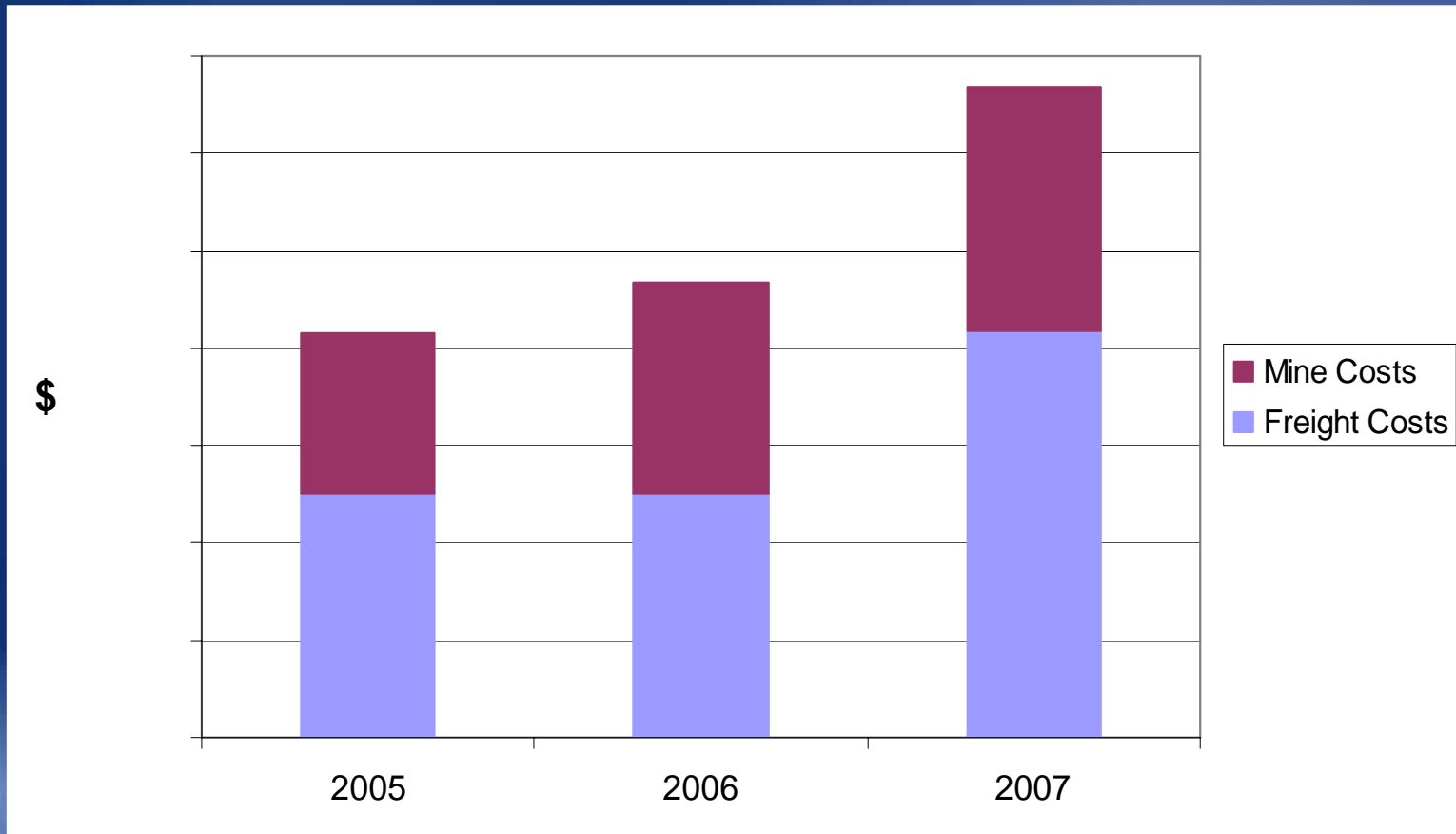
- Coal is essential to meeting our generation requirements
- 100% western coal
 - PRB 83%/Colorado 17%
 - Boiler designs limit fuel switching
- Delivery shortfalls usually permanent
- Coal stocks considered a backstop to transportation and mine failures
 - Plant inventory optimization must balance cost and reliability
 - Regulatory review

A Matter of Balance



Rail Transportation Costs Increasing

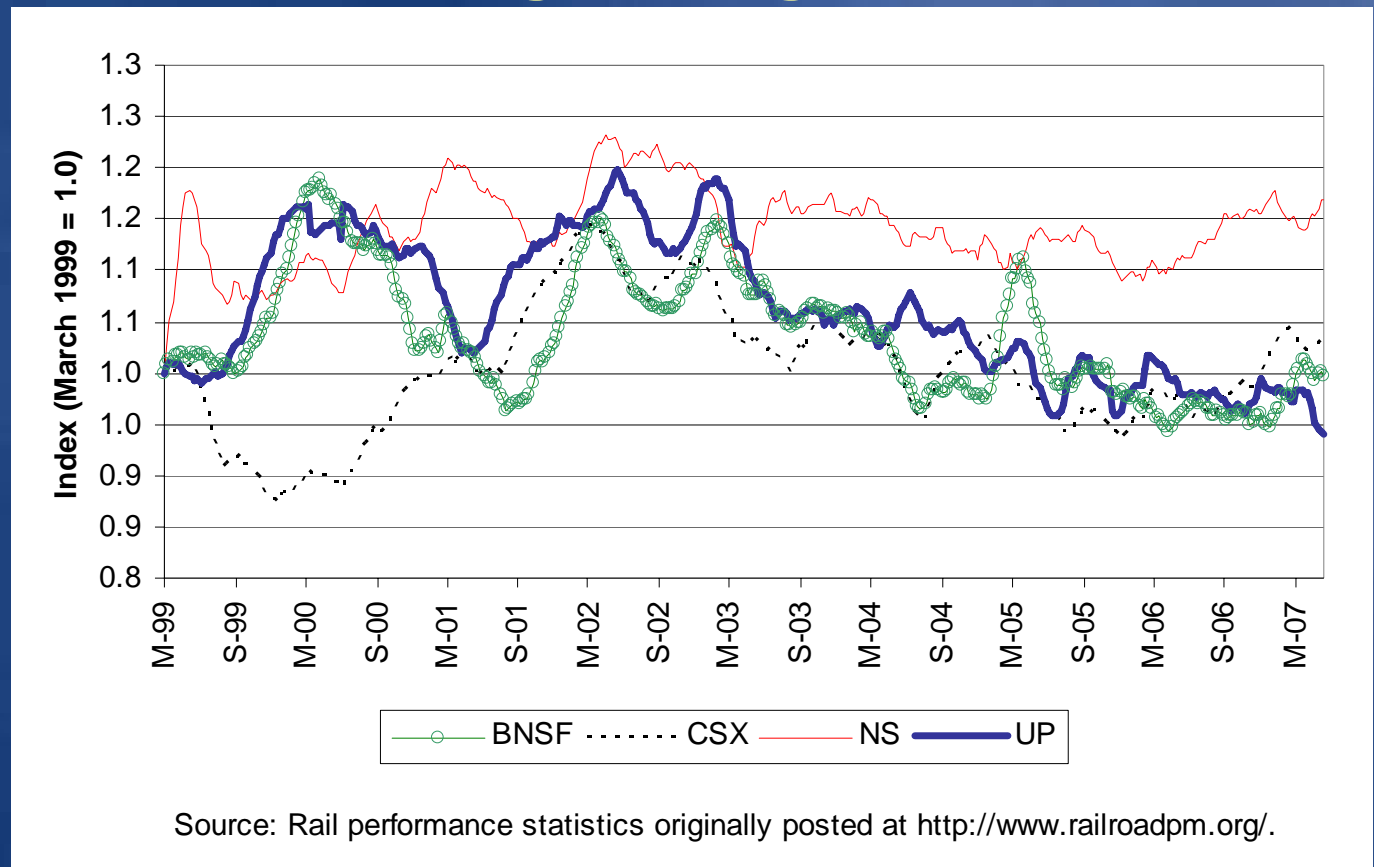
2005 – 2007 NSP Delivered Coal Costs



Railroad Performance

Average Speed of Coal Unit Trains, 12 Week Trailing Average

Declining
train
speed



Supply Chain Disruptions

- **Derailments**
- **Mine outages or production derates**
- **Utility dumper outages**
- **Railroad crew work rules**
- **Weather**
- **Poor communication**
- **Insufficient trainsets**

PRB Rail Transportation Challenges

- Capacity issues are route specific
- Improvements from recent joint line expansion
 - Continued vigilance required
- Need reserve capacity to handle surges or maintenance issues
- Performance guarantees

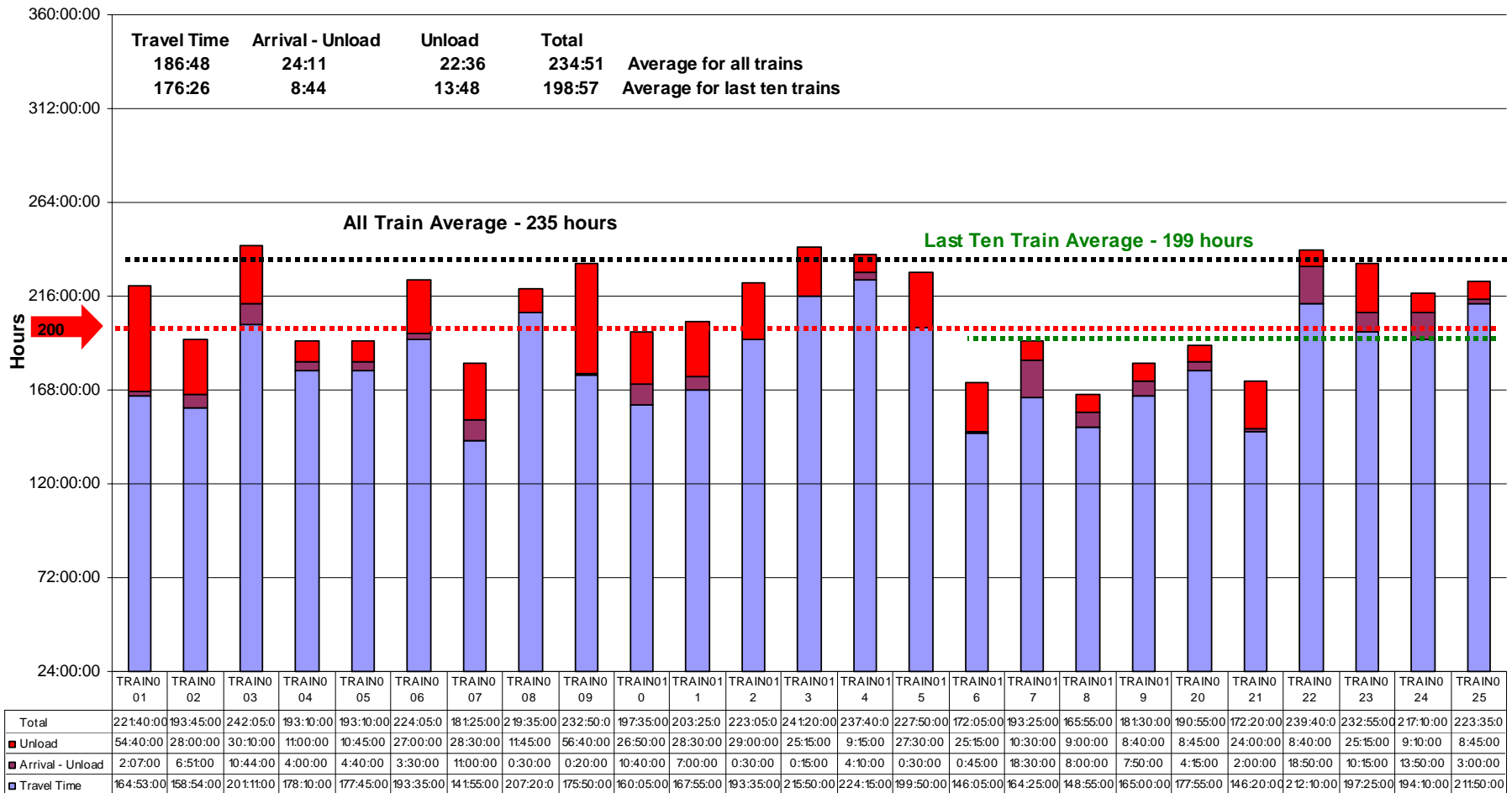
Utility Initiatives

- Coal handling investments at plants
- Additional resources
- Re-assess optimal inventory
- Increased participation
 - Industry groups
 - Legislative



Cycle Time Management

Plant Cycle Time Graph
Cycle Time Calculated from Load-to-Load



Best Practices

- **Cycle time analysis**
- **Shipment calendars**
- **In-pit crushing and overland conveyors**
- **Early notification of quality deviations**
- **Mid month assessment of deliveries and corrective action**
- **Supply diversification**

Future Issues

- **Capacity for growth**
 - Per CRS study, capacity issues difficult to address due to lack of data
- **Reliability**
- **Cost increases**
- **GHG Legislation**
- **Resolution of PRB joint line dust issue**