OE ENERGY
MARKET SNAPSHOT
Central Version – Data Through September 2015

Office of Enforcement
Federal Energy Regulatory Commission
Oct 2015
Natural Gas and Fuels Markets

Central
# Midwest Day-Ahead Natural Gas Prices

Averaged Annually/Seasonally

<table>
<thead>
<tr>
<th>Year</th>
<th>Average Day Ahead Prices ($/MMBtu)</th>
<th>Chicago City Gate</th>
<th>MichCon</th>
<th>AECO C Hub Natural Gas/USD</th>
<th>Dawn Ontario USD</th>
<th>NNG/NBP Ventura</th>
<th>Henry Hub</th>
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<tr>
<td>2012</td>
<td>Annual</td>
<td>2.85</td>
<td>2.90</td>
<td>2.39</td>
<td>3.07</td>
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<td>Summer</td>
<td>2.77</td>
<td>2.80</td>
<td>2.24</td>
<td>2.93</td>
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<td>Winter 2012/2013</td>
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<td>3.22</td>
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<td>Summer</td>
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<td>Annual</td>
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<td>3.90</td>
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<td>Annual</td>
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**Notes:**

Source: Derived from ICE data

Updated Oct-2015
Midwest Day-Ahead Prices

- Chicago City Gate
- AECO (USD/MMBtu)
- Northern Natural Ventura
- MichCon
- Dawn Ontario USD

30 Day Moving Avg

Source: Derived from ICE data

Updated Oct-2015
Midwest Natural Gas Market: Average Basis to Henry Hub

**Midwest Day-Ahead Basis**

<table>
<thead>
<tr>
<th>Day Ahead Basis ($/MMBtu)</th>
<th>Chicago City Gate Basis</th>
<th>MichCon Basis</th>
<th>AECO (USD/MMBtu) Basis</th>
<th>Dawn Ontario USD Basis</th>
<th>Northern Natural Ventura Basis</th>
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<td>Oct-15</td>
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**Notes:**

Source: Derived from ICE data

Updated Oct-2015
Midwest Monthly Average Basis Value To Henry Hub

- **Chicago City Gate Basis**
- **MichCon Basis**
- **AECO Basis**
- **Dawn Ontario Basis**
- **Northern Natural Ventura Basis**

**Day-Ahead Basis Averaged Monthly ($/MMBtu)**

- **Oct-2015**

**Notes:**
- Source: Derived from ICE data

**Updated Oct-2015**
Daily Midwest Natural Gas Demand All Sectors

Source: Derived from Bentek Energy data

Note: Midwest is defined as Michigan, Indiana, Illinois, Wisconsin, Iowa, Minnesota, Nebraska, South Dakota, and North Dakota
Midwest Natural Gas Consumption for Power Generation

Source: Derived from Bentek Energy data

Note: Midwest is defined as Michigan, Indiana, Illinois, Wisconsin, Iowa, Minnesota, Nebraska, South Dakota, and North Dakota
Daily Texas Natural Gas Demand All Sectors

Source: Derived from Bentek Energy data

Updated: Oct 2015
Electricity Markets
Central
Midwest Electricity Market: MISO Real Time Prices

### MISO Real Time Prices—Two Year History

<table>
<thead>
<tr>
<th>Prior Year</th>
<th>Last 30 days Indiana Hub Daily Avg Real Time Price was $26.25.</th>
<th>Last 30 days Illinois Hub Daily Avg Real Time Price was $26.86.</th>
<th>Last 30 days Michigan Hub Avg Real Time Price was $26.84.</th>
<th>Last 30 days Minnesota Hub Daily Avg Real Time Price was $18.63.</th>
</tr>
</thead>
</table>

Source: Genscape via Bloomberg

Updated: Oct 2015
Last 30 days average on peak load was 93 GW.

Source: Genscape via Bloomberg
MISO East On-Peak Spark & Dark Spreads – One Year History

Last 30 Days Avg On-Peak Spark Spread was $13.55 per MWh. Last 30 Days Avg On-Peak Dark Spread was $16.82 per MWh.

MISO East On-Peak Spark minus Dark Spread

Sources (all via Bloomberg): Electricity Price: Genscape; Coal Price: NYMEX

Assumptions:
Electricity Price = Indiana Hub On-Peak DA
NG Price Point = Chicago City Gate Spot
NG Heat Rate = 7000 mmBtu/kWh
Coal Type = Illinois Basin Mid Sulfur
Coal Heat Content = 11800 Btu/lb
Coal Heat Rate = 10000 mmBtu/kWh

Sources: Bloomberg Genscape and NYMEX data Updated: Oct 2015

NG more profitable. Coal more profitable. (Last 30 day avg $1.64 per MWh.)
Midwest Electricity Markets Overview: MISO West On-Peak Spark & Dark Spreads

Last 30 Days Avg On-Peak Spark Spread was $1.16 per MWh.
Last 30 Days Avg On-Peak Dark Spread was $11.99 per MWh.

Sources: Bloomberg Genscape and NYMEX data

Assumptions:
Electricity Price = Minnesota Hub Hub On-Peak DA
NG Price Point = Chicago City Gate Spot
NG Heat Rate = 7000 mmBtu/kWh
Coal Type = Powder River Basin
Coal Heat Content = 8800 Btu/lb
Coal Heat Rate = 10000 mmBtu/kWh

Sources (all via Bloomberg): Electricity Price: Genscape; Coal Price: NYMEX

Updated: Oct 2015
Midwest Electricity Markets Overview: East North Central Generation Mix

East North Central Generation Mix

Coal Generation in Jul '15 was 34557 GWh (62%).
Gas Generation in Jul '15 was 5891 GWh (11%).
Nuclear Generation in Jul '15 was 13750 GWh (25%).
Othr Renew Generation in Jul '15 was 1272 GWh (2%).
Hydro Generation in Jul '15 was 257 GWh (0%).
Oil Generation in Jul '15 was 60 GWh (0%).
Total Generation in Jul '15 was 55787 GWh.

States: IL, IN, MI, OH, WI

Source: EIA via Bloomberg

Updated: Oct 2015

Sources: Bloomberg EIA data
East South Central Generation Mix

- **Coal Generation** in Jul '15 was 17460 GWh (49%).
- **Gas Generation** in Jul '15 was 9050 GWh (26%).
- **Nuclear Generation** in Jul '15 was 6883 GWh (19%).
- **Hydro Generation** in Jul '15 was 1445 GWh (4%).
- **Othr Renew Generation** in Jul '15 was 541 GWh (2%).

Total Generation in Jul '15 was 35403 GWh.

Sources: Bloomberg EIA data

Updated: Oct 2015