OE ENERGY
MARKET SNAPSHOT
East Version – September 2015 Data

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

East
### Northeast Day-Ahead Prices

#### Averaged Annually/Seasonally

<table>
<thead>
<tr>
<th>Year</th>
<th>Average Day Ahead Prices ($/MMBtu)</th>
<th>Algonquin Citygates</th>
<th>Transco Zone 6 NY</th>
<th>Transco Zone 6 Non-NY</th>
<th>Columbia Appalachia</th>
<th>Henry Hub</th>
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**Notes:**
- Updated Oct-2015
- Source: Derived from ICE data
Northeast Monthly Average Basis Value To Henry Hub

Day-Ahead Basis Averaged Monthly ($/MMBtu)

Transco Zone 6 NY Basis
Transco Z6 Non-NY Basis
Columbia TCO Pool Basis
Algonquin Citygate Basis

Notes:
Source: Derived from ICE data
Updated Oct-2015

Notes:
Source: Derived from ICE data
Updated Oct-2015
Northeast Natural Gas Market: Yearly Hub Prices

Notes:
Source: Derived from ICE data
Updated Oct-2015
Daily Northeast Natural Gas Demand All Sectors

Source: Derived from Bentek Energy data

Note: Northeast is defined as Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, Ohio and Kentucky

Updated: Oct 2015
**Northeast Natural Gas Consumption for Power Generation**

Source: Derived from Bentek Energy data

Note: Northeast is defined as Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, Ohio and Kentucky

Updated: Oct 2015
### Southeast Day-Ahead Prices Averaged Annually/Seasonally

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<th>Average Day Ahead Prices ($/MMBtu)</th>
<th>FGT Z3</th>
<th>Tetco-M1</th>
<th>Transco St 65</th>
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**Notes:**

Source: Derived from ICE data

Updated Oct-2015
Southeast Day-Ahead Prices

Source: Derived from ICE data

Notes:

Updated Oct-2015
Southeast Natural Gas Market: Day Ahead Basis To Henry Hub

Southeast Day-Ahead Basis

Source: Derived from ICE data

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

Day-Ahead Prices Averaged Monthly ($/MMBtu)

- FGT Z3 Basis
- Tetco-M1 Basis
- Transco St 65 Basis
- Transco Zone 5 Basis

Notes:
Source: Derived from ICE data
Updated Oct-2015
Southeast Natural Gas Market: Daily Demand

Daily Southeast Natural Gas Demand All Sectors

Source: Derived from Bentek Energy data
Note: Southeast is defined as North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Arkansas, and Tennessee.

Updated: Oct 2015
Southeast Natural Gas Market: NG Consumption for Power Generation

Source: Derived from Bentek Energy data

Note: Southeast is defined as North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Arkansas, and Tennessee.

Updated: Oct 2015
Electricity Markets

East
Northeast Electricity Market: PJM Real Time Prices

PJM Real Time Prices—Two Year History

Prior Year

Last 30 days PJM Western Hub Daily Avg Real Time Price was $30.42.

Last 30 days PJM Eastern Hub Daily Avg Real Time Price was $28.69.

Last 30 days PJM Dayton Hub Daily Avg Real Time Price was $28.24.

Last 30 days PJM Dominion Hub Daily Avg Real Time Price was $30.64.

Source: Genscape via Bloomberg

Updated: Oct 2015
Last 30 days average on peak load was 110 GW. Last 30 days average off peak load was 97 GW.

Source: Genscape via Bloomberg
Current open interest for next month is 3280 contracts.

Yesterday’s forward curve range was $31 to $55.

One week ago the forward curve range was $31 to $55.

One month ago the forward curve range was $32 to $62.

Six months ago the forward curve range was $36 to $68.

Source: NYMEX Clearport via Bloomberg

Updated: Oct 2015
Northeast Electricity Market: PJM On-Peak Spark & Dark Spreads

**PJM On-Peak Spark & Dark Spreads – One Year History**

Last 30 Days Avg On-Peak Spark Spread was $26.76 per MWh.

Last 30 Days Avg On-Peak Dark Spread was $18.02 per MWh.

Assumptions:
- Electricity Price = PJM Western Hub Peak DA
- NG Price Point = TETCO M3 spot
- NG Heat Rate = 7000 mmBtu/kWh
- Coal Type = Central Appalachian
- Coal Heat Content = 12000 Btu/lb
- Coal Heat Rate = 10000 mmBtu/kWh

NG more profitable. (Last 30 day avg $4.37 per MWh.)
Coal more profitable.

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

Updated: Oct 2015
Northeast Electricity Market: NYISO Real Time Prices

NYISO Real Time Prices—Two Year History

Last 30 days Long Island Daily Avg Real Time Price was $35.96.

Last 30 days NYC Daily Avg Real Time Price was $27.09.

Source: Genscape via Bloomberg

Updated: Oct 2015
Last 30 days average on peak load was 21 GW. Last 30 days average off peak load was 17 GW.

Source: Genscape via Bloomberg
Current open interest for next month is 900 contracts.

Yesterday's forward curve range was $32 to $86.

One week ago the forward curve range was $32 to $87.

One month ago the forward curve range was $33 to $90.

Six months ago the forward curve range was $37 to $101.

Source: NYMEX Clearport via Bloomberg

Updated: Oct 2015
NYISO NYC On-Peak Spark & Dark Spreads – One Year History

Last 30 Days Avg On-Peak Spark Spread was $18.85 per MWh.
Last 30 Days Avg On-Peak Dark Spread was $16.27 per MWh.

Assumptions:
- Electricity Price = NYC Zone J On-Peak DA
- NG Price Point = Transco Z6 spot
- NG Heat Rate = 7000 mmBtu/kWh
- Coal Type = Central Appalachian
- Coal Heat Content = 12000 Btu/lb
- Coal Heat Rate = 10000 mmBtu/kWh

Sources (all via Bloomberg): Electricity Price: Genscape; Coal Price: NYMEX
Updated: Oct 2015
NYISO Capital Zone On-Peak Spark & Dark Spreads – One Year History

Last 30 Days Avg On-Peak Spark Spread was $10.82 per MWh.
Last 30 Days Avg On-Peak Dark Spread was $11.28 per MWh.

NYISO Capital Zone On-Peak Spark minus Dark Spread

NG more profitable. Coal more profitable. (Last 30 day avg $0.23 per MWh.)

Assumptions:
Electricity Price = Capital Zone F On-Peak RT
NG Price Point = Iroquois Zone 2
NG Heat Rate = 7000 mmBtu/kWh
Coal Type = Central Appalachian
Coal Heat Content = 12000 Btu/lb
Coal Heat Rate = 10000 mmBtu/kWh

Sources (all via Bloomberg): Electricity Price: Genscape; Coal Price: NYMEX
ISO-NE Real Time Prices—Two Year History

- Prior Year
- Last 30 days NE Mass/Boston Daily Avg Real Time Price was $31.63.
- Last 30 days Connecticut Zone Daily Avg Real Time Price was $31.05.
- Last 30 days Internal Hub Daily Avg Real Time Price was $31.17.
- Last 30 days Maine Zone Avg Real Time Price was $30.75.

Source: Genscape via Bloomberg

Updated: Oct 2015
Prior Year
Last 30 days average on peak load was 15 GW.
Last 30 days average off peak load was 11 GW.

Source: Genscape via Bloomberg

Updated: Oct 2015
Current open interest for next month is 2340 contracts.

Yesterday's forward curve range was $32 to $94.

One week ago the forward curve range was $31 to $94.

One month ago the forward curve range was $31 to $95.

Six months ago the forward curve range was $36 to $120.

Source: NYMEX Clearport via Bloomberg

Updated: Oct 2015
ISO-NE On-Peak Spark & Dark Spreads – One Year History

**ISO-NE On-Peak Spark minus Dark Spread**

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<tr>
<th>Spark &amp; Dark Spreads ($/MWh)</th>
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<tr>
<td>10</td>
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<td>30</td>
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NG more profitable. Coal more profitable. (Last 30 day avg $0.86 per MWh.)

Assumptions:
- Electricity Price = Internal Hub On-Peak DA
- NG Price Point = Algonquin Boston City Gate Spot
- NG Heat Rate = 7000 mmBtu/kWh
- Coal Type = Central Appalachian
- Coal Heat Content = 12000 Btu/lb
- Coal Heat Rate = 10000 mmBtu/kWh

Sources (all via Bloomberg): Electricity Price: Genscape; Coal Price: NYMEX
New England Generation Mix

States: CT, ME, MA, NH, RI, VT

- Gas Generation in Jul '15 was 5345 GWh (52%).
- Nuclear Generation in Jul '15 was 3344 GWh (32%).
- Coal Generation in Jul '15 was 173 GWh (2%).
- Hydro Generation in Jul '15 was 609 GWh (6%).
- Othr Renew Generation in Jul '15 was 819 GWh (8%).
- Oil Generation in Jul '15 was 40 GWh (0%).
- Total Generation in Jul '15 was 10330 GWh.

Source: EIA via Bloomberg

Updated: Oct 2015
Northeast Electricity Market: Mid Atlantic Generation Mix

States: NJ, NY, PA

Gas Generation in Jul '15 was 13904 GWh (37%).
Coal Generation in Jul '15 was 6528 GWh (17%).
Nuclear Generation in Jul '15 was 13834 GWh (37%).
Hydro Generation in Jul '15 was 2338 GWh (6%).
Othr Renew Generation in Jul '15 was 956 GWh (3%).
Oil Generation in Jul '15 was 59 GWh (0%).
Total Generation in Jul '15 was 37619 GWh.

Source: EIA via Bloomberg

Updated: Oct 2015
South Atlantic Generation Mix

- Gas Generation in Jul '15 was 13904 GWh (37%).
- Coal Generation in Jul '15 was 6528 GWh (17%).
- Nuclear Generation in Jul '15 was 13834 GWh (37%).
- Hydro Generation in Jul '15 was 2338 GWh (6%).
- Othr Renew Generation in Jul '15 was 956 GWh (3%).
- Oil Generation in Jul '15 was 59 GWh (0%).

Total Generation in Jul '15 was 37619 GWh.

States: NJ, NY, PA

Source: EIA via Bloomberg

Updated: Oct 2015