BENETEK North American Market Overview & Outlook

To Illinois State University
Institute for Regulatory Policy Studies
Springfield, IL
October 30, 2012
Agenda

- Drilling Efficiencies and Oil & NGL Production Will Sustain Annual Growth of Gas Volumes
- Demand Is Responding to Low Prices
- Prices Will Be Low and Stable as Supply Continues to Overwhelm Demand
- Changes in Intra-Regional Flow Dynamics Will Impact Local Prices, Particularly Out West
Massive Displacement
Forcing Gas Into New Markets
Supply
U.S. Production Slows But Sustains YOY Growth

2012 Avg: 63.5 Bcf/d
2011 Avg: 61.6 Bcf/d
2010 Avg: 57.1 Bcf/d
2009 Avg: 55.1 Bcf/d

Source: BENTEK Supply/Demand Balance History
Massive Shift of Rigs to Oil & Liquids Plays

Active rig count: October 5, 2012 / Change in rig count from Jan. 1, 2010

Source: BENTEK, October 2012
IRRs Shift Production to Oil/NGL-Rich Plays

Source: Company Presentations, Quarterly Reports, and News Releases
Numerous Plays Become Attractive Again at $4 Gas

Source: Company Presentations, Quarterly Reports, and News Releases
Technology Gains Drive Gas Production

<table>
<thead>
<tr>
<th></th>
<th>2007 Q1</th>
<th>2008 Q1</th>
<th>2009 Q1</th>
<th>2010 Q1</th>
<th>2011 Q1</th>
</tr>
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<tbody>
<tr>
<td>Drill Time (Days)</td>
<td>20</td>
<td>18</td>
<td>8</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Wells Per Yr. Per Rig</td>
<td>43</td>
<td>43</td>
<td>2,104</td>
<td>1,006</td>
<td>18,360</td>
</tr>
<tr>
<td>Avg. Lateral Length (Feet)</td>
<td>4,985</td>
<td>2,673</td>
<td>18,360</td>
<td>18,360</td>
<td>116,148</td>
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<tr>
<td>30 Day Ave. Prod Rate (Mcf/d)</td>
<td>1,006</td>
<td>2,673</td>
<td>18,360</td>
<td>18,360</td>
<td>116,148</td>
</tr>
<tr>
<td>IP Additions Per Rig Per Yr. (Mcf/d)</td>
<td>18,360</td>
<td>18,360</td>
<td>18,360</td>
<td>18,360</td>
<td>116,148</td>
</tr>
<tr>
<td>Drill &amp; Complete Costs ($MM)</td>
<td>2.6</td>
<td>2.6</td>
<td>2.6</td>
<td>2.6</td>
<td>2.6</td>
</tr>
</tbody>
</table>

Source: Southwestern Energy Financials
Shale Rig Counts Peaked in 2010
Yet Production Has Grown 8 Bcf/d Since 2010

Source: BENTEK Production Monitors
Associated Gas, Efficiencies, Stronger Prices Will Sustain Production Growth

Source: BENTEK Forward Curve Quarterly 2012.09.28

+10 Bcf/d By 2017

Bcf/d


History Forecast
U.S. Substantially Less Reliant on Canadian Gas

Historic Exports: 6.77 Bcf/d
Historic Decline: 0.67 Bcf/d

Forecast Exports: 4.29 Bcf/d
Forecast Decline: 0.78 Bcf/d

Source: BENTEK Canadian Observer Suite and CellCast
Demand
Power, Industrial, Mexican Exports
Spur Demand Growth

History

Forecast

+9 Bcf/d Vs. 2012


Bcf/d

-  10  20  30  40  50  60  70  80  90

Power, Industrial, Mexican Exports
Spur Demand Growth

Does not include forecast LNG exports

Source: BENTEK Forward Curve Quarterly 2012.09.28
Over 70 Industrial Demand Expansions Planned By 2017

Source: BENTEK Industrial End Users Report
Industrial Demand Forecast to Add 0.3 Bcf/d/year

- Demand bottoms out with recession
- Summer baseload has since increased 1.3 Bcf/d
- Winter & Summer to average 1.3 Bcf/d above 2012
Mexican Exports to Continue Rising

Up to 1 Bcf/d of Export Expansions By 2014

Mexican Demand

- History
- Projected

U.S. Exports to Mexico

- History
- Forecast

Mexican Demand: SENER
History: BENTEK Supply/Demand Balance Analytic Report History
Forecast: BENTEK Forward Curve Quarterly, 2012.09.28
YOY Gas Demand from Power Up 5 Bcf/d (23%)

2012 YTD: 26.7 Bcf/d
Vs. 2011 YTD: +5.0 Bcf/d
Vs. 5-Yr YTD: +6.7 Bcf/d
Gas Prices Capable of Capturing Market Share

Source: EIA, BENTEK Power Burn Report

12-Month Forward
HH Avg
$3.63
5.2 Bcf/d

2011 HH Avg
$3.98
3.0 Bcf/d
New Gas-Fired Generation Will Boost Demand

Under Construction

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<tr>
<th>Year</th>
<th>MW</th>
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<tr>
<td>2013</td>
<td>8,254</td>
</tr>
<tr>
<td>2014</td>
<td>6,488</td>
</tr>
<tr>
<td>2015</td>
<td>1,350</td>
</tr>
<tr>
<td>2016</td>
<td>624</td>
</tr>
<tr>
<td>2017</td>
<td>85</td>
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<tr>
<td>Total</td>
<td>19,293</td>
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Gas Burn Equivalent

- Under Construction + Proposed Gas Burn Equivalent: 5.9 Bcf/d
- Gas Burn Equivalent: 1.7 Bcf/d

Gas Burn Equivalent assumes all plants are combined-cycle running at 50% utilization with heat rates of 7.5.

Source: Platts & BENETEK Generation Data
Tightening Balance May Support Near-Term Prices; Long-Term Supply Surplus Grows

Source: BENTEK Forward Curve Quarterly 2012.09.28
N. America Becomes Net LNG Exporter By 2016

Net LNG Exports (Bcf/d)

First Ex Q1 2016, Net Ex Q3 2016

Source: BENTEK Special Report “LNG Surge”
Regional Dynamics
Massive Displacement
Forcing Gas Into New Markets
Marcellus to Remain Cheapest Gas Due to Production Growth and Takeaway Constraints

Incremental 7.4 Bcf/d by 2016

Source: BENTEK Northeast Production Monitor and BENTEK Cell Model
Canadian Production Declines But Exceeds 12 Bcf/d

Annual Production: 15.2 Bcf/d  
Annual Decline: 0.52 Bcf/d  

Source: BENTEK Canadian Production Monitor Monthly
Rockies Production To Stay Flat

Source: BENTEK Rockies Production Monitor
Anadarko Basin Drives MCP Growth
Expansions Will Support Bakken Growth

Williston Basin Expansions

- ONEOK Garden Creek
- ONEOK Stateline I
- HESS Tioga Plant Expansion
- ONEOK Stateline II

330 MMcf/d of Planned Processing Expansions Over Next Three Years

Source: BENTEK Midcon Production Monitor
Midcon Sources Gas From Other Areas

Market Share of Midcon Imports

2007
- Northeast: 1%
- Rockies: 23%
- SE Gulf: 23%
- Canada: 43%
- MCP: 10%

2012
- Northeast: 3%
- Rockies: 21%
- SE Gulf: 32%
- Canada: 31%
- MCP: 13%

Source: BENTEK Midcon Observer
Midcon Demand Stagnant

-0.3 Bcf/d per year

Source: BENTEK CellCast and Midcon Observer
Midcon Market Gas Power Demand Rising

Gas Burn:
YTD: 1.99 Bcf/d
+0.75 Bcf/d above 2011 YTD
+0.9 Bcf/d above 3-Yr YTD

Source: BENTEK Midcon Observer History and Energy Information Administration
Supply Shifts and Production Growth Will Moderate Prices

Source: ICE/Clearport and BENTEK Natural Gas Price Matrix
CASW Inbound Pipelines Are At ~80% Capacity

Source: BENTEK West Coast Observer
Demand & Export Growth Will Test CASW Capacity

Source: BENTEK West Coast Observer, CellCast, and Forward Curve
California Features Highest Demand Prices

Source: CME/NYMEX Clearport and BENTEK Natural Gas Price Matrix
Another Shift Looms With LNG Exports
### Basis Tightening Continent-Wide

#### AECO
- **2009**: $-0.44
- **2010**: $-0.49
- **2011**: $-0.32
- **2012**: $-0.42

#### Dawn
- **2009**: $0.32
- **2010**: $0.37
- **2011**: $0.39
- **2012**: $0.29

#### Sumas
- **2009**: $-0.13
- **2010**: $-0.28
- **2011**: $-0.11
- **2012**: $-0.12

#### NW Rox
- **2009**: $-0.82
- **2010**: $-0.47
- **2011**: $-0.23
- **2012**: $0.17

#### Chicago (Nicor)
- **2009**: $0.00
- **2010**: $0.08
- **2011**: $0.12
- **2012**: $0.07

#### PG&E
- **2009**: $0.21
- **2010**: $0.16
- **2011**: $0.25
- **2012**: $0.33

#### SoCal
- **2009**: $-0.30
- **2010**: $-0.13
- **2011**: $0.07
- **2012**: $0.15

#### Transco Z6
- **2009**: $0.95
- **2010**: $1.03
- **2011**: $0.99
- **2012**: $0.47

#### Tetco M3
- **2009**: $0.72
- **2010**: $0.74
- **2011**: $0.63
- **2012**: $0.22

#### Waha
- **2009**: $-0.51
- **2010**: $-0.22
- **2011**: $-0.12
- **2012**: $-0.08

#### Henry Hub (Cash)
- **2009**: $3.92
- **2010**: $4.37
- **2011**: $3.99
- **2012**: $2.53

*2012 prices are average of year-to-date as of 2012.09.24.*
Price Outlook
Prices To Remain Range Bound Between $3 to $3.50

Source: BENTEK Market Call 2012.09.28
NYMEX is 30-day average as of 2012.10.14
Significant Resistance at $5 Mark

NYMEX is last seven-day average as of 2012.10.14

Source: BENTEK US Forward Curve 2012.09.28
**Key Takeaways**

- Despite Weak Gas Prices, Supply Will Remain Abundant
- Structural Demand Growing But Not Pacing Supply
- Basis Will Flatten Until LNG Exports Become Established
- Until Then Gas Will Struggle to Break $5 Mark
BENTEK Energy

BENTEK is an energy market analytics company focused on the natural gas market and related energy sectors.

Rick Margolin
Direct: 720.214.3807
rmargolin@bentekenergy.com
AIM: BentekRickM

Or

Contact Any Analyst at 303.988.1320

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