

# **Coping with the Costly Oversupply of Gas: Liquids Activity Surges Ahead**

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*Presentation to the AAPG Trustees*

September 2011 • Lake Tahoe, California

*Robert W. Esser,  
IHS CERA (retired)*



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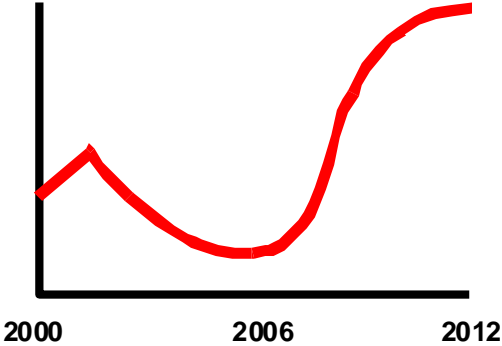
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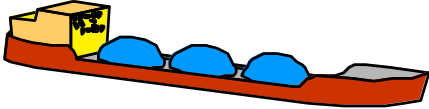
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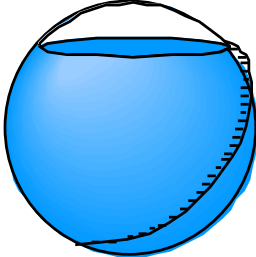
# Too Much Gas



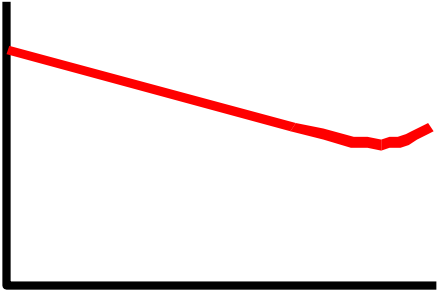
**Surge in Domestic Production**



**LNG Imports**



**Storage**

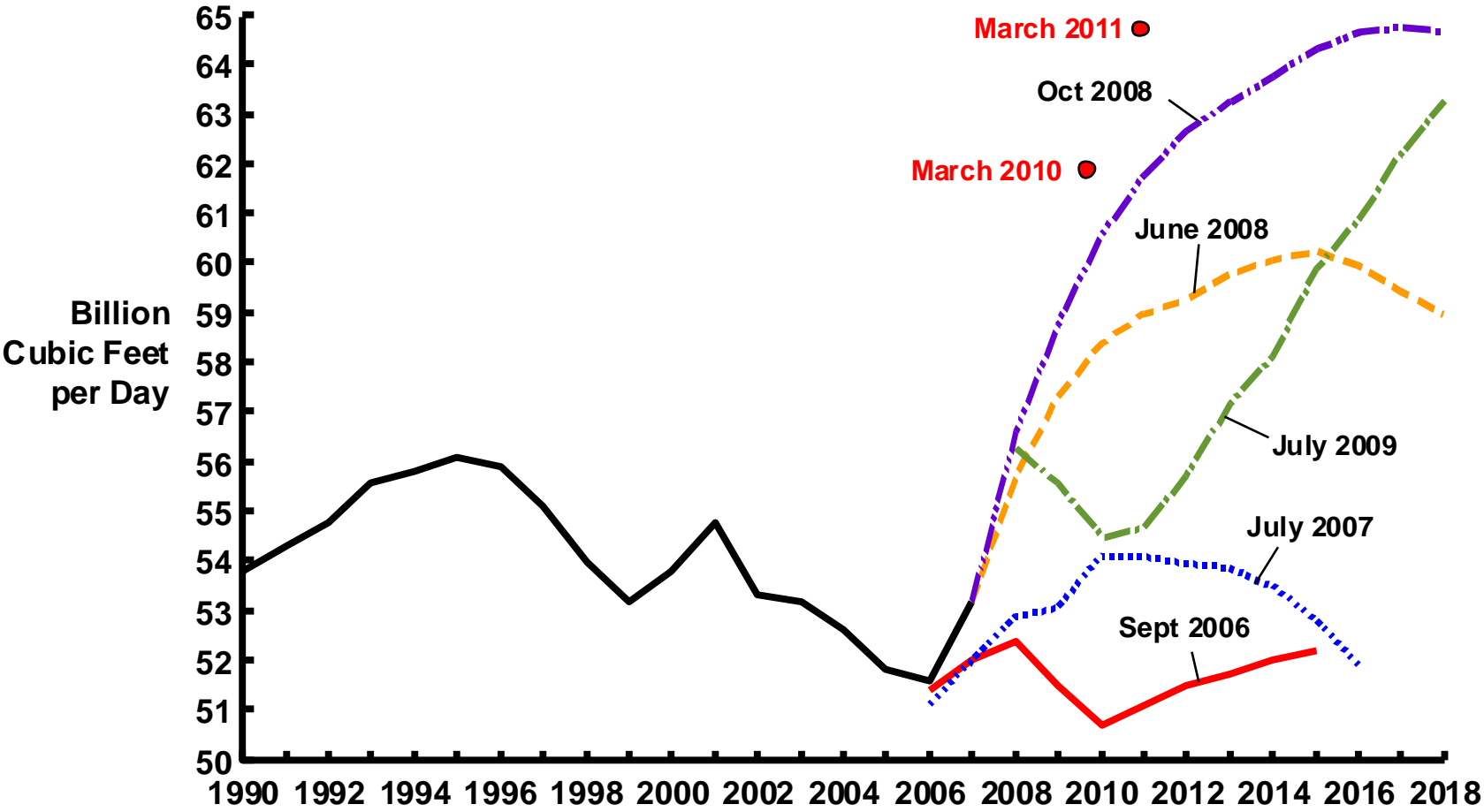


**Demand**



Source: EIA, IHS CERA.  
August 2011  
40916-100

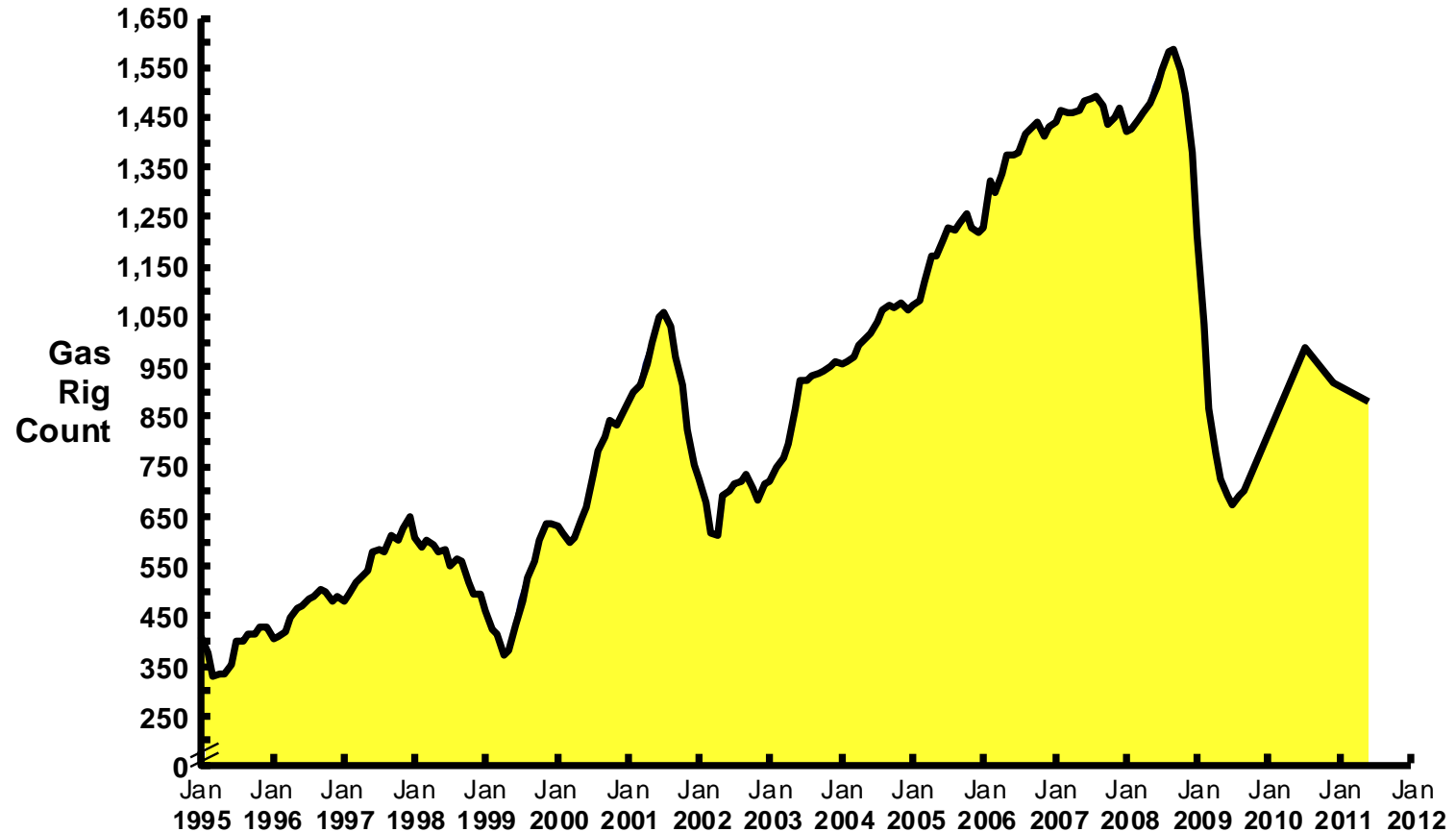
# Recent US Lower-48 Average Annual Dry Gas Productive Capacity Outlooks



Source: IHS CERA.  
July 2011  
40916-3B



# US Gas-related Drilling



Source: IHS CERA, Baker Hughes Inc.

Note: A weekly peak level of 1,606 rigs was reached in September 2008.

A secondary peak of 1,068 rigs was attained in July 2001.

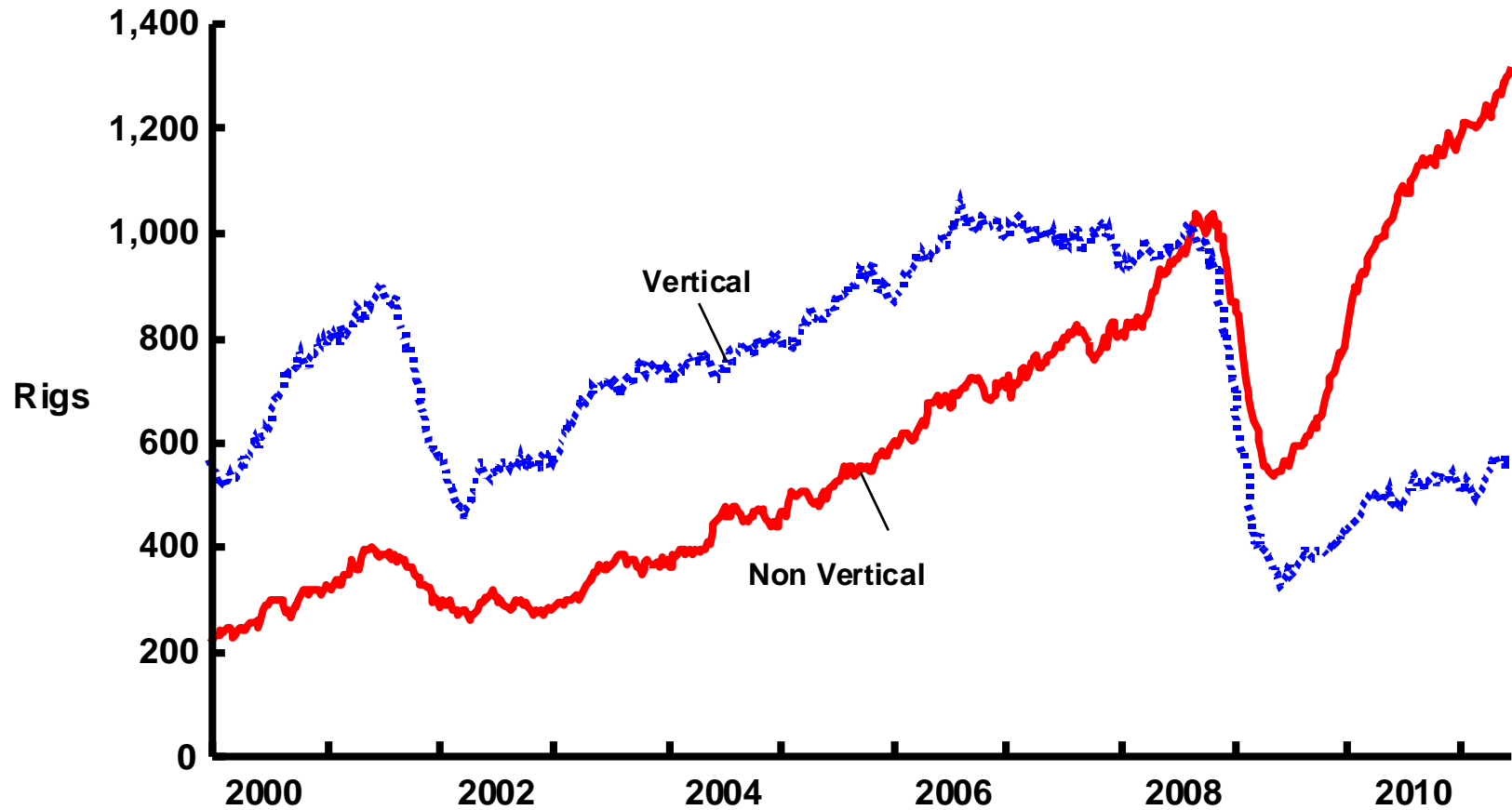
Updated July 2011

40916-2



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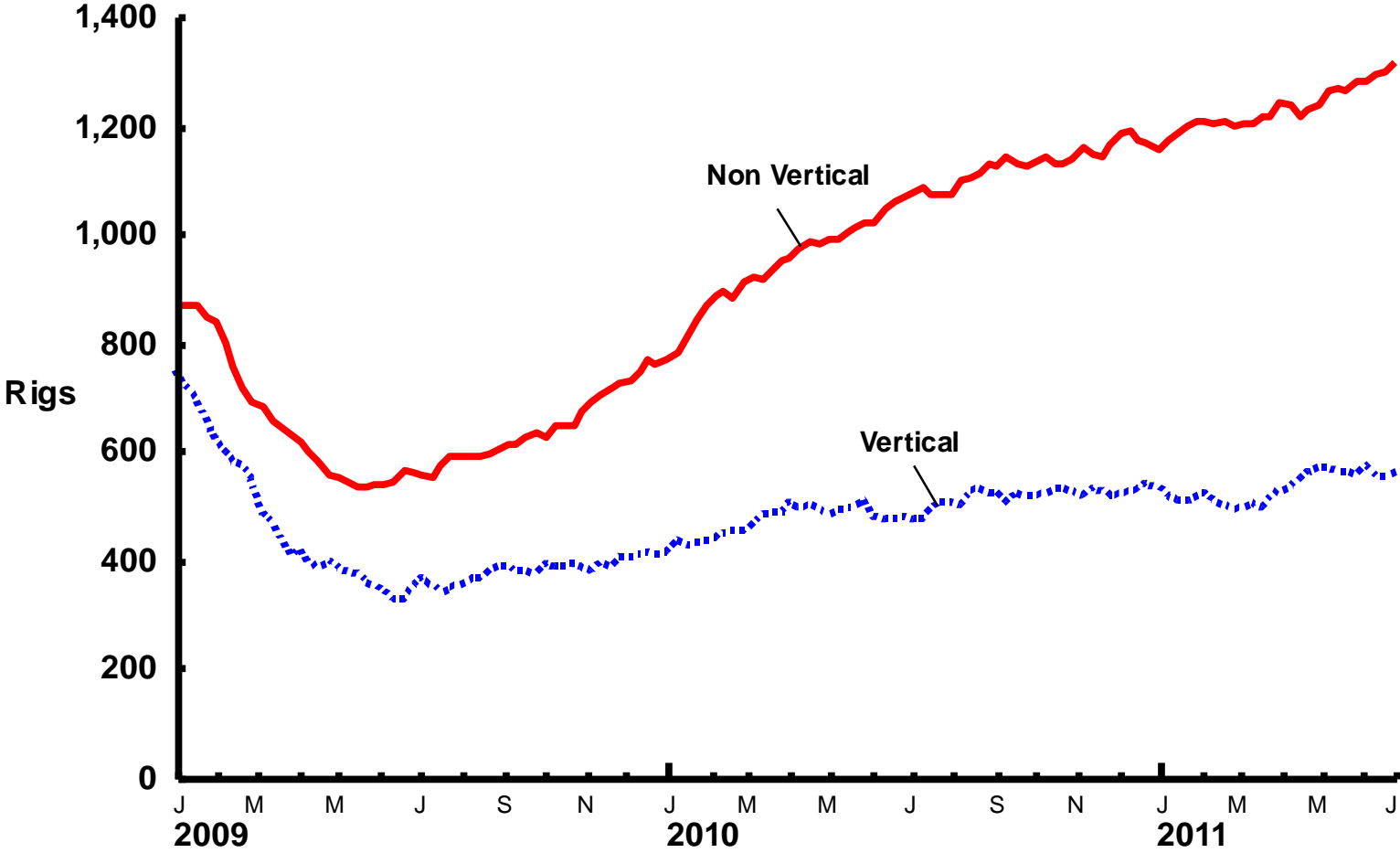
# US Lower 48 Rig Count by Direction 2000-2011



Source: IHS CERA.  
July 2011  
40916-102

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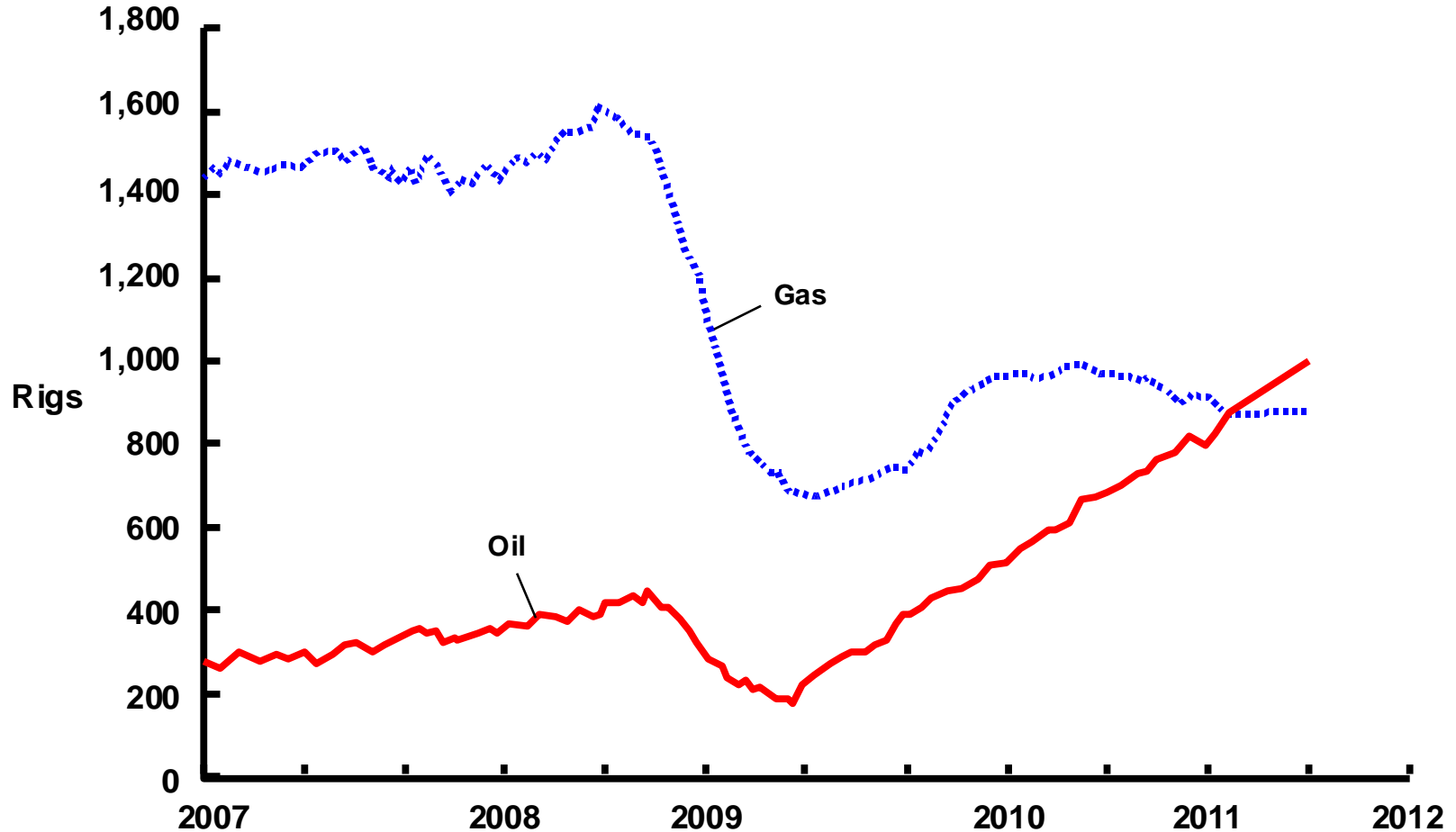
# US Lower 48 Rig Count by Direction 2009-2011



Source: IHS CERA.  
July 2011  
40916-103



# US Lower-48 Rig Count Shifts Toward Oil



Source: IHS CERA.  
July 2011  
40916-104

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# Significant Changes in Rig Counts

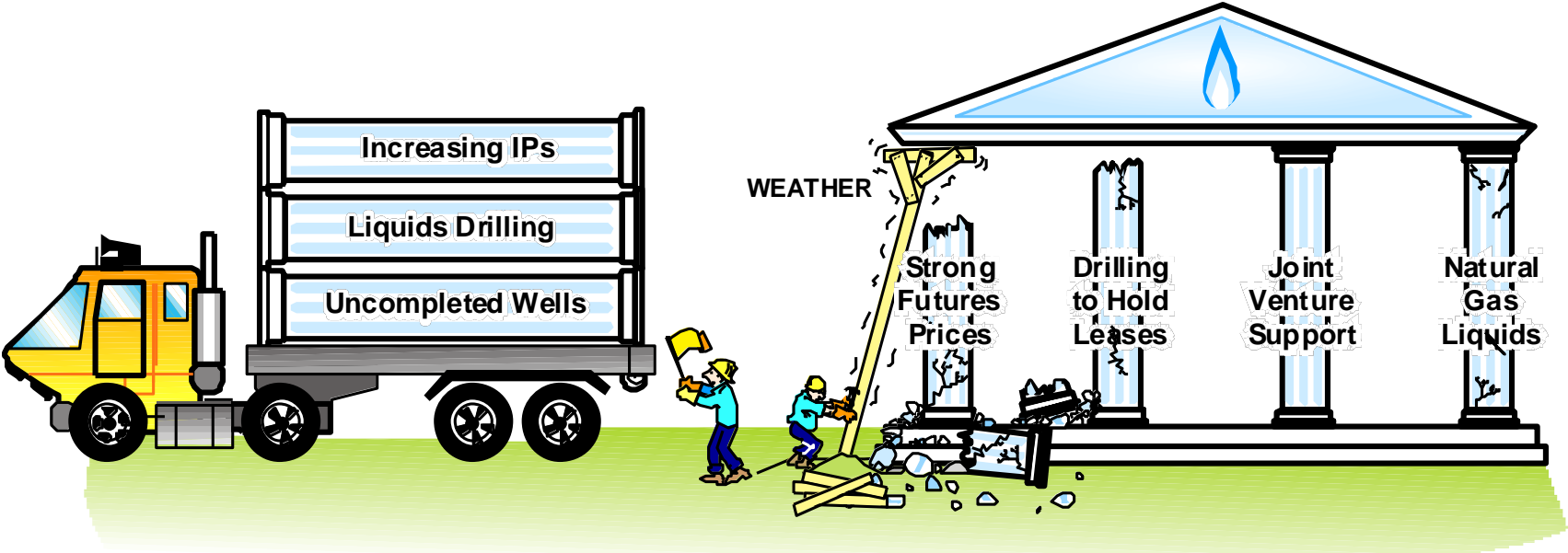
Area	Play	June 2010	June 2011	Change
<b>Oil Related</b>				
Colorado	Niobrara	53	70	+17
Kansas		17	29	+12
New Mexico	Bone Spring/Avalon	65	80	+15
North Dakota	Bakken	115	161	+46
Oklahoma	Miss Lime*, Woodford-Cano*	125	169	+44
TX RR 1	Eagle Ford	41	106	+65
TX RR 2	Eagle Ford	28	66	+38
TX RR 7C	Wolfberry	52	70	+18
TX 8	Bone Sprint/Avalon*	150	255	+105
TX 8A	Wolfberry	25	37	+12
<b>Gas Related</b>				
Arkansas	Fayetteville Dry Gas	39	35	-4
North Louisiana	Haynesville Dry Gas	139	100	-39
Pennsylvania	Marcellus	82	111	+29
TX RR 5	Barnett	86	55	-31
TX RR 6	Haynesville Dry Gas	75	50	-25
TX 10	Granite Wash	62	78	+16
TX 3	Dry Gas	53	42	-11

Source: IHS CERA.

\*Rich gas.

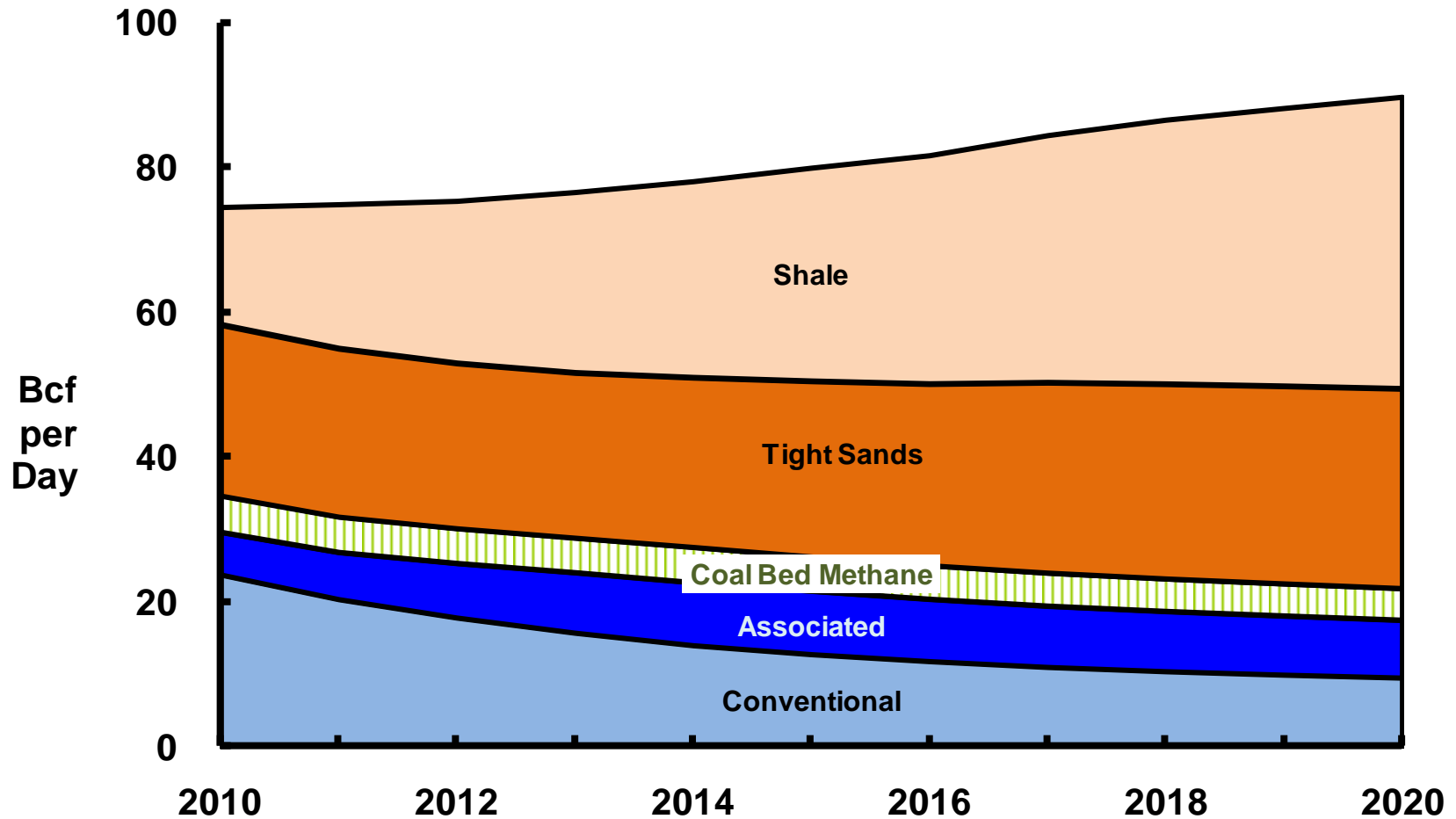


# Pillars of Gas Production Support



Source: IHS CERA.  
01002-5\_0804

# North American Productive Capacity by Type

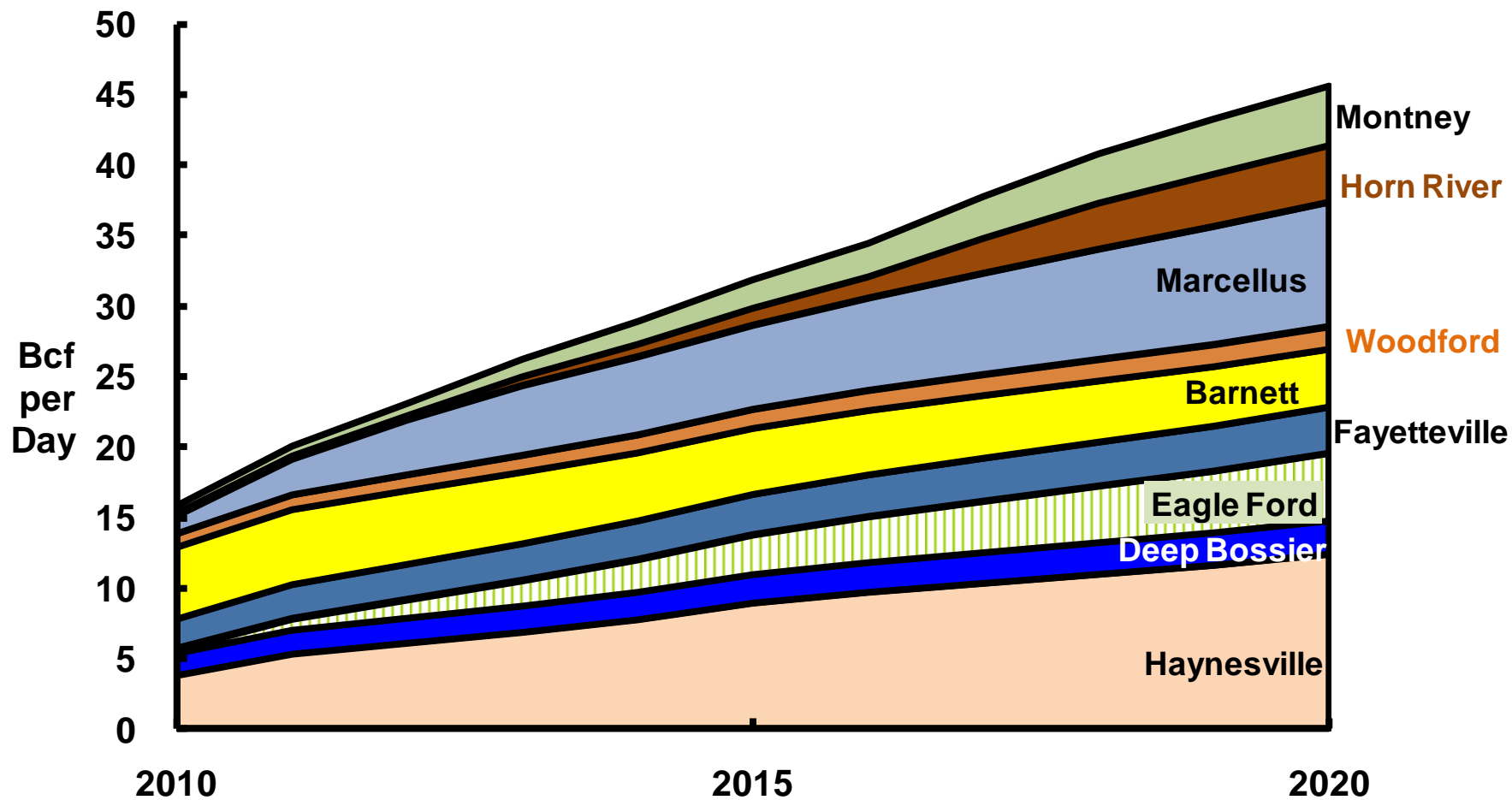


Source: EIA, IHS CERA.

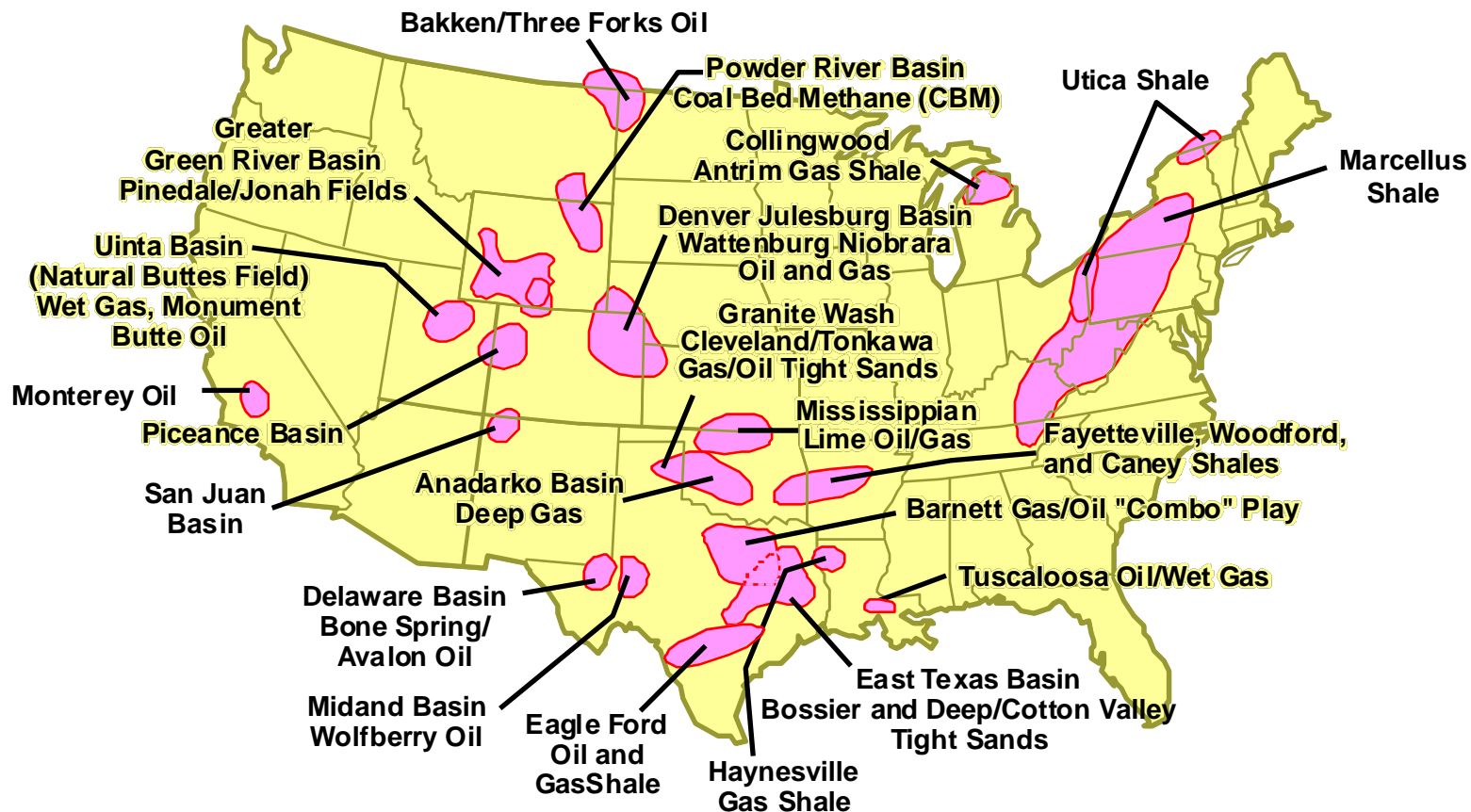


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# Productive Capacity from Major Shale Plays

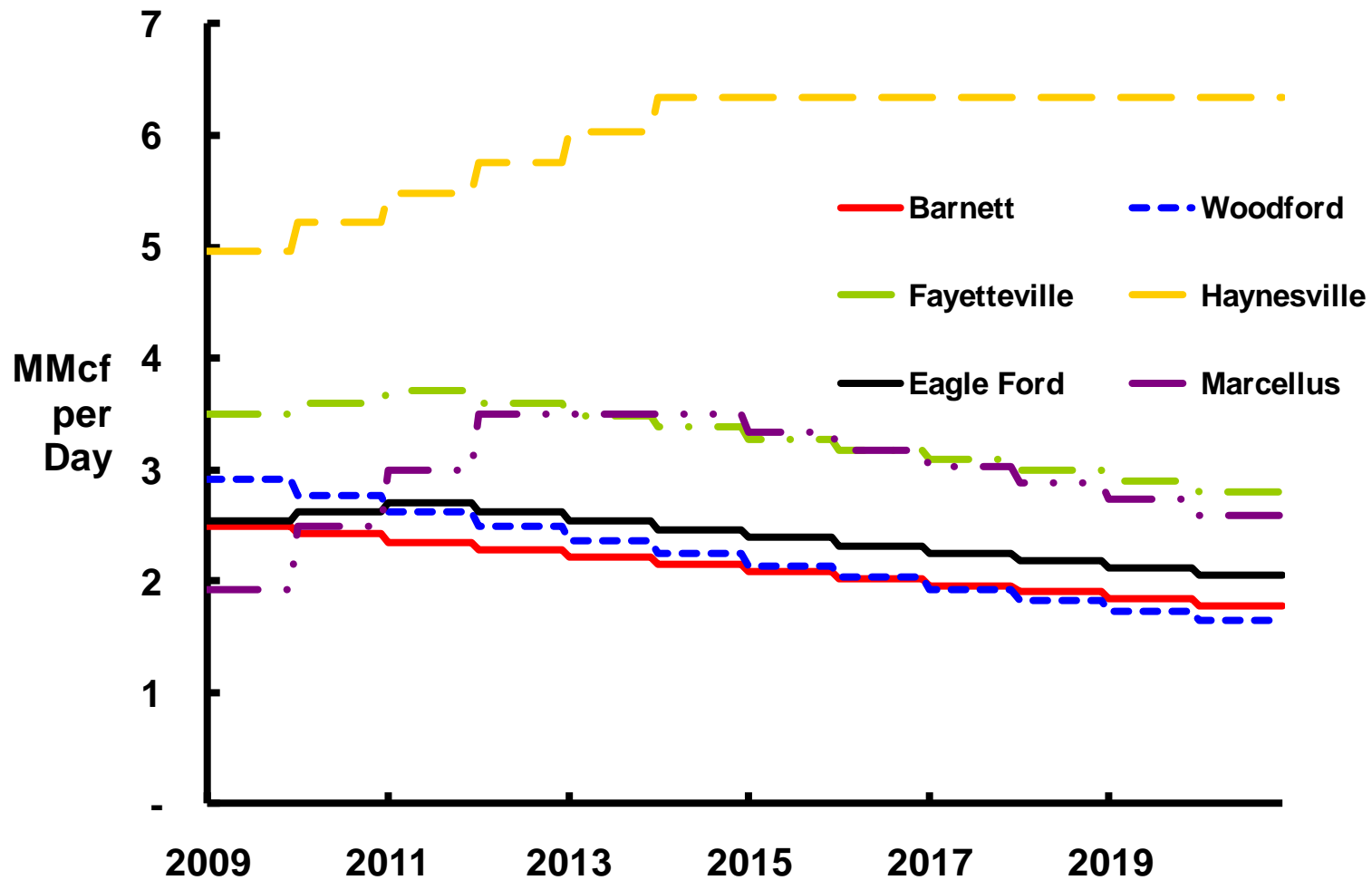


# Major US Lower 48 Unconventional Liquids\* and Gas Hotspots



Source: IHS CERA.  
 \*Includes oil, high NGL yield gas.  
 Updated August 2011  
 40916-45

# Major Shale IP Rates



Source: IHS CERA.

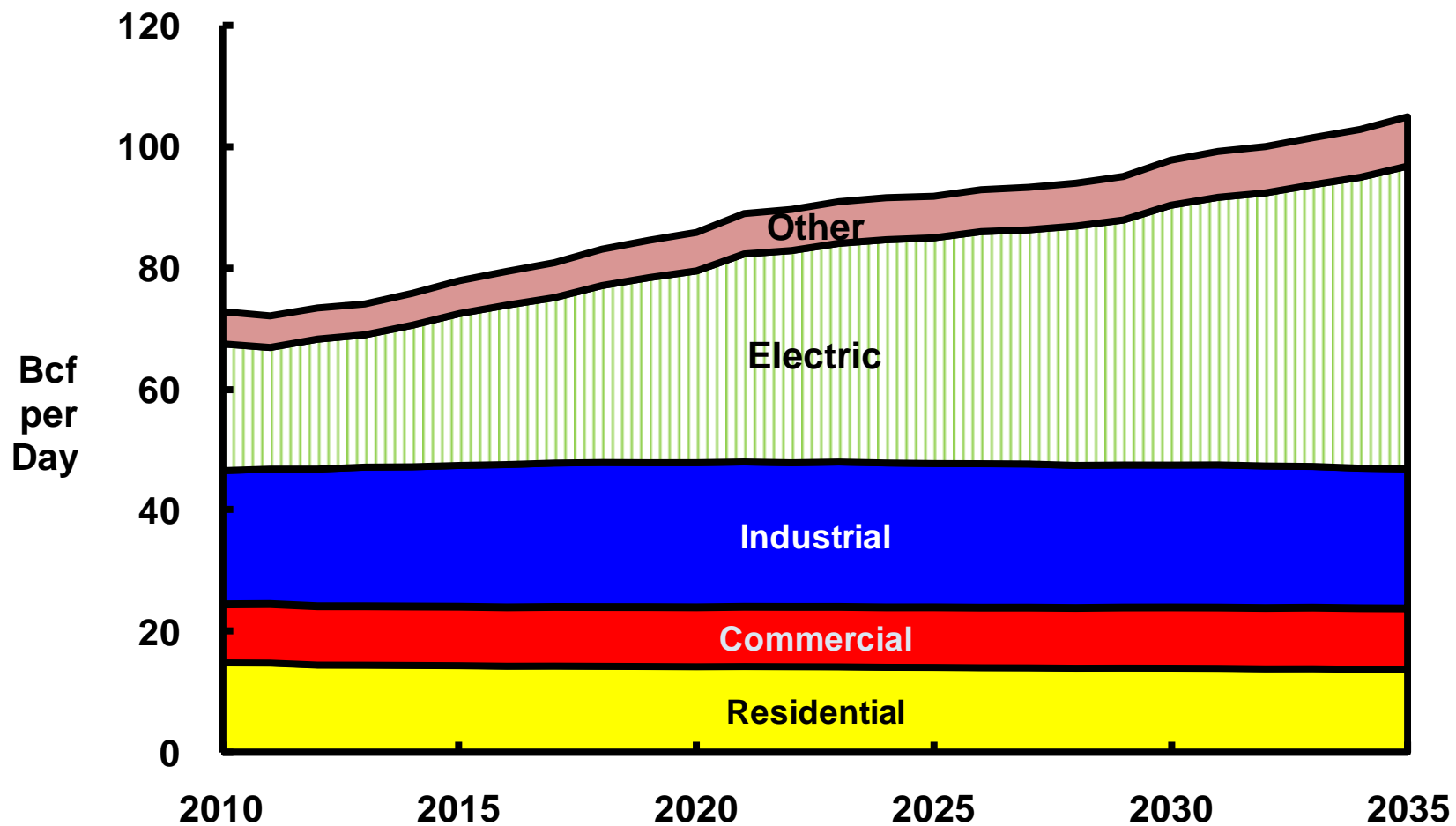
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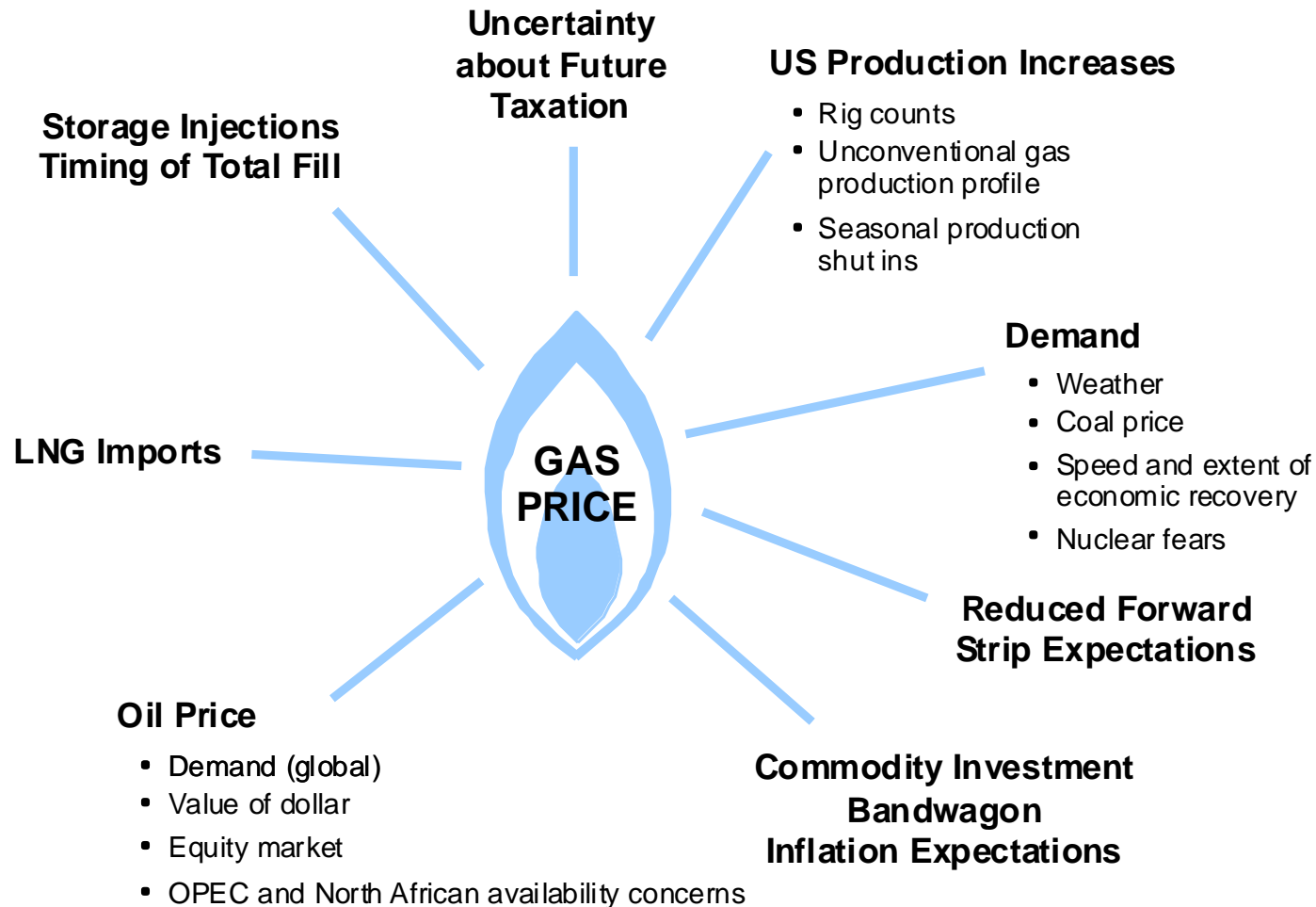
# North American Natural Gas Demand



Source: EIA, IHS CERA.



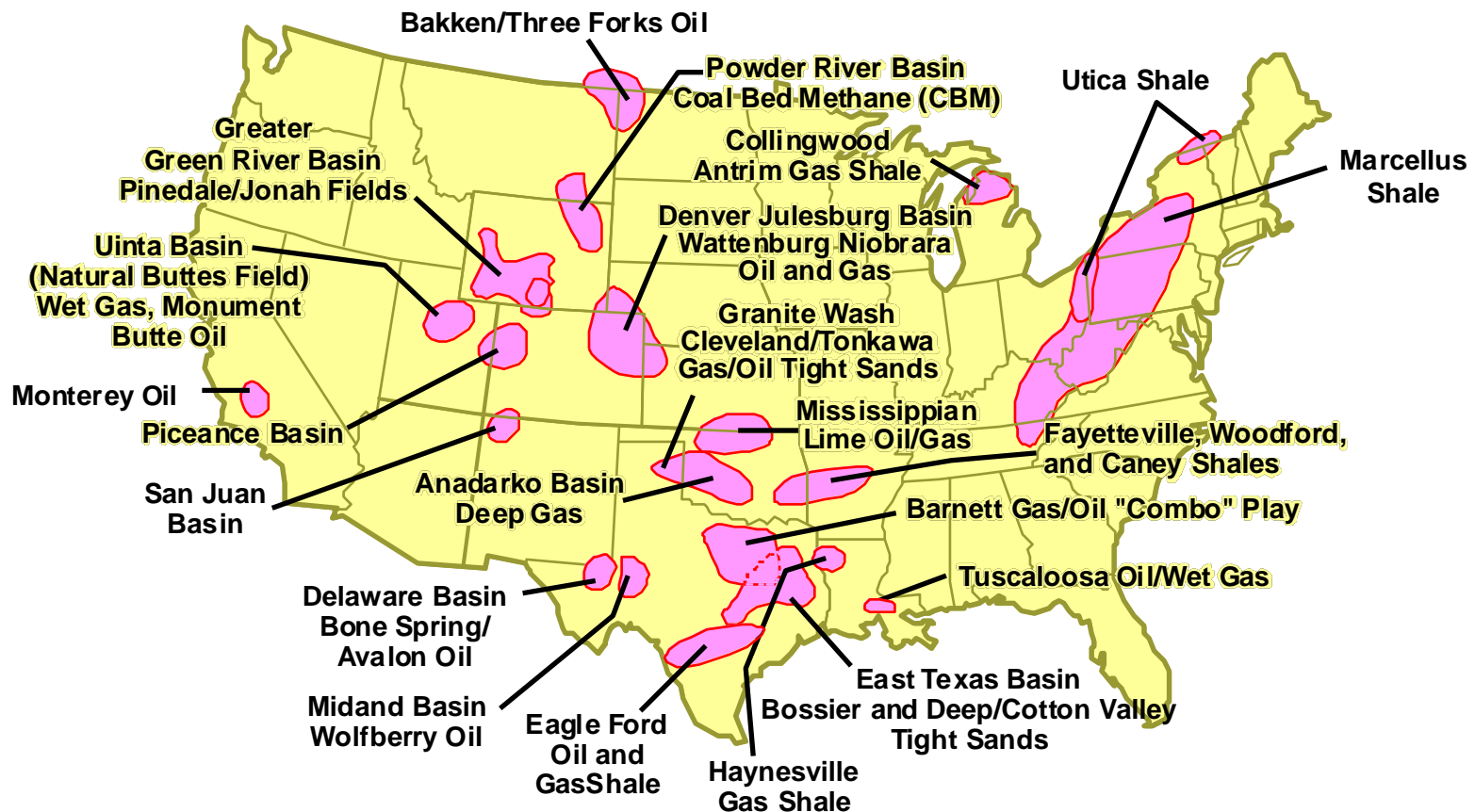
# Factors in US Gas Price Expectations



Source: IHS CERA.  
July 2011  
40916-101

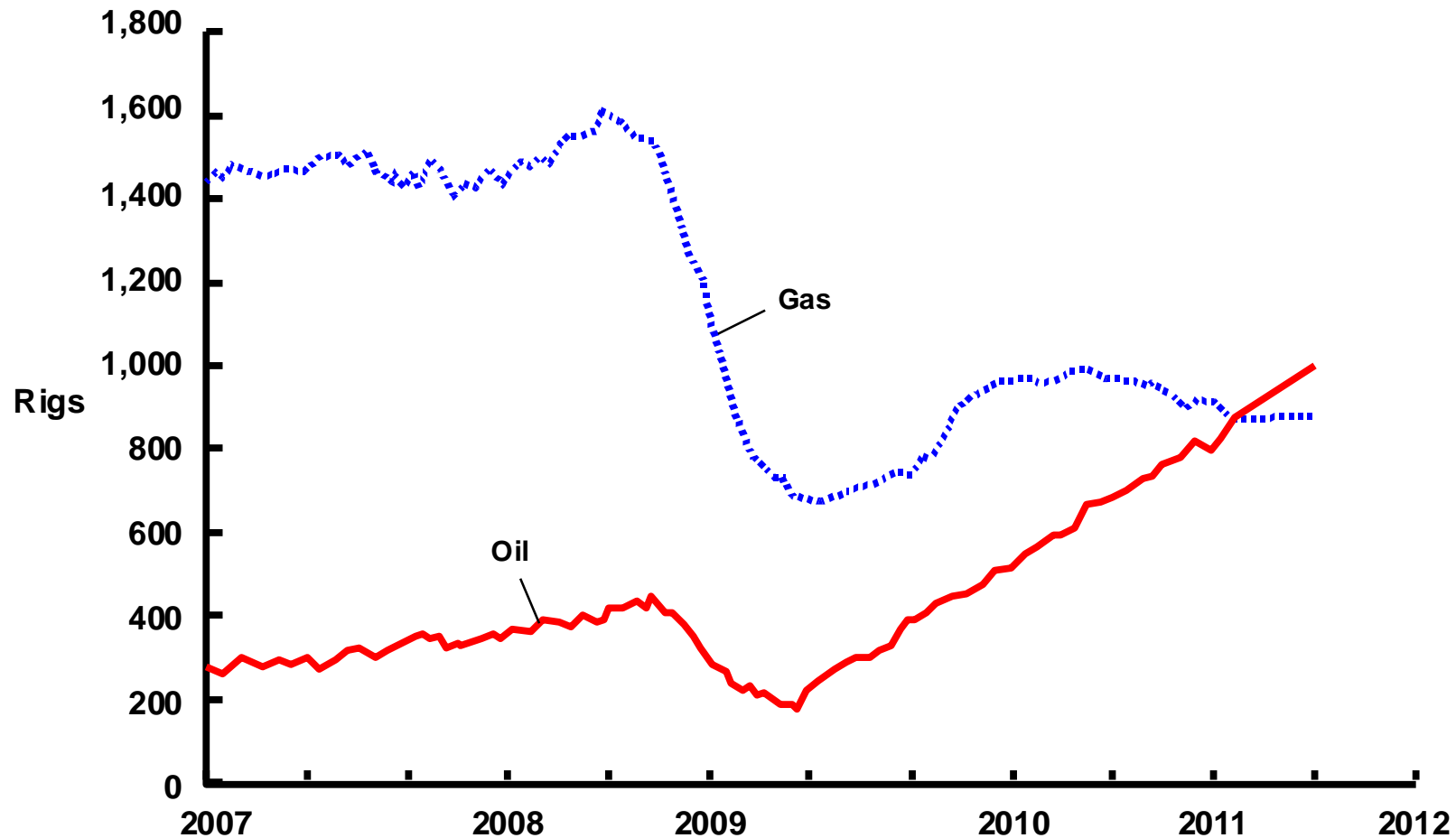


# Major US Lower 48 Unconventional Liquids\* and Gas Hotspots



Source: IHS CERA.  
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 Updated August 2011  
 40916-45

# US Lower-48 Rig Count Shifts Toward Oil



Source: IHS CERA.  
July 2011  
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