

# Utility Segment Update

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SEPTEMBER 22, 2016, STB RETAC MEETING

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# Overview

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- Compare 2015 and 2016 Utility Industry Survey Results

- Summary of Observations from Survey

- Aging Coal Fleet

# Utility Industry Survey

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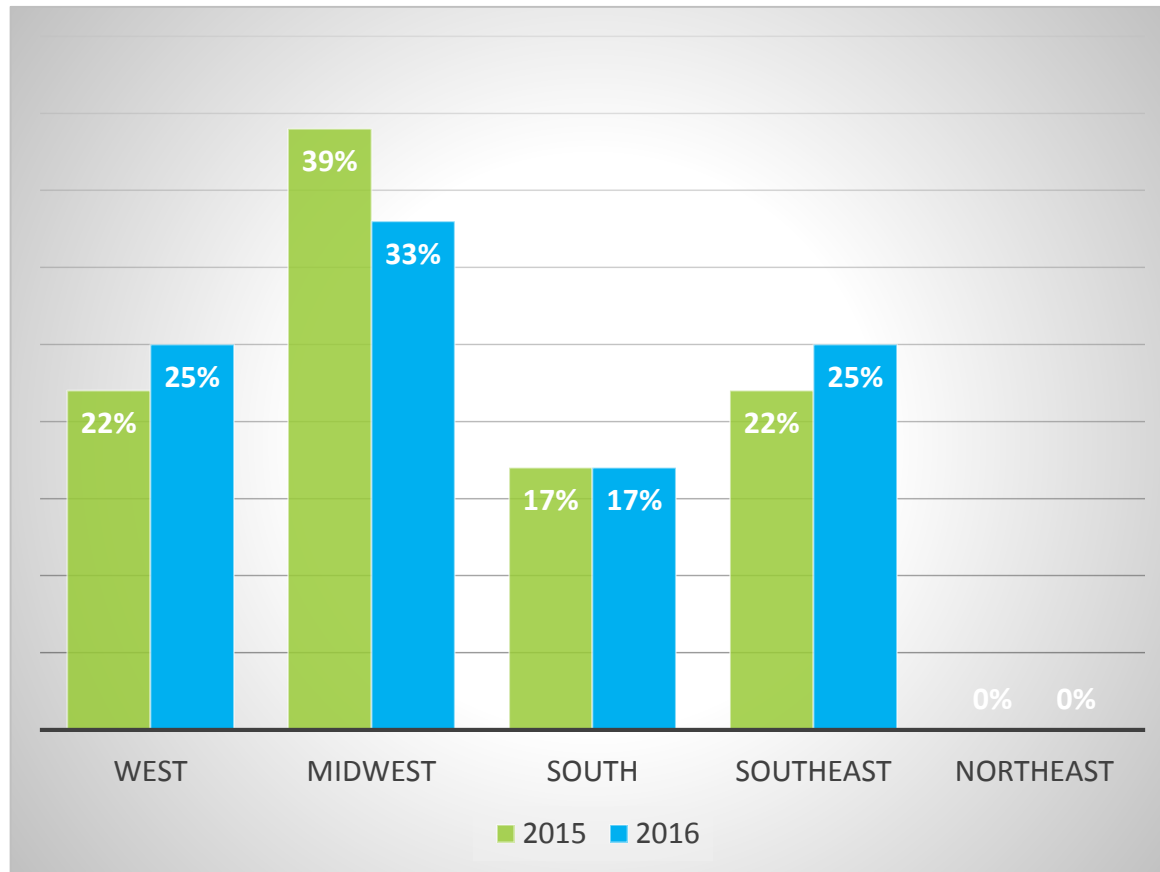
*Special Thanks to:*

**National Coal Transportation Association**

For conducting the Utility Segment survey and compiling the data

# Region the majority of your coal-fired generation located

1. West
2. Midwest
3. South
4. Southeast
5. Northeast



# Year-to-Date results

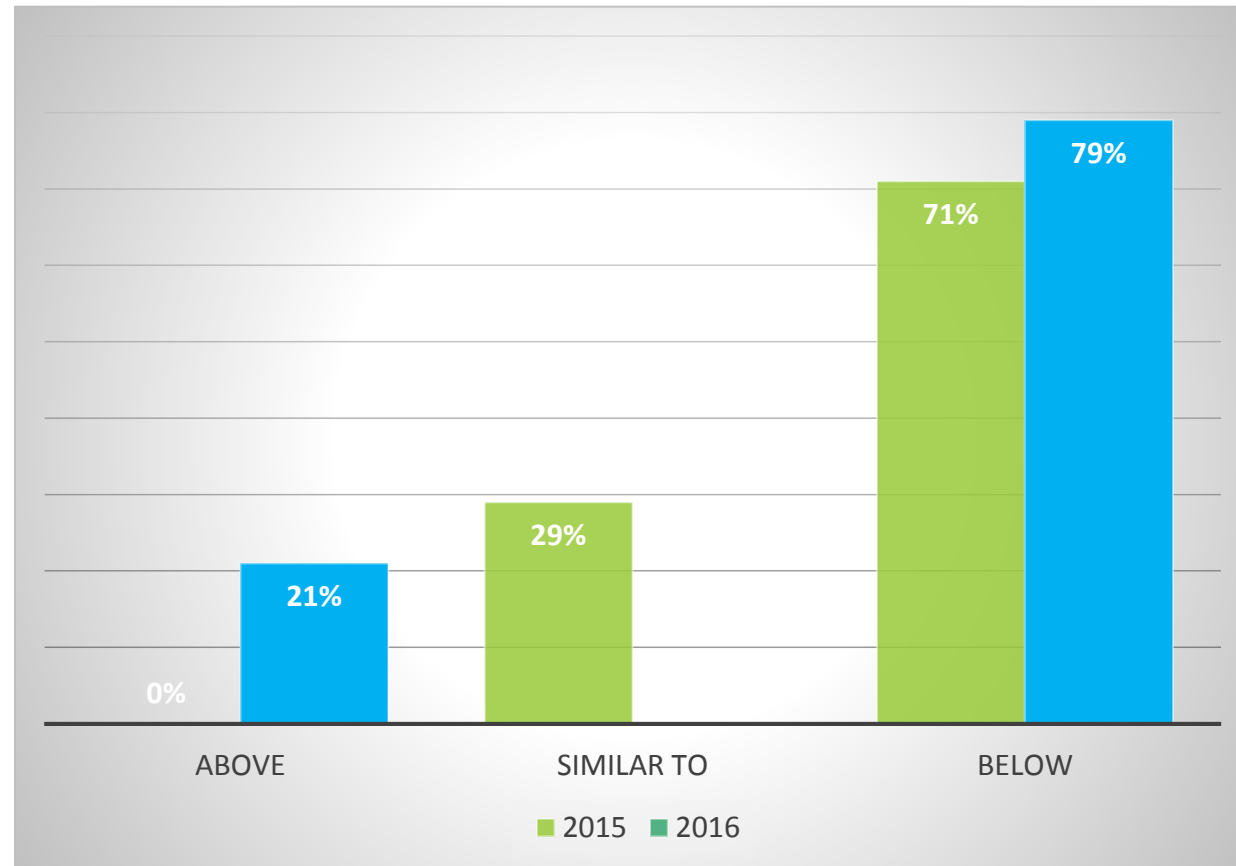
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2016 VERSUS 2015

# YTD actual coal-fired generation is...

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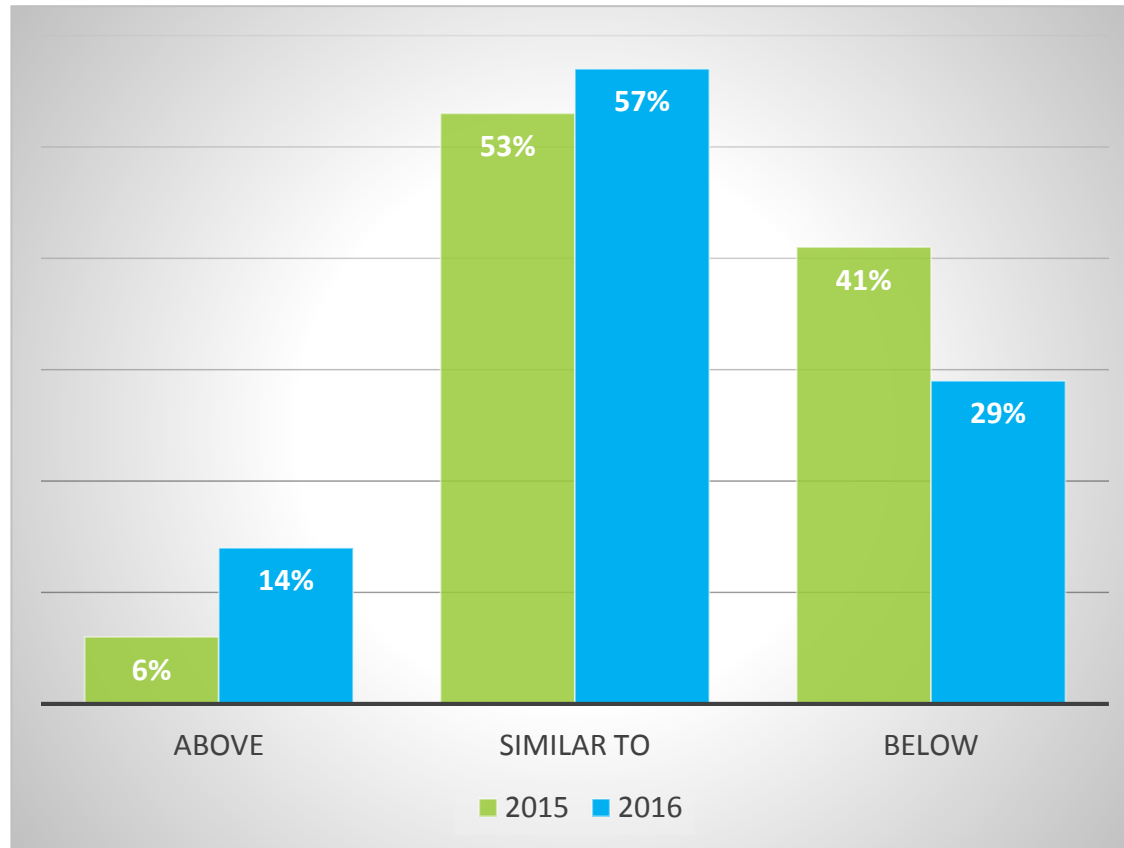
1. Above forecast
2. Similar to forecast
3. Below forecast



# YTD actual rail deliveries are...

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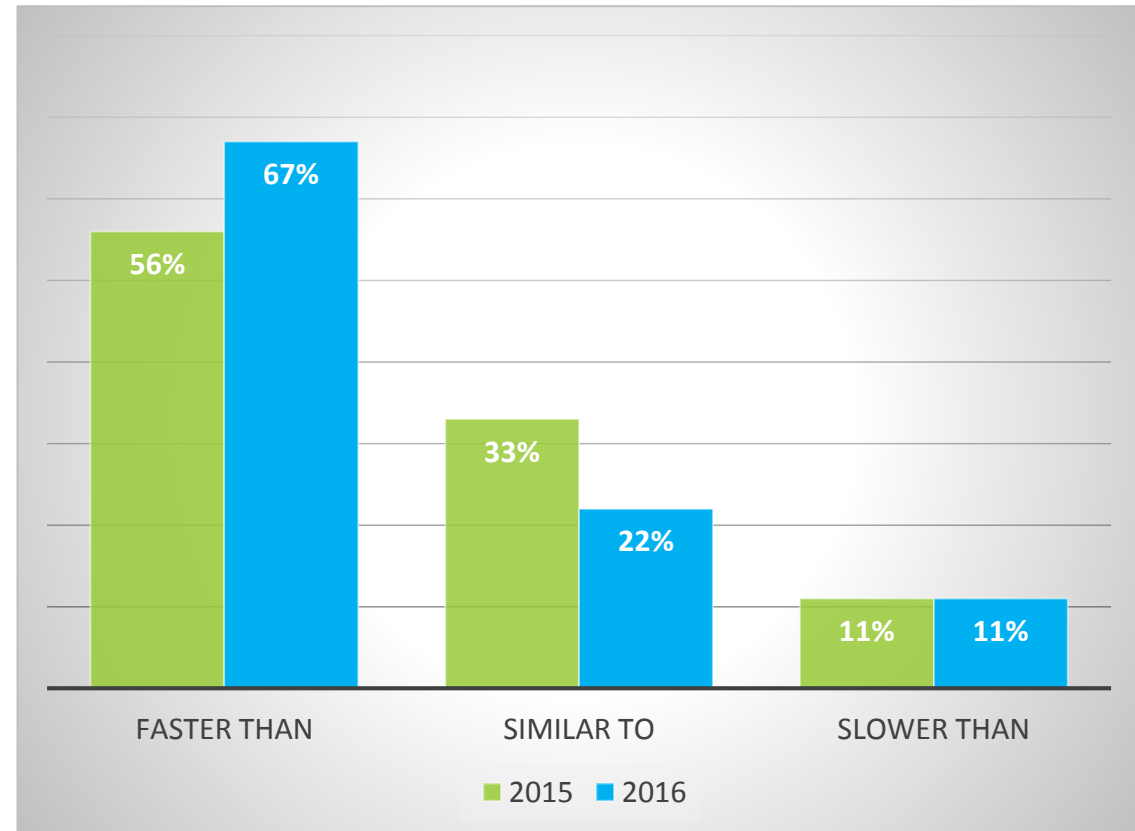
1. Above forecast
2. Similar to forecast
3. Below forecast



# Rail cycle times are...

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1. Faster than previous year
2. Similar to previous year
3. Slower than previous year

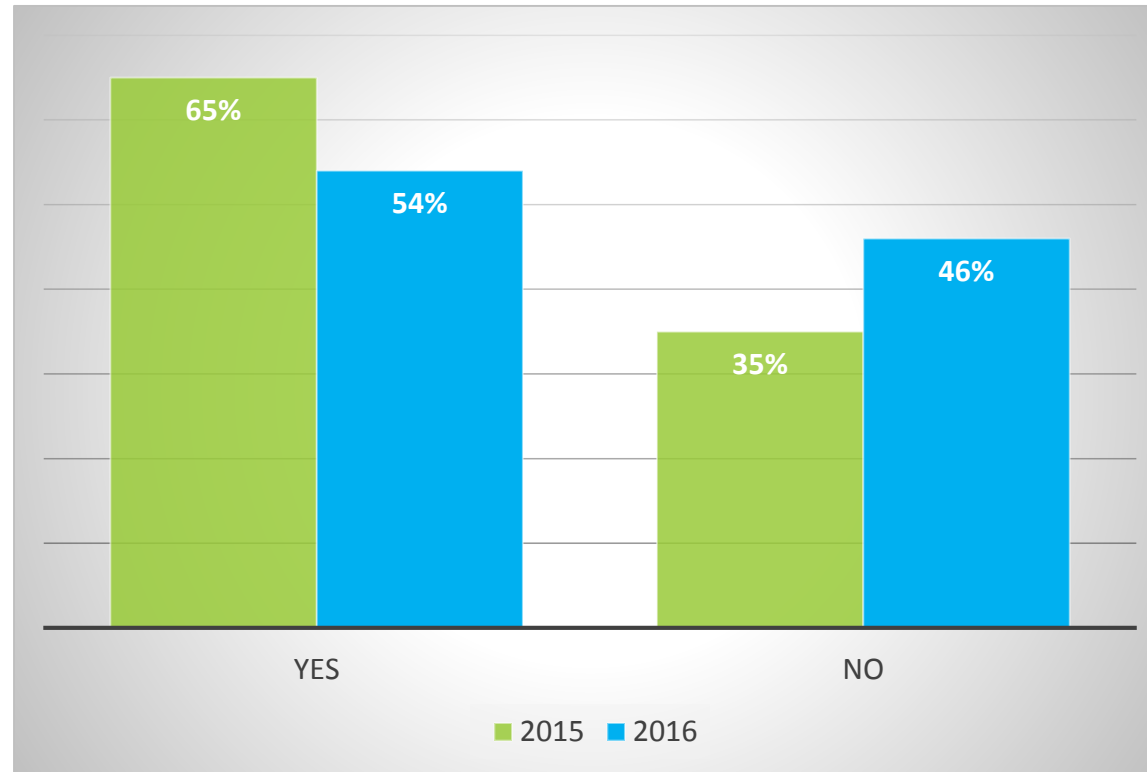




# Are you currently storing railsets?

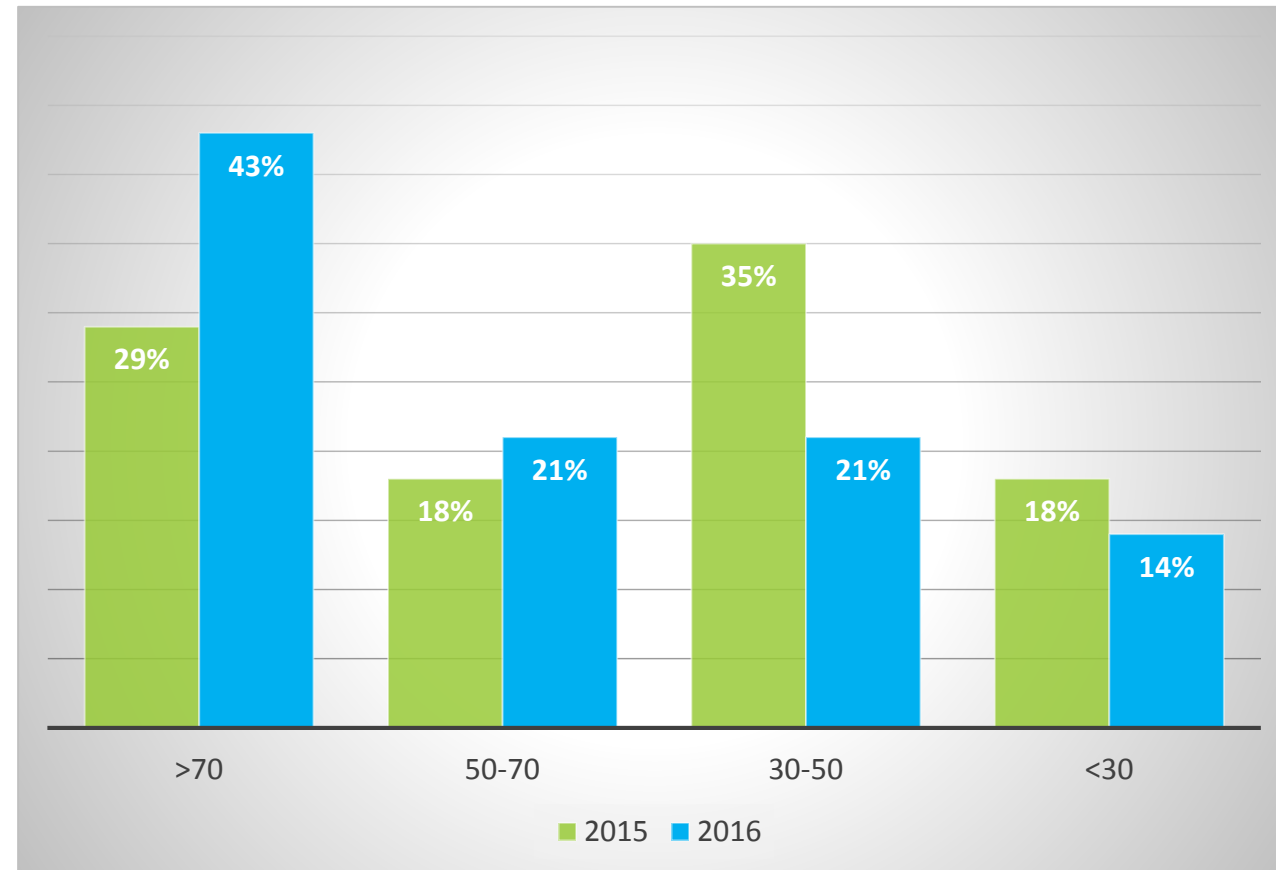
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1. Yes
2. No



# Current coal inventory (average days of burn on hand for generators that run all year)

1. >70
2. 50 – 70
3. 30 – 50
4. <30



# Survey Observations

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## -Generation from coal

- Over 70% of generators are consuming less coal in the last two years than forecasted

## -Rail Deliveries

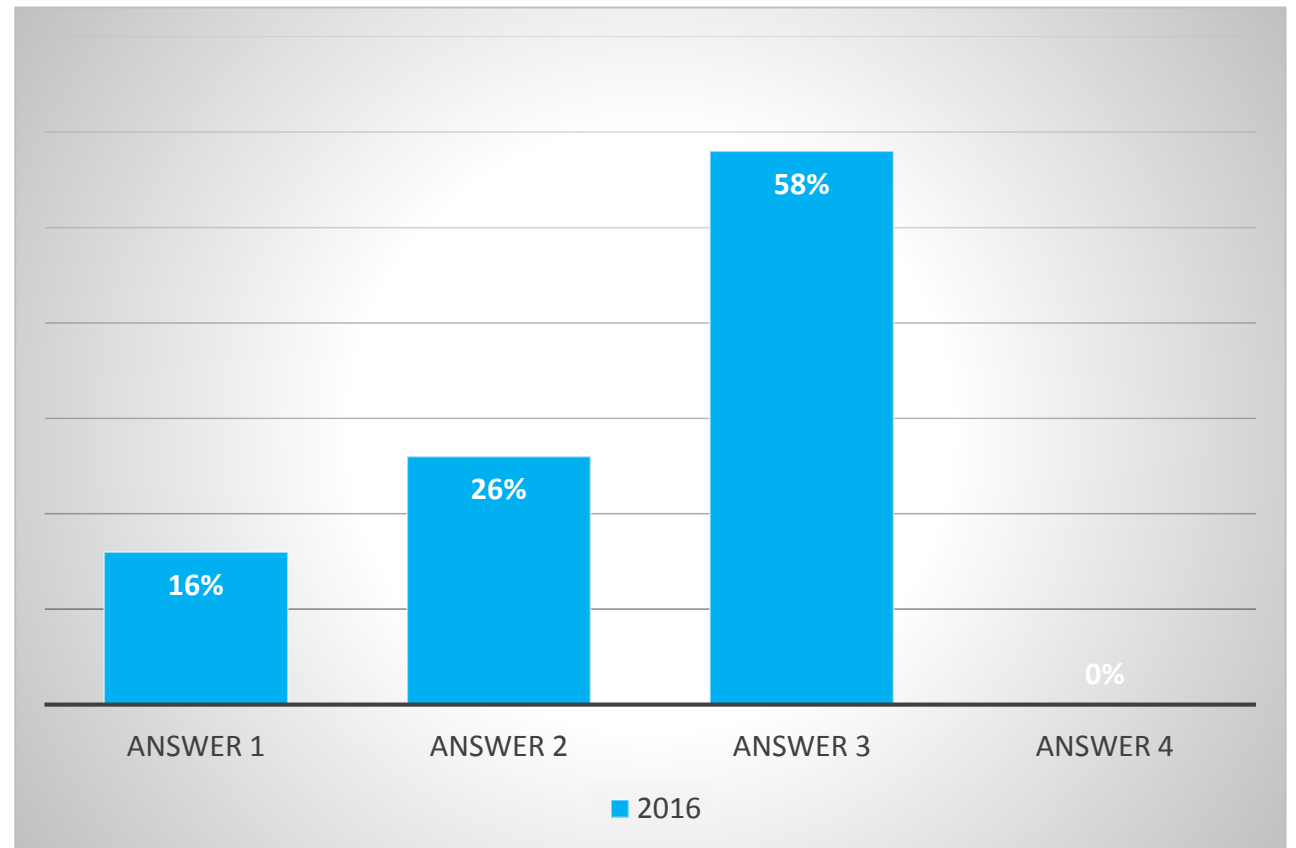
- Slightly more coal being delivered in 2016
  - Less sets being stored
- Faster cycle times

## -Coal Inventory

- Over 60% generators have at least 50 days on hand
  - Near 40% increase from a year ago

# The need for more flexibility will ultimately...

1. Drive the market to include more flexibility in long term supply and transportation agreements
2. Drive utilities to short term Agreements and/or spot purchases
3. Both in equal measure
4. Neither



# Conclusion

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- Demand is down driven mainly by competition from natural gas
- Coal playing less of a “baseload” role and serving a larger “intermediate” dispatch role
- “Ratable Delivery” can be a challenge in this environment
- Need for a flexible delivery system that can rapidly respond to dynamic demand for coal (coal vs. natural gas economics)

# Aging Coal Fleet

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# Aging coal fleet

- Major driver in coal retirements 2015-2020
  - 14 GW of coal-fired plants went offline in 2015
- 2016 retirement coal capacity
  - PJM 477 MW
  - MISO 2.2 GW
- By 2020, some 65 GW of plants will be 50 years or older



Source: SNL "Experts: Aging coal fleet a major driver in coal retirements 2015-2020", September 8, 2016  
SNL "Chart Watch: Coal plant retirements reached zenith in 2015, but more to come", March 7, 2016

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Discussion, Questions, and Comments





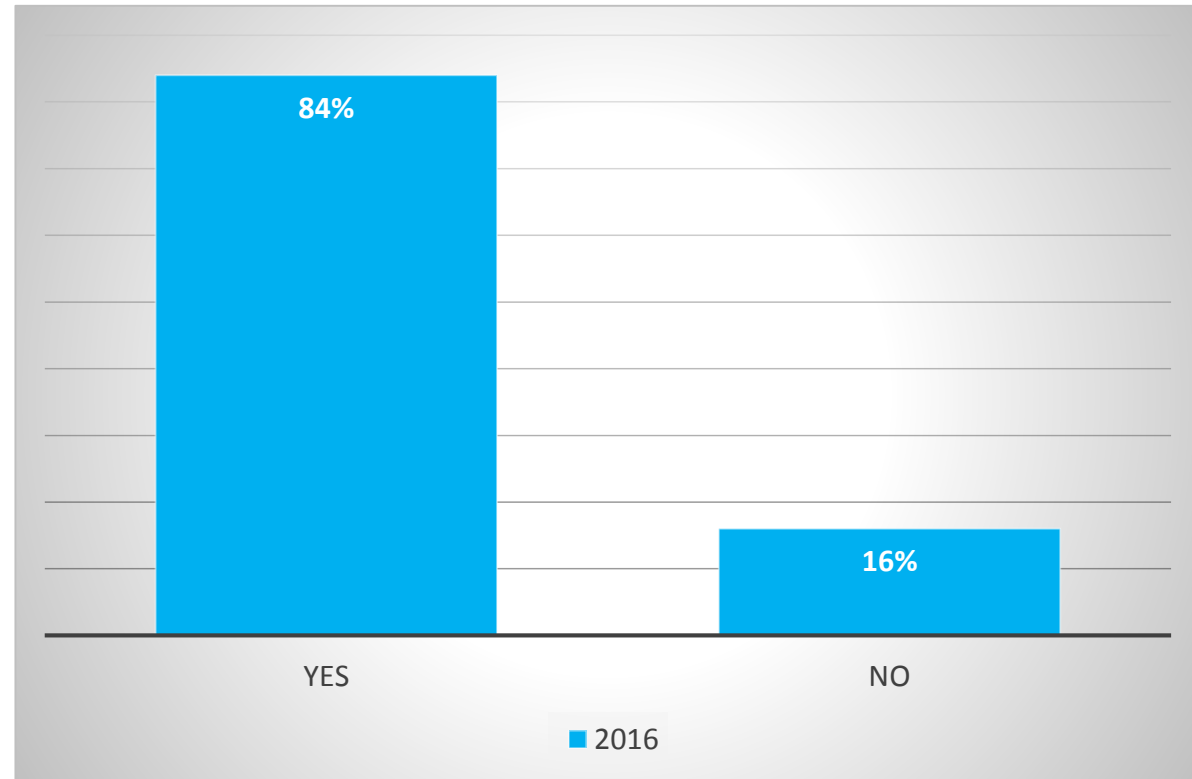
# Additional Data

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# Coal demand is down but isn't 700 MMT of coal still a lot of coal?

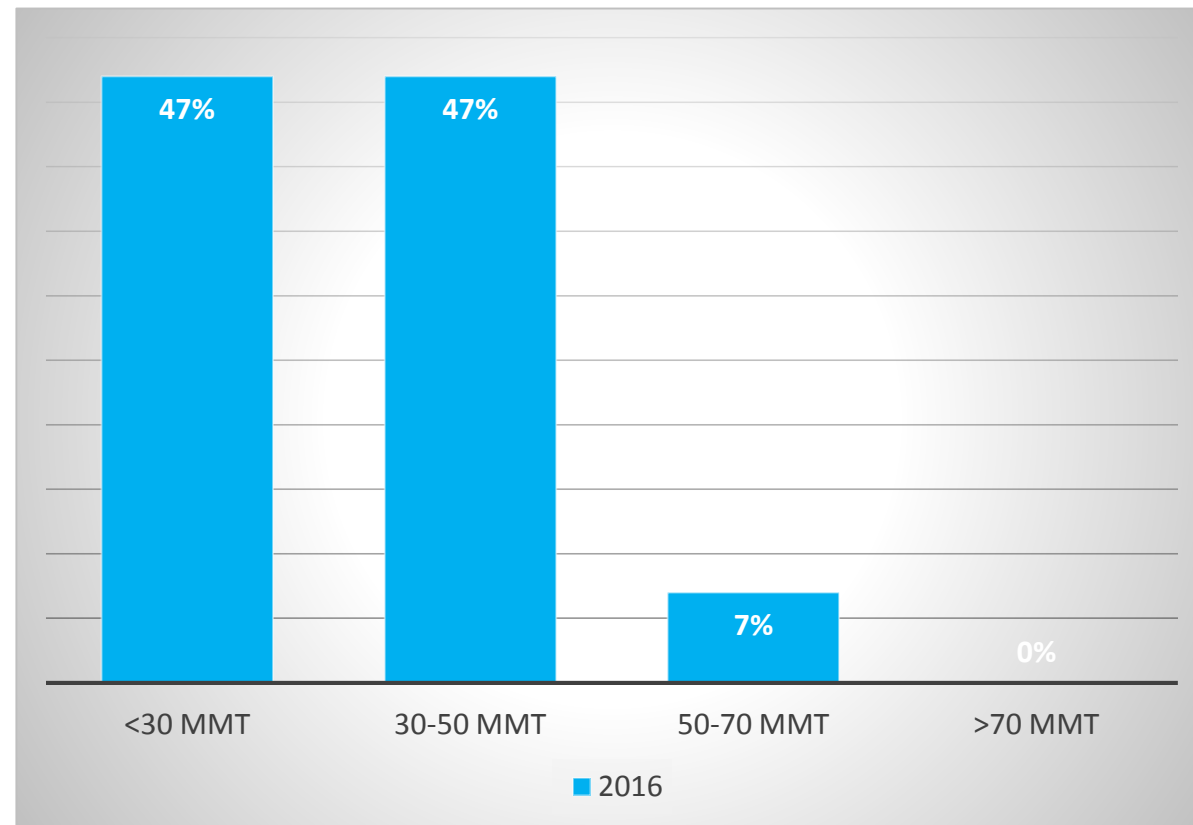
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1. Yes
2. No



# Where do you think the export market will be in the upcoming year?

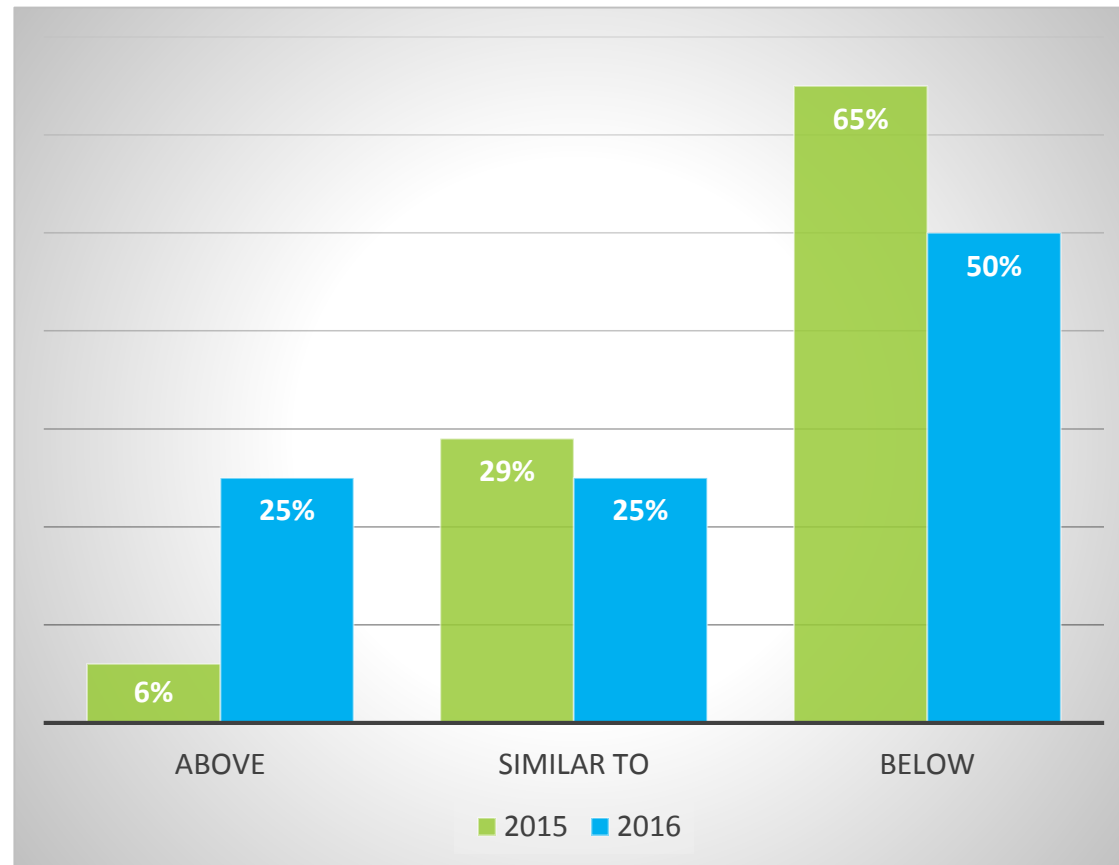
1. <30 MMT
2. 30-50 MMT
3. 50-70 MMT
4. >70 MMT



# YY actual coal-fired generation is...

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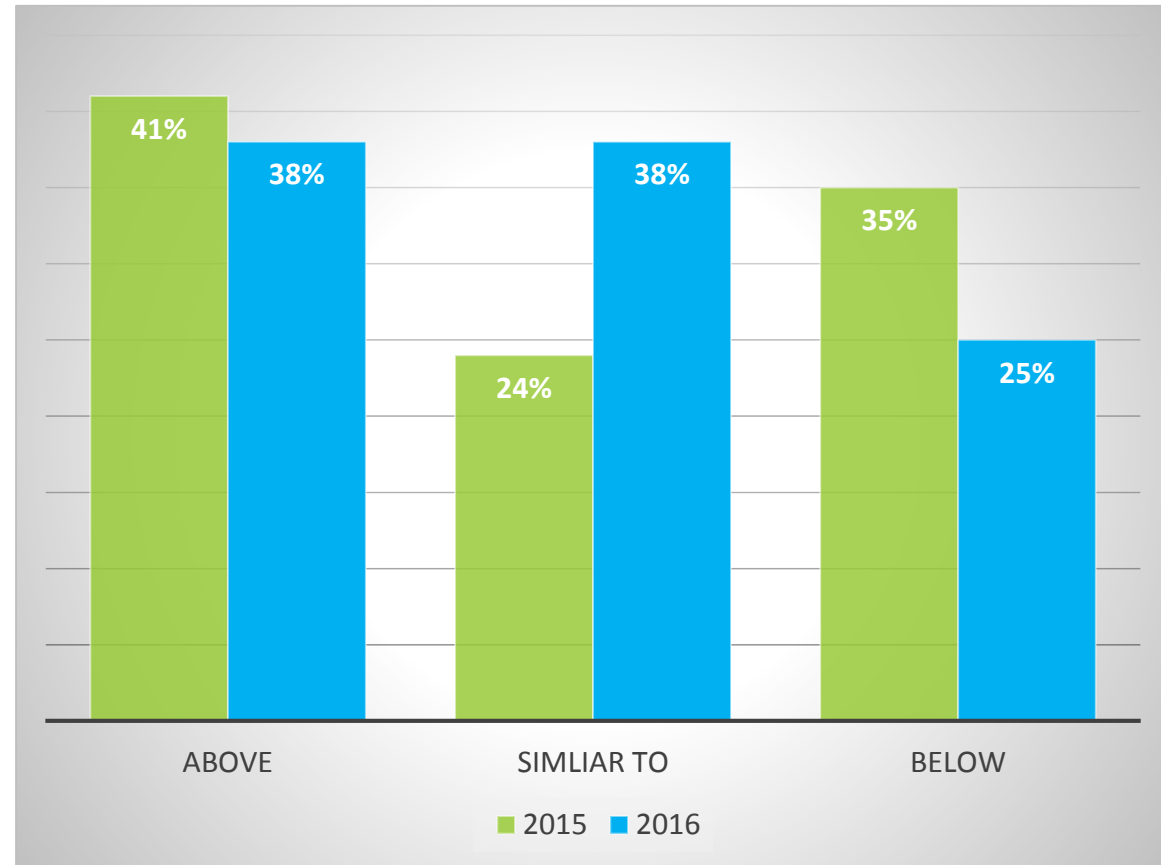
1. Above previous year
2. Similar to previous year
3. Below previous year



# YY actual rail deliveries are...

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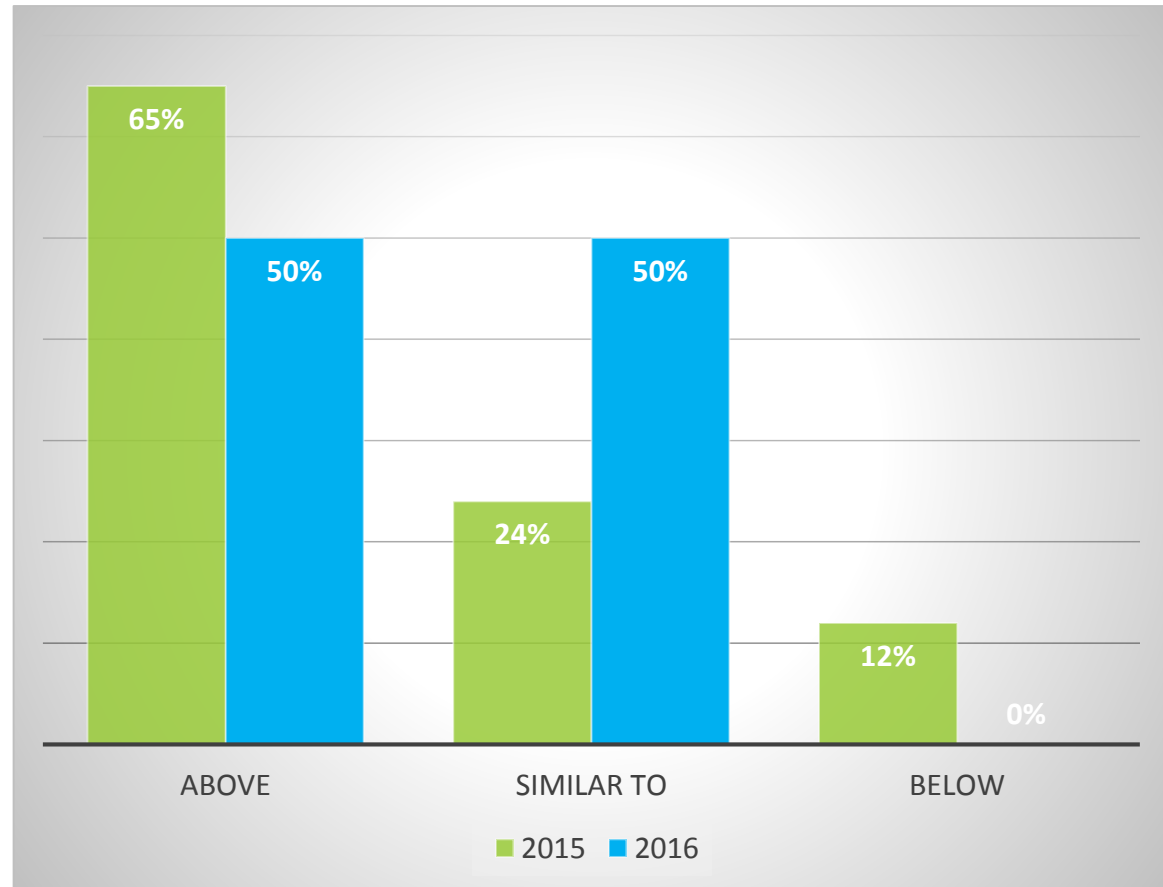
1. Above previous year
2. Similar to previous year
3. Below previous year



# YY current coal inventory is...

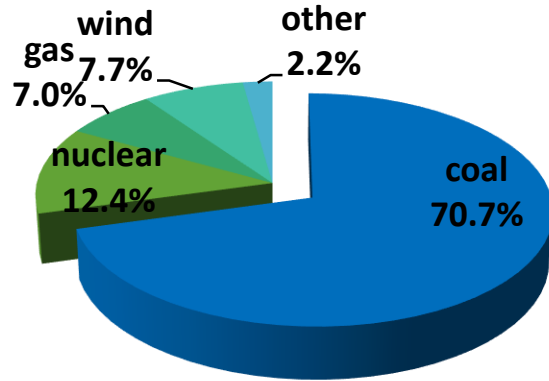
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1. Above previous year
2. Similar to previous year
3. Below previous year

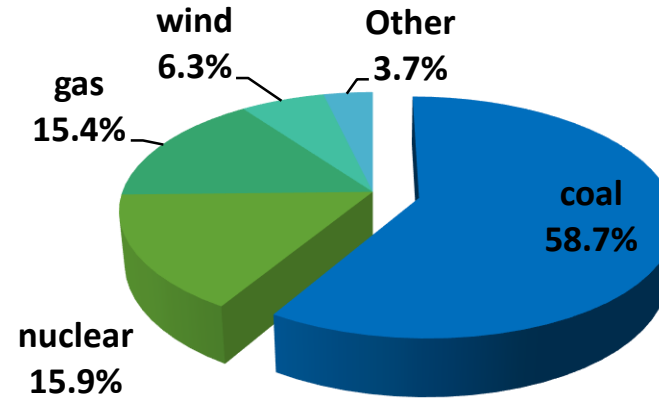


# MISO Fuel Mix

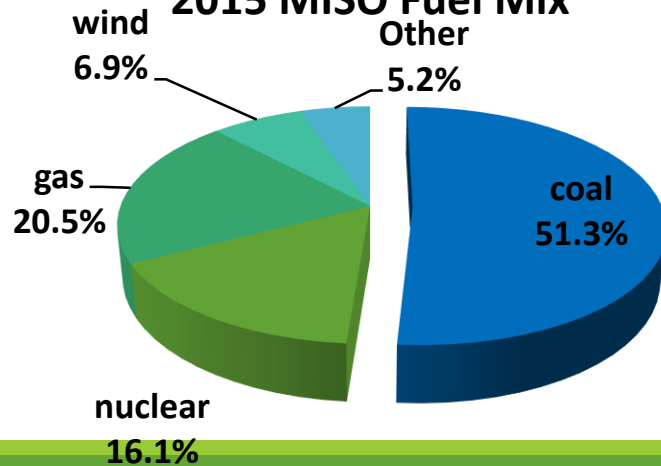
2013 MISO Fuel Mix



2014 MISO Fuel Mix



2015 MISO Fuel Mix



2016 YTD MISO Fuel Mix

