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August 31, 2012

Executive Secretary
North Dakota Public Service
Commission
State Capitol Building
Bismarck, ND 58505

Re: Cost of Gas Adjustment (COG)
September 2012

Great Plains Natural Gas Co. (Great Plains), a Division of MDU Resources Group, Inc., herewith submits an original and seven (7) copies of a Cost of Gas Adjustment (COG) pursuant to North Dakota Century Code 49-05-05.

Attachment A is the Rate Summary Sheet (78th Revised Sheet No. 1.1) showing the proposed natural gas rates and the Cost of Gas Tariff (78th Revised Sheet No. 8), showing the September 2012 cost of gas and the resulting Cost of Gas Adjustment. The net effect of this filing is a decrease of \$0.0083 per mcf for residential and firm general service customers and a decrease of \$0.0506 per mcf for interruptible customers.

Attachment B shows the calculations supporting the gas costs for September 2012, including the calculation of the commodity cost of gas. The commodity cost of gas has decreased \$0.0506 since the last COG filing. There has been an increase in pipeline charges of \$0.0423 per mcf due to changes in pipeline rates. The net effect of these changes is a decrease of \$0.0083 per mcf for residential and firm general service customers.

Attachment C explains the reasons for the change in the market price of gas.

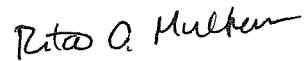
Attachment D shows the calculation of the balancing account since April 30, 2012.

Great Plains submitted a check for \$600.00 on January 4, 2012 pursuant to the requirements of Section 49-05-05 of the North Dakota Century Code. This payment covers the \$50.00 filing fee associated with this month's COG filing.

Great Plains respectfully requests this filing be accepted as being in full compliance with the filing requirements of this Commission.

Please acknowledge receipt by stamping or initialing the duplicate copy of this letter attached hereto and returning the same in the enclosed self-addressed, stamped envelope.

Sincerely,

A handwritten signature in black ink that reads "Rita A. Mulkern". The signature is written in a cursive style with a long horizontal flourish at the end.

Rita A. Mulkern
Regulatory Affairs Manager

Attachments

Attachment A

Attachment A



GREAT PLAINS NATURAL GAS CO.
A Division of MDU Resources Group, Inc.

**State of North Dakota
 Gas Rate Schedule**

NDPSC Volume 2
 78th Revised Sheet No. 1.1

RATE SUMMARY SHEET

Canceling 77th Revised Sheet No.1.1

Page 1 of 1

Rate Schedule	Sheet No.	Basic Service Charge	Distribution Delivery Charge	COG Items	Total Rate/MCF
Firm Gas Service - General	2	\$3.50 per month	First 10 MCF \$1.2740 Over 10 MCF 1.0540	\$7.2712	\$8.5452 8.3252
Firm Gas Service - General Highway 13	2.5	\$3.50 per month	First 10 MCF \$2.1740 Over 10 MCF 1.9540	\$7.2712	\$9.4452 9.2252
Interruptible Gas Service - General	3	\$3.50 per month	First 400 MCF \$1.1391 Next 2,600 MCF 0.8931 Over 3,000 MCF 0.7411	\$2.1157	\$3.2548 3.0088 2.8568
Interruptible Gas Service - Highway 13	3.5	\$3.50 per month	First 400 MCF \$2.0391 Next 2,600 MCF 1.7931 Over 3,000 MCF 1.6411	\$2.1157	\$4.1548 3.9088 3.7568
Interruptible Gas Service - Grain Processing	4	\$3.50 per month	All MCF \$1.2391	\$2.1157	\$3.3548
Transportation Service	5	\$3.50 per month	First 400 MCF \$1.1391 Next 2,600 MCF 0.8931 Over 3,000 MCF 0.7411		\$1.1391 0.8931 0.7411

Date Filed: August 31, 2012

Effective Date: September 1, 2012

Issued By: Tamie A. Aberle
 Regulatory Affairs Manager

Case No.:



GREAT PLAINS NATURAL GAS CO.

A Division of MDU Resources Group, Inc.

State of North Dakota Gas Rate Schedule

NDPSC Volume 2
78th Revised Sheet No. 8
Canceling 77th Revised Sheet No. 8

COST OF GAS

Summary:	Firm				Interruptible		
	Est. Wtd. Demand Costs	Average Commodity	GCR Adj.	Est. Wtd. Total Firm	Average Commodity	GCR Adj.	Total Int.
Base Rate	\$0.0658	\$5.1191	\$0.0000	\$5.1849	\$5.1191	\$0.0000	\$5.1191
Accumulated Adj.	3.7570	(2.6761)	1.0137	2.0946	(2.6613)	(0.2915)	(2.9528)
Current Adj.	0.0423	(0.0506)	0.0000	(0.0083)	(0.0506)	0.0000	(0.0506)
Total Adj.	3.7993	(2.7267)	1.0137	2.0863	(2.7119)	(0.2915)	(3.0034)
Total Rate:	\$3.8651	\$2.3924	\$1.0137	\$7.2712	\$2.4072	(\$0.2915)	\$2.1157

Date Filed: August 31, 2012

Effective Date: Service rendered on and
after September 1, 2012

Issued By: Tamie A. Aberle
Regulatory Affairs Manager

Case No.:

**GREAT PLAINS NATURAL GAS CO.
WAHPETON
COST OF GAS ADJUSTMENT
SEPTEMBER 2012**

<u>Firm</u>	<u>Billing</u> <u>Determinants</u>	<u>Rate</u>	<u>Demand</u> <u>Months</u>	<u>Amount</u>	<u>Amount</u> <u>Per dk</u>
FT-A	7,841	\$3.4671	12	\$326,226	\$0.2331
FT-A - Zone 1-1	500	3.4671	5	8,668	0.0062
FT-A - Zone 1-2	4,500	4.5871	5	103,210	0.0737
FT-A Seasonal	2,000	3.7671	5	37,671	0.0269
TFX Seasonal	2,000	15.1530	5	151,530	0.1083
NOVA - Demand Charge	7,947	14.7328	12	1,404,979	1.0038
Trans Canada - Demand Charge	7,947	23.1186	12	2,204,682	1.5751
BP Canada - Demand Charge	7,947	0.9612	12	91,664	0.0655
NOVA - Seasonal	5,068	14.7328	5	373,329	0.2667
Trans Canada - Seasonal	5,068	23.1186	5	585,825	0.4185
BP Canada - Seasonal	5,068	0.9612	5	24,357	0.0174
BP Canada Winter Surcharge	5,068	3.0417	5	77,077	0.0551
LMS Demand 2/					0.0148
Total Demand Charges				<u>\$5,389,218</u>	<u>3.8651</u>
Estimated Weighted Average Commodity Cost	1,399,684	1/ 2.3924		<u>3,348,604</u>	2.3924
Gas Cost Reconciliation Adjustment					<u>1.0137</u>
Total Current Firm Gas Cost				<u><u>\$8,737,822</u></u>	<u><u>7.2712</u></u>
Base Cost of Gas					<u>5.1849</u>
Accumulated Adjustment					<u><u>\$2.0863</u></u>
 <u>Interruptible</u>					
Estimated Weighted Average Commodity Cost					\$2.3924
Gas Cost Reconciliation Adjustment					(0.2915)
LMS Demand 2/					<u>0.0148</u>
Total Current Interruptible Gas Cost					<u>2.1157</u>
Base Cost of Gas					<u>5.1191</u>
Accumulated Adjustment					<u><u>(\$3.0034)</u></u>

1/ Three year normalized average Dk sales.

2/ Amount divided by 2008-2010 average interruptible sales volumes plus 2008-2010 average normalized firm sales volumes.

	<u>Billing</u> <u>Determinants</u>	<u>Rate</u>	<u>Demand</u> <u>Months</u>	<u>Amount</u>	<u>Amount</u> <u>Per dk</u>
LMS Demand	2,500	\$1.0000	12	\$30,000	\$0.0148

**GREAT PLAINS NATURAL GAS CO.
WAHPETON
COST OF GAS ADJUSTMENT
SEPTEMBER 2012**

Rates Effective September 1, 2012	<u>\$/Dk</u>	
FT-A - Zone 1-1	\$3.4671	Per dk/Mo.
FT-A - Zone 1-2	4.5871	Per dk/Mo.
FT-A - Seasonal	3.7671	Per dk/Mo.
TFX Seasonal	15.1530	Per dk/Mo.
NOVA - Demand Charge	14.7328	Per dk/Mo.
Trans Canada Pipeline Demand Charge	23.1186	Per dk/Mo.
BP Canada - Demand Charge	0.9612	Per dk/Mo.
NOVA - Seasonal	14.7328	Per dk/Day
Trans Canada - Seasonal	23.1186	Per dk/Mo.
BP Canada - Seasonal	0.9612	Per dk/Mo.
BP Canada Winter Surcharge	3.0417	Per dk/Mo.
LMS Demand	1.0000	Per dk/Mo.
Estimated Weighted Average Commodity Cost:	2.3924	Per dk
Base Rate Effective September 1, 1981		
Demand Charge	\$0.8100	Per Mcf/Mo.
Commodity Charge	5.1191	Per Mcf
Base Rate Calculation		
<u>Firm</u>		
Demand 1/	\$0.0658	Per Mcf
Commodity	<u>5.1191</u>	Per Mcf
Total Firm Base Cost	\$5.1849	Per Mcf
<u>Interruptible:</u>		
Commodity	\$5.1191	Per Mcf

1/ Demand base rate calculation: $4,768 \times 12 \times \$0.8100 / 707,222$

STATEMENT OF RATES
 (Rates Per Dekatherm)

Currently Effective Term-Differentiated Rates

Rate Schedule	Base Tariff Rate
<hr/>	
Category 1 (Contract Term of Less than 3 Years)	
<hr/>	
Monthly Reservation Rates	
FT-A	
Zone 1-1 Maximum Rate	\$3.7671
Zone 1-1 Minimum Rate	\$0.0000
Zone 1-2 Maximum Rate	\$4.8871
Zone 1-2 Minimum Rate	\$0.0000
Zone 2-2 Maximum Rate	\$2.1400
Zone 2-2 Minimum Rate	\$0.0000
<hr/>	
Category 2 (Contract Term of 3 Years to less than 5 Years)	
<hr/>	
Monthly Reservation Rates	
FT-A	
Zone 1-1 Maximum Rate	\$3.6171
Zone 1-1 Minimum Rate	\$0.0000
Zone 1-2 Maximum Rate	\$4.7371
Zone 1-2 Minimum Rate	\$0.0000
Zone 2-2 Maximum Rate	\$1.9900
Zone 2-2 Minimum Rate	\$0.0000
<hr/>	
Category 3 (Contract Term of 5 or more Years)	
<hr/>	
Monthly Reservation Rates	
FT-A	
Zone 1-1 Maximum Rate	\$3.4671
Zone 1-1 Minimum Rate	\$0.0000
Zone 1-2 Maximum Rate	\$4.5871
Zone 1-2 Minimum Rate	\$0.0000
Zone 2-2 Maximum Rate	\$1.8400
Zone 2-2 Minimum Rate	\$0.0000

Rate Schedule	Base Tariff Rate	Adjustment Under Section 19 1/	Rate After Current Adjustment	Fuel and Loss Retention Percentages 2/
Commodity Rates				
FT-A – Maximum Rates				
Zone 1-1	\$0.0130	\$0.0018	\$0.0148	1.16%
Zone 1-2	\$0.0130	\$0.0018	\$0.0148	1.52%
Zone 2-2	\$0.0130	\$0.0018	\$0.0148	0.36%
Minimum Rate	\$0.0130	\$0.0018	\$0.0148	
IT and AOT				
Zone 1-1	\$0.1368	\$0.0018	\$0.1386	1.16%
Zone 1-2	\$0.1737	\$0.0018	\$0.1755	1.52%
Zone 2-2	\$0.0834	\$0.0018	\$0.0852	0.36%
Minimum Rate	\$0.0130	\$0.0018	\$0.0148	

1/ Pursuant to Section 19 of the General Terms and Conditions, the Annual Charge Adjustment (ACA) Surcharge of \$0.0018 per Dekatherm shall be added to other charges under Company's Rate Schedules.

2/ Fuel and Losses Retention Percentages shall be applicable to all transportation rate schedules.

Transportation Fuel and Loss Retention Percentages are inclusive of the following percentages for Gas Lost and Unaccounted For: 0.18% for Zone 1-1, 0.23 % for Zone 1-2, and 0.05% for Zone 2-2. Transportation entirely by backhaul will incur only the Gas Lost and Unaccounted for percentages.

Rate Schedule	Base Tariff Rate	Adjustment Under Section 27 1/	Rate After Current Adjustment
LMS – Monthly Demand Rate	\$1.0000		\$1.0000
LMS – Daily Overrun Rate	\$0.1737		\$0.1737
LMS – Load Management Cost Reconciliation Adjustment		(\$0.0022)	

1/ Pursuant to Section 27 of the General Terms and Conditions of this Tariff, a mechanism is established to reconcile through surcharges or credits to the Rate Schedule LMS rate, as appropriate, differences between the cost to maintain Company's line pack gas and the amounts Company receives or pays for such gas arising out of the purchase and sale of such gas.

Rate Schedule	Maximum Rate Per Dekatherm	Minimum Rate Per Dekatherm
PAL		
NPL, OPL, and APL Service:		
Daily Commodity Rate	\$0.1737	\$0.0000
RPL Service:		
Daily Reservation Rate	\$0.1737	\$0.0000

RATE SCHEDULE TF

RESERVATION RATES	MARKET-TO-MARKET			FIELD-TO- FIELD/MARKET DEMARICATION
	TF12			TFF
	TF12 Base	Variable	TF5	
Base Tariff Rates 1/				
Summer (Apr-Oct)	5.683	5.683	-0-	5.473
Winter (Nov-Mar)	10.230	13.866	15.153	9.853

COMMODITY RATES 2/		Market Area 3/		Field Mileage 5/ Rate per 100 miles		Carlton Surcharge 4/		Out-of Balance 3/	
TF12 Base, TF12 Var., TF5 & TFF		Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
Receipt Point	Delivery Point								
Market	Market	0.0378	0.0209			0.0175	0.0000	0.0378	0.0209
Field	Market	0.0378	0.0209	0.0122	0.0040	0.0175	0.0000		
Market	Field			0.0122	0.0040				
Field	Field			0.0122	0.0040			0.0294	0.0108

- 1/ The minimum reservation rate is equal to zero.
- 2/ The applicable Mileage Indicator Districts (MIDs) billing rate will be added to the TF rates for volumes received in the Field Area, or received in the Market Area and delivered to the Field Area. The MIDs rates shown on Sheet Nos. 59-60A represent the total maximum Field Area throughput commodity rates for any transaction involving MIDs. For volumes transported through Northern's Ft. Buford compressor station, the commodity rate, fuel and unaccounted for apply only to volumes that are not ultimately confirmed for re-delivery into Northern's Market Area.
- 3/ Maximum and Minimum rates include ACA of \$0.0018 and the Market Area Electric Compression charge of \$0.0001 where applicable.
- 4/ Applicable to Market Area shippers as provided for in the Carlton Settlement filed in Docket No. RP96-347 dated October 28, 1996.
- 5/ Where Applicable, Field Area Electric Compression charge of \$0.0000 and ACA will be added to the mileage based rates.

RATE SCHEDULES TFX and LFT

RESERVATION RATES	MARKET-TO-MARKET		FIELD-TO-FIELD	
	Apr-Oct	Nov-Mar	Apr-Oct	Nov-Mar
Base Tariff Rates 1/	\$5.683	\$15.153	\$5.473	\$9.853

COMMODITY RATES 2/ TFX and LFT		Market Area 3/		Field Mileage 5/ Rate per 100 miles		Carlton Surcharge 4/		Out-of-Balance 3/	
Receipt Point	Delivery Point	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
Market	Market	0.0378	0.0209			0.0175	0.0000	0.0378	0.0209
Field	Market	0.0378	0.0209	0.0122	0.0040	0.0175	0.0000		
Market	Field			0.0122	0.0040				
Field	Field			0.0122	0.0040			0.0294	0.0108

GULF COAST	Reservation 1/		Commodity 6/		Out-of-Balance 6/	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
MOPS Gathering	1.0514	0.0000	0.0018	0.0018	0.0018	0.0018
MOPS Transmission	1.5337	0.0000	0.0018	0.0018	0.0018	0.0018
Tivoli - Downstream	0.6827	0.0000	0.0018	0.0018	0.0018	0.0018
Other Gulf Coast	4.8169	0.0000	0.0018	0.0018	0.0018	0.0018

- 1/ The minimum reservation rate is equal to zero.
- 2/ The applicable Mileage Indicator Districts (MIDs) billing rate will be added to the TF rates for volumes received in the Field Area, or received in the Market Area and delivered to the Field Area. The MIDs rates shown on Sheet Nos. 59-60A represent the total maximum Field Area throughput commodity rates for any transaction involving MIDs. For volumes transported through Northern's Ft. Buford compressor station, the commodity rate, fuel and unaccounted for apply only to volumes that are not ultimately confirmed for re-delivery into Northern's Market Area.
- 3/ Maximum and Minimum rates include ACA of \$0.0018 and the Market Area Electric Compression charge of \$0.0001 where applicable.
- 4/ Applicable to Market Area shippers as provided for in the Carlton Settlement filed in Docket No. RP96-347 dated October 28, 1996.
- 5/ Where applicable, Field Area Compression charge of \$0.0000 and ACA will be added to the mileage based rates.
- 6/ Maximum and Minimum rates include ACA of \$0.0018.

RATE SCHEDULES TF, TFX, LFT, GST, TI, & FDD

Fuel Percentages/Electric Compression Rates

	Percentages -----
FUEL PERCENTAGES:	1/
Market Area (including Out-of-Balance)	0.67%
Field Area	2/ 3/ 5/ 6/
UNACCOUNTED FOR PERCENTAGE (including Out-of-Balance)	0.43% 4/ 5/
FDD Storage Fuel	1.09%
	Electric Compression -----
COMMODITY RATES:	1/
Market Area	\$0.0001
Field Area	\$0.0000

1/ Northern will adjust its Fuel percentages and electric compression commodity rates in accordance with Sections 53A and 53B, respectively, of the General Terms and Conditions of this Tariff.

2/ Fuel shall be determined by Mileage Indicator Districts (MIDS) for the Field Area.

3/ Fuel charged in the Field and Market Areas for a pooling transaction or for processing plant transactions will not exceed the fuel charged on a unified Field-to-Market transaction having the same initial Field receipt point and ultimate Market delivery point, i.e., the total fuel collected for transactions that go into and out of pooling points or processing plants in either the Field Area or the Market Area will be no greater than the fuel collected on the total path between the original receipt point and the ultimate delivery point, subject to the shipper(s) providing Northern the requisite information.

4/ The Unaccounted For percentage utilizes the most recent twelve-month period ending December 31, 2011.

5/ Sheet No. 54A identifies the specific transportation transactions exempt from fuel and unaccounted-for retention charges.

6/ The Out-of-Balance Fuel Percentage for deliveries in MIDS 1-7 shall be the applicable Section 1 Mainline Fuel percentage, and for deliveries in MIDS 8-16B shall be the applicable Section 2 Mainline Fuel percentage.

In the event facilities have been abandoned, Northern shall have the right to file to reduce the applicable MID fuel percentage(s) on a common basis for all transactions affected by the abandonment to reflect the reduction in use for the remainder of the PRA period. In the event such abandoned facilities (gas compressors) have been replaced with electric compressors installed after October 1, 1998, and Northern reduces the applicable MID fuel percentages, Northern has the right to file to increase the applicable electric compression commodity rate.

RATE SCHEDULES FDD, PDD, IDD & SMS

Rate Schedule FDD

Maximum Reservation Fee	1.7140	1/
Maximum Capacity Fee	0.3567	1/
Injection Charge - Firm	0.0149	
Withdrawal Charge - Firm	0.0149	
Annual Rollover Fee	0.3567	1/

Rate Schedule PDD

Maximum Capacity Fee	0.3567	1/
Maximum Monthly Inventory Charge	0.0887	1/
Injection Charge	0.0149	
Withdrawal Charge	0.0149	
Annual Rollover Fee	0.3567	1/

Rate Schedule IDD

Maximum Monthly Inventory Charge	0.0887	1/
Injection Charge	0.0149	
Withdrawal Charge	0.0149	
Annual Rollover Fee	0.3567	1/

Rate Schedule SMS

Reservation Fee	2.1800	
Commodity Rate	0.0208	

1/ Minimum Rate is zero.

**Great Plains Natural Gas Co.
Market Conditions for Wahpeton's Natural Gas
September 2012**

The principal gas sources of natural gas for Wahpeton, North Dakota are from the large Western Canadian Sedimentary Basin (WCSB). The pricing point for much of this gas is the Alberta Energy Company (AECO-C), one of the largest and most liquid volume points in North America. The September monthly price for the AECO Index is expected to decrease from the previous month index. The AECO Index is based on the weighted average one month spot price at AECO-C and Nova Inventory Transfer (N.I.T.) as reported by Natural Gas Exchange (NGX).

Following the warmest July on record, moderating temperatures in certain regions of the U.S., the resultant shedding of natural gas electric generation to meet air conditioning demand, and storage levels remaining in record territory for this time of the year likely contributed to the decrease in the index price of natural gas. The Energy Information Administration (EIA) reported storage levels nationwide as of August 24, 2012 were 12.0 percent above the five-year average and 14.6 percent above last year's balance.

The Department of Energy's (DOE) Energy Information Administration (EIA) provides various publications on energy issues. The information is available on the DOE website: <http://www.eia.doe.gov>.

The most recent Short-Term Energy Outlook specific to natural gas prices, supply and demand is provided as pages 2 through 18.



Independent Statistics & Analysis

U.S. Energy Information
Administration

August 2012

Short-Term Energy Outlook

Highlights

- EIA projects that the Brent crude oil spot price will average about \$103 per barrel during the second half of 2012, about \$3.50 per barrel higher than in last month's *Outlook*. The forecast Brent crude oil spot price falls to an average of \$100 per barrel in 2013. The projected West Texas Intermediate (WTI) crude oil spot price discount to Brent crude oil narrows from about \$14 in the third quarter of 2012 to \$9 by late 2013. These price forecasts assume that world oil-consumption-weighted real gross domestic product (GDP), which increased by 3.0 percent in 2011, grows by 2.8 percent in 2012 and 2.9 percent in 2013.
- With higher crude oil prices, EIA has increased the average regular gasoline retail price forecast for the third quarter of 2012 to \$3.49 per gallon from \$3.39 per gallon in last month's *Outlook*. EIA expects regular gasoline retail prices, which averaged \$3.53 per gallon in 2011, to average \$3.53 per gallon in 2012 and \$3.33 per gallon in 2013.
- EIA expects U.S. total crude oil production to average 6.3 million barrels per day (bbl/d) in 2012, an increase of 0.6 million bbl/d from last year, and the highest level of production since 1997. Projected U.S. domestic crude oil production increases to 6.7 million bbl/d in 2013.
- As a result of drought conditions affecting corn harvests and prices throughout the Midwest, ethanol production fell from 920 thousand bbl/d for the week ending June 8, 2012 to 809 thousand bbl/d for the week ending July 27, 2012. EIA has reduced its 2012 ethanol production forecast from 900 thousand bbl/d (13.8 billion gallons) in last month's *Outlook* to 870 thousand bbl/d (13.3 billion gallons). EIA expects ethanol production to recover in the second half of 2013, averaging about 880 thousand bbl/d for the year.
- Natural gas working inventories ended July 2012 at an estimated 3.2 trillion cubic feet (Tcf), about 17 percent above the same time last year. EIA expects the Henry Hub natural gas spot price, which averaged \$4.00 per million British thermal units (MMBtu) in 2011, to average \$2.67 per MMBtu in 2012 and \$3.34 per MMBtu in 2013.

Global Crude Oil and Liquid Fuels

Global Crude Oil and Liquid Fuels Overview. EIA expects global liquid fuels consumption growth of about 0.8 million bbl/d in 2012 and 0.9 million bbl/d in 2013. Despite downside risks to global oil demand, the spot price for Brent crude climbed back above \$100 per barrel in July after prices sank below \$90 per barrel in June. Markets have rallied around expectations that policymakers in the European Union (EU), China, and the United States will provide more economic stimulus to counteract slowing growth. Additionally, Iran's threats to block oil from transiting through the Strait of Hormuz have triggered market anxiety and prompted upward price pressure. Although angst over global growth and supply disruptions may continue to contribute to price volatility, EIA believes that Brent crude oil, a benchmark for the global oil price, will average \$104 per barrel for the third quarter of 2012. EIA estimates that world liquids consumption will outpace production by 0.9 million bb/d in the third quarter, as world demand reaches its seasonal peak. EIA expects that the significant stock builds that occurred in the first half of 2012 will help relieve global oil markets in the second half of 2012.

Several upside and downside risks could move prices higher or lower than projected. The possibility that the economic situation in EU countries could deteriorate further poses a downside risk to global oil demand and prices, though oil prices will likely rise and fall as perceptions about the likelihood of a deeper crisis evolve. In the current *Outlook*, consumption in Europe is expected to fall year-over-year by 0.4 million bbl/d in 2012 and by a further 0.2 million bbl/d in 2013. The possibility of slower growth in China, which has been a key driver of increased oil demand in recent years, could also curb demand. China's weakening exports, particularly to Europe, and slower industrial and domestic growth experienced in the first half of 2012 could place downward pressure on oil prices, while prospects for more economic stimulus could swing the pendulum towards higher prices. EIA currently projects annual increases in consumption in China of around 0.4 million bbl/d in both 2012 and 2013. On the supply side, oil prices could be higher than projected in this *Outlook* if recoveries from supply disruptions are slower than forecast, additional disruptions occur, or supply growth is lower than expected.

Global Crude Oil and Liquid Fuels Consumption. World liquid fuels consumption grew by an estimated 0.8 million bbl/d in 2011. EIA expects consumption growth of 0.8 million bbl/d in 2012 and 0.9 million bb/d in 2013, with China, the Middle East, Central and South America, and other countries outside of the Organization for Economic Cooperation and Development (OECD) accounting for essentially all consumption growth. Projected OECD liquid fuels consumption declines by 0.4 million bbl/d in 2012 and by a lesser 0.1 million bbd/d in 2013, buoyed by growth in liquid fuels consumption in the United States.

In the third quarter of 2012, world demand will reach its seasonal peak, reflecting both the U.S. driving season and increased oil use for electricity generation in the Middle East. Projected consumption exceeds production by 0.9 million bbl/d, leading to global stock draws. Given overall lower demand expectations, the impact of seasonality on the tightness of global oil markets is expected to be less than in 2010 or 2011, when third-quarter consumption outpaced production by 1.1 million bbl/d and 1.7 million bbl/d, respectively.

Non-OPEC Supply. EIA expects liquid fuels production by non-Organization of the Petroleum Exporting Countries (OPEC) to rise by 0.6 million bbl/d in 2012, and by a further 1.3 million bbl/d in 2013. The largest area of non-OPEC growth is North America, where production increases by 940 thousand bbl/d and 440 thousand bbl/d in 2012 and 2013, respectively, resulting from continued production growth from U.S. onshore shale and other tight oil formations and from Canadian oil sands. EIA expects that Kazakhstan, which will commence commercial production in the Kashagan field next year, will increase its total production by 200 thousand bbl/d in 2013. In Brazil, output is projected to rise by 140 thousand bbl/d in 2013, with increased output from its offshore, pre-salt oil fields. Forecast production also rises in China, Russia, and Colombia over the next two years, while production declines in Mexico and the North Sea.

EIA revised Brazil's historical and projected liquid fuels production estimates to reflect the seasonality of ethanol production. Brazil's ethanol production fluctuates considerably over the course of the year because, unlike the corn used for ethanol production in the United States, Brazil's sugarcane feedstock must be processed into ethanol almost immediately after it is harvested. Accordingly, ethanol production typically ramps up in the second quarter and peaks in the third quarter of any given year, when the greatest amount of sugarcane in the leading ethanol-producing region of south-central Brazil is harvested, and reaches its nadir in the first quarter. Brazilian ethanol production in April and May was below even the disappointing levels of 2011 due to poor weather conditions. Though preliminary July data indicates that production has since recovered to some extent, Brazil's ethanol production is forecast to remain below the levels reached in the calendar year of 2010, when it averaged almost 500 thousand bbl/d. As a result, Brazil will depend on some combination of higher ethanol and gasoline imports.

The incorporation of seasonal variations into EIA's estimates of Brazilian ethanol production has unique implications for the global liquid fuels balance. The relatively large volumes of Brazilian ethanol that are produced in the third quarter would superficially imply that liquid fuels markets are slightly less tight in that quarter than previously estimated, with countervailing impacts on balances in the historically looser first quarter. Insofar as biofuels are close substitutes for petroleum products, this is a reasonable reflection of reality. However, certain caveats apply. First, Brazilian ethanol consumption, sales, and exports do not fluctuate as significantly as production, although ethanol storage infrastructure is not fully developed and supplies have been constrained in past years during inter-harvest periods. Second, unlike crude oil, which can be refined into various products according to market needs, ethanol is a much less fungible energy commodity given that it can only be used to supplement or supplant gasoline consumption. Moreover, relatively few countries possess automobiles and other relevant infrastructure that can support the use of large volumes of ethanol. Therefore, the relatively niche uses of ethanol in global energy markets should be considered when assessing the extent to which seasonal changes in ethanol production meaningfully contribute to relatively tighter or looser oil market conditions over the course of the year.

Several notable disruptions to non-OPEC production have commenced or intensified since the beginning of this year. Unplanned outages to non-OPEC production totaled around 900 thousand bbl/d in July 2012, slightly lower than the average in June. New developments

pertaining to unplanned disruptions have prompted EIA to increase or cut back the projected output for some non-OPEC countries. The Marib pipeline in Yemen was restored after several sabotage attacks left the pipeline offline for about a year. The pipeline has experienced over a dozen attacks since political instability escalated last year, compromising about 100 thousand bbl/d of Yemen's oil output. According to various news sources, the pipeline was repaired in July and soon after began pumping crude from connected oil fields to the Ras Eisa port on the Red Sea, from which the oil is shipped to the country's refinery in Aden. However, it is uncertain whether Yemen's production will climb back to its pre-crisis level of around 240 thousand bbl/d, or if the Marib pipeline will encounter another attack, suspending production again at the nearby oil fields. EIA increased the forecast for Yemen's output to reach 200 thousand bbl/d by the end of 2012 and 220 thousand bbl/d by the end of 2013.

In Syria, escalating violence has prompted EIA to cut back that country's projected output. EIA now expects Syria's production to average 200 thousand bbl/d in 2012 and 210 thousand bbl/d in 2013, compared with the forecasts in last month's *Outlook* of 240 thousand bbl/d and 340 thousand bbl/d in 2012 and 2013, respectively. On a more hopeful note, there are recent reports of a breakthrough in the dispute between Sudan and South Sudan. The two sides have apparently reached an understanding on oil transportation arrangements, including the pipeline, marine terminal, processing, and transit fees that South Sudan will pay to Sudan in order to export its oil. Although the understanding on oil transit fees marks a significant step forward, some officials have noted that a signed agreement may be contingent on a broader deal on border security. Given the considerable uncertainty surrounding the negotiations and the practical challenges associated with restarting production, EIA is keeping Sudan and South Sudan's forecasted oil production mostly unchanged from last month's *Outlook*, but will make revisions accordingly when a signed agreement is finalized or as other developments warrant.

Unplanned supply disruptions also persist in Brazil, Colombia, and China. In Brazil, production at the offshore Frade field was halted in March 2012 after the field's operator, Chevron, requested to shut in production to investigate a spill at the field. Prior to the field's initial spill in November 2011, which initiated an investigation by Brazil's National Petroleum Agency (ANP), output at Frade was about 80 thousand bbl/d. In Colombia, additional troops have been deployed to protect the country's energy infrastructure, particularly oil pipelines, from insurgent groups. Increased attacks on the Caño Limón-Covenas pipeline and on trucks transporting oil have curbed production at multiple fields. Although Colombia's production is higher than year-ago levels, analysts have attributed the less than 1 million bbl/d output in 2012 to these attacks. In China, over 100 thousand bbl/d remains offline, as an oil leak in the Bohai Bay in June 2011 caused the Chinese government to suspend all operations at the Penglai 19-3 field. Production is expected to start ramping up gradually by the end of 2012.

Supply disruptions in Norway and Argentina were mitigated in July, as workers' strikes that threatened to curtail a substantial amount of production in both countries were contained. On July 9, Norway's government ordered mandatory arbitration and an end to the strike, forestalling a threatened lockout that could have impacted all of Norway's offshore production. In Argentina, most of the output from the onshore Cerro Dragon field has been restored since a

workers' strike lowered production from the field in late June and July. The field's production capacity is almost 100 thousand bbl/d, which is about 15 percent of Argentina's crude output.

In addition to unplanned disruptions, some large non-OPEC producers are also undergoing planned maintenance that traditionally takes place during this time of the year. For example, in the North Sea, many gas platforms, pipelines, and power interconnectors undergo annual maintenance between May and September. Overall, planned maintenance is expected to affect more than 70,000 bbl/d in July and August. The Buzzard field, which has experienced a number of technical difficulties over the last year resulting in production shut-ins, will be taken offline for planned maintenance in the first week of September for several weeks. Production at the 200,000 bbl/d oilfield is expected to return to full rate by the middle of October.

OPEC Supply. EIA expects that OPEC members will continue to produce more than 30 million bbl/d of crude oil over the next two years to accommodate the projected increase in world oil consumption and to counterbalance supply disruptions. Projected OPEC crude oil production increases by about 0.9 million bbl/d in 2012 and then remains flat in 2013 as non-OPEC supply growth increases and stocks rise slightly. OPEC non-crude oil liquids (condensates, natural gas liquids, and gas-to-liquids), which are not covered by OPEC's production quotas, averaged 5.3 million bbl/d in 2011 and are forecast to increase by 0.3 million bbl/d in 2012 and by 0.2 million bbl/d in 2013.

EIA expects Iran's crude oil production to fall by about 1 million bbl/d by the end of 2012 relative to an estimated output level of 3.6 million bbl/d at the end of 2011, and by an additional 200 thousand bbl/d in 2013. Iran's output decline has continued to accelerate since the fourth quarter of 2011. EIA believes that this acceleration reflects erosion in Iran's crude oil production capacity due to the country's inability to carry out investment projects that are necessary to offset the natural decline in production from existing wells, as well as the impact of lower Iranian crude oil exports due to recently enforced EU and U.S. sanctions. A number of foreign companies that were investing in Iran's upstream have halted their activities as a result of previous U.S. sanctions, which have been compounded by tighter measures enforced since the start of this year that have made it increasingly difficult to do business with the country. EIA expects that the forecast decline in Iran's output will be offset by increased production from other OPEC member countries.

The impacts of newly imposed EU and U.S. sanctions on supplies and exports of Iranian oil are not easily extricated from the effects of sanctions enacted in previous years, the more general decline in Iran's production capacity, and other oil market developments. Undoubtedly, the EU embargo eliminates a significant market for Iranian oil. U.S. financial sanctions and EU insurance provisions have also impeded other countries' transactions for Iranian oil, leading to reports that Iran's ability to produce oil has outstripped its ability to sell it. Until recently, Iran could react to lower demand for its oil by adjusting the amount of oil it uses domestically or holds in onshore and offshore storage, in order to temporarily maintain relatively normal, albeit declining, levels of production. EIA estimates that Iranian production continued to fall in July as production capacity continues to be affected by country's inability to carry out investment projects that are

necessary to offset the natural decline in production from existing wells, as well as the impact of lower Iranian crude oil exports and possibly production shut-ins. EIA bases this assessment on preliminary commercial data on tanker liftings from Iran, press reports, official Iranian statements, and other relevant information. However, this tentative interpretation of a very fluid situation could change as data are revised, independent estimates of Iranian production are issued, and more details about Iranian storage levels, refinery utilization, and domestic consumption emerge.

Iran's threat to block oil shipments passing through the Strait of Hormuz is a potential risk to global supply. Hormuz is the world's most important oil chokepoint, which EIA defines as a narrow channel along widely used global sea routes. EIA estimates that about 17 million bbl/d passed through Hormuz in 2011, or roughly 35 percent of all seaborne traded oil. In response to the threat, Saudi Arabia and the United Arab Emirates (UAE) have recently increased their oil pipeline capacity to circumvent Hormuz. The UAE constructed the 1.5 million bbl/d Abu Dhabi Crude Oil Pipeline that runs from Habshan, a collection point for Abu Dhabi's onshore oil fields, to the port of Fujairah on the Gulf of Oman, allowing crude oil shipments to bypass Hormuz. However, the UAE currently does not have the ability to utilize the pipeline completely until it ramps to full capacity. Saudi Arabia recently converted a natural gas pipeline back to an oil pipeline. The pipeline is a part of a two-pipeline system called Petroline, or the East-West Pipeline, which runs across Saudi Arabia to the Red Sea, avoiding Hormuz. Despite the increased capacity, most potential bypass options in the Gulf are currently not operational and would require extensive renovations. EIA estimates that the available pipeline capacity to bypass Hormuz, which is not currently utilized, was 1 million b/d at the start of 2012 and could potentially increase to 4.3 million b/d by the end of this year.

OPEC members serve as the swing producers in the world market because only OPEC producers possess surplus or spare oil production capacity, most of which is in Saudi Arabia. EIA projects that OPEC surplus production capacity will average 2.3 million bbl/d in 2012 and rise to an average 2.6 million bbl/d in 2013.

OECD Petroleum Inventories. EIA estimates that OECD commercial oil inventories ended 2011 at 2.59 billion barrels, equivalent to 56 days of forward-cover. Projected OECD oil inventories increase to 2.62 billion barrels and 57 days of forward-cover by the end of 2012, which is among the highest end-of-year levels in the last decade, because of the decline in OECD consumption.

Crude Oil Prices. EIA projects that the discount of the WTI crude oil spot price to Brent crude oil spot price will continue in 2012, averaging \$13 per barrel in the second half of 2012 and \$10 per barrel in 2013. EIA projects the price of Brent crude oil will average \$108 per barrel in 2012 and \$100 per barrel in 2013. EIA expects the WTI price to average \$90 per barrel in the second half of 2012 and generally remain at this level, averaging \$90 per barrel in 2013.

Energy price forecasts are highly uncertain (*Market Prices and Uncertainty Report*). WTI futures for November 2012 delivery during the 5-day period ending August 2, 2012 averaged \$89 per barrel. Implied volatility averaged 32 percent, establishing the lower and upper limits of the 95-

percent confidence interval for the market's expectations of monthly average WTI prices in November 2012 at \$67 per barrel and \$119 per barrel, respectively. Last year at this time, WTI for November 2011 delivery averaged \$93 per barrel and implied volatility averaged 32 percent. The corresponding lower and upper limits of the 95-percent confidence interval were \$70 per barrel and \$125 per barrel.

U.S. Crude Oil and Liquid Fuels

U.S. Liquid Fuels Consumption. Total consumption fell by 340 thousand bbl/d (1.8 percent) last year. Motor gasoline consumption accounted for the bulk of that decline, shrinking by 260 thousand bbl/d (2.9 percent). In 2012, total consumption falls by a further 170 thousand bbl/d (0.9 percent). The year-over-year decline in total consumption narrowed from 680 thousand bbl/d in the first quarter of 2012 to 110 thousand bbl/d in the second quarter. In the third and fourth quarters of 2012 EIA expects a turnaround in total liquid fuels consumption with a smaller year-over-year decline of 30 thousand bbl/d (0.2 percent) in the third quarter and a projected year-over-year increase of 120 thousand bbl/d (0.6 percent). Most of the recovery comes from natural gas liquids, which rise because of continued growth in industrial use and the assumption of near-normal weather this coming winter.

In 2013, total liquid fuels consumption grows by 60 thousand bbl/d (0.3 percent), led by a 50-thousand-bbl/d (1.2-percent) increase in distillate consumption and 30 thousand bbl/d growth in liquefied petroleum gas consumption. Despite an assumed increase in the growth rate of U.S. real disposable income from 1.1 percent in 2012 to 1.7 percent in 2013 and projected declines in retail pump prices of almost 6 percent in 2013, forecast motor gasoline consumption declines by 30 thousand bbl/d (0.4 percent). Gasoline consumption continues to fall because of slow growth in the driving-age population, the acceleration of improvements in the average fuel economy of new vehicles, and increased rates of retirement of older, less-fuel-efficient vehicles.

U.S. Liquid Fuels Supply and Imports. Domestic crude oil production increased by an estimated 210 thousand bbl/d (3.9 percent) to 5.7 million bbl/d in 2011. Forecast U.S. total crude oil production increases to 6.3 million bbl/d in 2012, the highest annual level of production since 1997. Forecast lower-48 onshore crude oil production grows by a robust 670 thousand bbl/d in 2012 and output in the Gulf of Mexico stabilizes after having fallen last year, but Alaskan output continues to decline by 30 thousand bbl/d. In 2013, total crude oil output rises a further 390 thousand bbl/d, most of which is accounted for by increases in lower-48 onshore production. That increase is driven by increased oil-directed drilling activity, particularly in onshore tight oil formations. The number of onshore oil-directed drilling rigs reported by Baker Hughes has increased from 777 at the beginning of 2011 to 1,191 at the start of 2012, and to 1,429 as of August 3, 2012.

Concerns regarding the supply of refined products on the U.S. East Coast have eased considerably in recent months (see [*This Week in Petroleum - Update of the Status of East Coast*](#))

Refineries, July 25, 2012). Following the recently formed joint venture between The Carlyle Group and Sunoco, the Sunoco Philadelphia refinery is now expected to remain in operation. In addition, Delta Air Lines has purchased the Trainer refinery and has announced plans to restart it in the third quarter of 2012. The previously estimated regional "supply gap" of approximately 420,000 bbl/d for gasoline and ultra-low-sulfur diesel (ULSD) combined that would have resulted from the idling of three Philadelphia-area refineries (*Potential Impacts of Reductions in Refinery Activity on Northeast Petroleum Product Markets*, February 2012) is now expected to be just 50,000 bbl/d of ULSD, with the gasoline gap disappearing almost entirely. The remaining potential ULSD supply gap is largely the result of an expected increase in demand for ULSD because of New York State's requirement that, beginning in July 2012, all distillate fuel used for heating purposes be ULSD.

The share of total U.S. consumption met by total liquid fuel net imports (including both crude oil and products) has been falling since peaking at over 60 percent in 2005, and averaged 45 percent in 2011, down from 49 percent in 2010. EIA expects that the total net import share of consumption will continue to decline to 41 percent in 2012 and to 39 percent in 2013 as a result of lower consumption and the substantial increases in domestic crude oil production. If the 2013 estimate holds true, it would be the first time the share of total U.S. consumption met by total liquid fuel imports is less than 40 percent since 1991.

U.S. Petroleum Product Prices. After a sharp increase in gasoline prices earlier this year, reaching a monthly average of \$3.90 per gallon (regular grade) in April, gasoline prices have fallen for the third consecutive month, averaging \$3.44 per gallon in July. EIA expects regular gasoline retail prices to average \$3.49 per gallon during the third quarter of 2012, up from the \$3.39 per gallon projected in last month's *Outlook*, primarily as a result of the rise in oil prices in mid-July. EIA projects that crude oil prices will remain near their current levels through 2013, resulting in regular gasoline retail prices averaging \$3.53 per gallon in 2012 and \$3.33 per gallon in 2013, both about 4 cents per gallon higher than in last month's *Outlook*. EIA expects that on-highway diesel fuel retail prices, which averaged \$3.84 per gallon in 2011, will average \$3.84 per gallon and \$3.62 per gallon in 2012 and 2013, respectively.

Natural Gas

U.S. Natural Gas Consumption. EIA expects that natural gas consumption will average 69.8 billion cubic feet per day (Bcf/d) in 2012, an increase of 3.2 Bcf/d (4.8 percent) from 2011. Large gains in electric power use in 2012 will more than offset declines in residential and commercial use. Projected consumption of natural gas in the electric power sector averages 25.4 Bcf/d in 2012, 22 percent higher than in 2011, primarily driven by the improved relative cost advantages of natural gas over coal for power generation in some regions. Consumption in the electric power sector during 2012 peaks at 31.6 Bcf/d in the third quarter, when electricity demand for air conditioning is highest. As a result of the extreme heat last month, estimated electric-

power-sector natural gas consumption during July 2012 averaged 34.8 Bcf/d, 1.8 Bcf/d higher than projected in last month's *Outlook*.

Growth in total natural gas consumption slows in 2013, with forecast consumption averaging 70.9 Bcf/d. Growth in 2013 is driven by consumption increases from the residential, commercial, and industrial sectors, as consumption in the electric power sector levels off. A forecast of near-normal weather next winter drives 2013 increases in residential and commercial consumption of 9.2 percent and 6.4 percent, respectively. Although projected natural gas burn in the electric power sector declines by 3.5 percent from 2012, it remains near historically high levels in 2013.

U.S. Natural Gas Production and Imports. Total marketed production of natural gas grew by 4.8 Bcf/d (7.9 percent) in 2011. This strong growth was driven in large part by increases in shale gas production. EIA expects continued year-over-year growth in 2012 of 2.5 Bcf/d. EIA, however, expects a small drop in production in the coming months, reflecting both expected losses from hurricanes ([2012 Outlook for Hurricane-Related Production Outages in the Gulf of Mexico](#)) and declines related to recent drops in the rig count. According to Baker Hughes, the natural gas rig count was 498 as of August 3, 2012, compared with 811 at the start of 2012. While some declines in production have occurred so far in 2012, production remained flat from April to May. Declining production from less-profitable "dry" natural gas plays such as the Haynesville Shale, as well as the continued long-term decline in the Gulf of Mexico, is offset by growth in production from liquids-rich natural gas production areas such as the Eagle Ford and wet areas of the Marcellus Shale, and associated gas from the growth in domestic crude oil production.

EIA expects pipeline gross imports will fall by 0.1 Bcf/d (1.3 percent) in 2012, as domestic supply continues to displace Canadian sources. The warm winter in the United States also added to the year-over-year decline in imports, particularly to the Northeast, where imported natural gas can serve as additional supply in times of very cold weather. EIA expects pipeline gross imports will remain flat in 2013, at around 8.4 Bcf/d. Pipeline gross exports grew by 1.0 Bcf/d (33 percent) in 2011, driven by increased exports to Mexico, but are expected to remain flat in 2012, and grow by 0.2 Bcf/d in 2013.

Liquefied natural gas (LNG) imports are expected to fall by 0.5 Bcf/d (51 percent) in 2012 from the year before. EIA expects that an average of about 0.5 Bcf/d and 0.6 Bcf/d will arrive in the United States (mainly at the Elba Island terminal in Georgia) in 2012 and 2013, respectively, either to fulfill long-term contract obligations or to take advantage of temporarily high local prices due to cold snaps and disruptions. Higher prices for LNG, particularly in Asian markets, have made the U.S. a market of last resort for LNG.

U.S. Natural Gas Inventories. Working natural gas inventories remain at historically high levels for this time of year. As of July 27, 2012, according to EIA's [Weekly Natural Gas Storage Report](#), working inventories totaled 3,217 Bcf, 472 Bcf greater than last year's level and 407 Bcf above the five-year average. EIA expects that inventory levels at the end of October 2012 will set a new record of 3,954 Bcf, slightly lower than last month's *Outlook*, which forecast inventories

slightly above 4,000 Bcf. Though absolute levels of working inventories remain high (because of very high storage entering the summer injection season this year), builds since April, for the most part, have been below the five-year average and below last year's levels. The projected increase of 1,477 Bcf in working gas inventory during the 2012 injection season (from the end of March to the end of October) would be the smallest build since 1991. In 2013, working inventory levels recede from current record highs, although they will still remain abundant compared with recent history.

U.S. Natural Gas Prices. Natural gas spot prices averaged \$2.95 per MMBtu at the Henry Hub in July 2012, up \$0.49 per MMBtu from the June average, but still \$1.47 per MMBtu (33 percent) lower than the July 2011 average. While abundant supplies have kept prices relatively low, a hot summer and associated increases in demand for natural gas for power generation contributed to the increase in prices in July. EIA expects the Henry Hub natural gas price will average \$2.67 per MMBtu in 2012, with prices remaining below \$3.00 per MMBtu until December. EIA expects 2013 prices will average \$3.34 per MMBtu.

Natural gas futures prices for November 2012 delivery (for the 5-day period ending August 2, 2012) averaged \$3.26 per MMBtu, and the average implied volatility based on options and futures prices was 44 percent (*Market Prices and Uncertainty Report*). Current options and futures prices imply that market participants place the lower and upper bounds for the 95-percent confidence interval for November 2012 contracts at \$2.13 per MMBtu and \$4.98 per MMBtu, respectively. At this time last year, the November 2011 natural gas futures contract averaged \$4.23 per MMBtu and implied volatility averaged 32 percent. The corresponding lower and upper limits of the 95-percent confidence interval were \$3.12 per MMBtu and \$5.74 per MMBtu.

Coal

U.S. Coal Consumption. Power-sector coal consumption, which averaged over 1 billion short tons annually from 2003 through 2008, fell by 46 million short tons (MMst) in 2011. Lower electric power sector natural gas prices have led to a significant increase in the share of natural-gas-fired generation. EIA expects coal consumption in the electric power sector to total 825 MMst in 2012, the lowest amount in 20 years. EIA projects power sector coal consumption will remain flat in 2013 as the effects of higher electric power sector natural gas prices are offset by the weak increase in electricity consumption.

U.S. Coal Supply. EIA forecasts that coal production will decline by 7 percent in 2012 as domestic consumption falls. Production for the first six months of 2012 was 33 MMst (6 percent) below last year's level for the same period. EIA predicts that production will continue to decline in 2013, but at a slightly slower rate (4 percent). Despite declines in production, EIA projects that secondary inventories will increase in 2012, reaching near-record levels. Electric

power sector stocks are forecast to be 194 MMst by the end of the year (estimated stocks for May 2012 were 203 MMst) and inventories will remain at elevated levels in 2013.

U.S. Coal Trade. EIA expects U.S. coal exports to remain strong in 2012 and exceed the 107 MMst exported in 2011. The U.S. exported 12.3 MMst of coal in May, which was slightly below April's record-setting amount. EIA projects coal exports to total 116 MMst in 2012. EIA expects that coal exports will fall by 16 percent in 2013. Major reasons for the export decline include China's economic slowdown and high coal stockpiles, and increased exports from Indonesia and Australia. U.S. coal exports averaged 56 MMst in the decade preceding 2011.

U.S. Coal Prices. Delivered coal prices to the electric power industry had increased steadily over the last 10 years and this trend continued in 2011, with an average delivered coal price of \$2.40 per MMBtu (a 6-percent increase from 2010). However, EIA expects the decline in demand for coal, combined with the large coal inventories, will begin to put downward pressure on coal prices and contribute to the shut-in of higher-cost production. EIA forecasts that the average delivered coal price in 2012 will average \$2.41 per MMBtu, about the same as last year. EIA predicts the 2013 average delivered coal price to average \$2.36 per MMBtu, or about 2 percent lower than the 2012 price.

Electricity

U.S. Electricity Consumption. Many areas of the United States have experienced record temperatures this summer, similar to the hot weather last summer. According to the National Oceanic and Atmospheric Administration, U.S. cooling degree-days during July 2012 were about 25 percent higher than the 30-year average, but about the same as July 2011. EIA estimates that retail sales of electricity to the residential sector during the first half of this year were about 6.4 percent lower than the same period in 2011, as a result of mild winter temperatures in the South where many households heat using electricity. Residential sales for the entire year are projected to average about 3.0 percent lower than sales during 2011. Projected sales of electricity to the residential sector grow by 1.9 percent in 2013.

U.S. Electricity Generation. Starting with this month's *Outlook*, EIA has expanded its modeling of electricity generation to the four Census regions (Northeast, South, Midwest, and West) in addition to its standard U.S. projections. EIA expects total U.S. generation across all sectors during 2012 will average 0.4 percent lower than in 2011. However, generation fueled by natural gas is projected to rise this year by 23.2 percent. The South Census region accounts for the largest absolute increase in natural gas generation—an annual increase of 303 thousand megawatthours per day (MWh/d), or 18.4 percent. Yet, the Midwest region has the largest relative increase in natural gas generation—rising by 93.0 percent, or 152 thousand MWh/d, during 2012. This substantial increase in the share of generation fueled by natural gas is occurring at the expense of coal generation, which is projected to fall by 12.1 percent nationwide during 2012. Higher natural gas prices relative to coal prices leads to a reversal of

this trend next year, when U.S. natural gas generation falls by 4.3 percent and coal generation increases by 1.7 percent.

U.S. Electricity Retail Prices. EIA expects the average U.S. residential electricity price will rise by 1.6 percent during 2012 to an average of 11.99 cents per kilowatthour. The forecast cost of natural gas delivered to the electric power sector is about 28 percent lower in 2012 compared with the previous year, which should slow the growth in retail electricity rates. EIA projects U.S. residential retail electricity prices to rise by 0.9 percent in 2013. When measured in real terms, the average 2013 residential electricity price is 2.9 percent less than the price in 2009.

Renewables and Carbon Dioxide Emissions

U.S. Renewables. After growing by 14 percent in 2011, total renewable energy consumption is projected to decline by 2.4 percent in 2012. This decrease is the result of hydropower resource levels beginning to return to the long-term average, with consumption falling by 0.4 quadrillion Btu (13 percent). The decline in hydropower from 2011 to 2012 more than offsets the projected growth in the consumption of other renewable energy forms. Renewable energy consumption increases 2.1 percent in 2013 as hydropower continues to decline (2.9 percent) but non-hydropower renewables grow by an average of 4.7 percent.

Under current law, Federal production tax credits for wind-powered generation will not be available for turbines that begin operating after the end of 2012. Wind-powered generation, which grew by 26 percent in 2011, is forecast to grow an additional 17 percent in 2012. The forecast for wind capacity additions and generation in 2013 will likely respond to whatever decision is made regarding the extension of production tax credits.

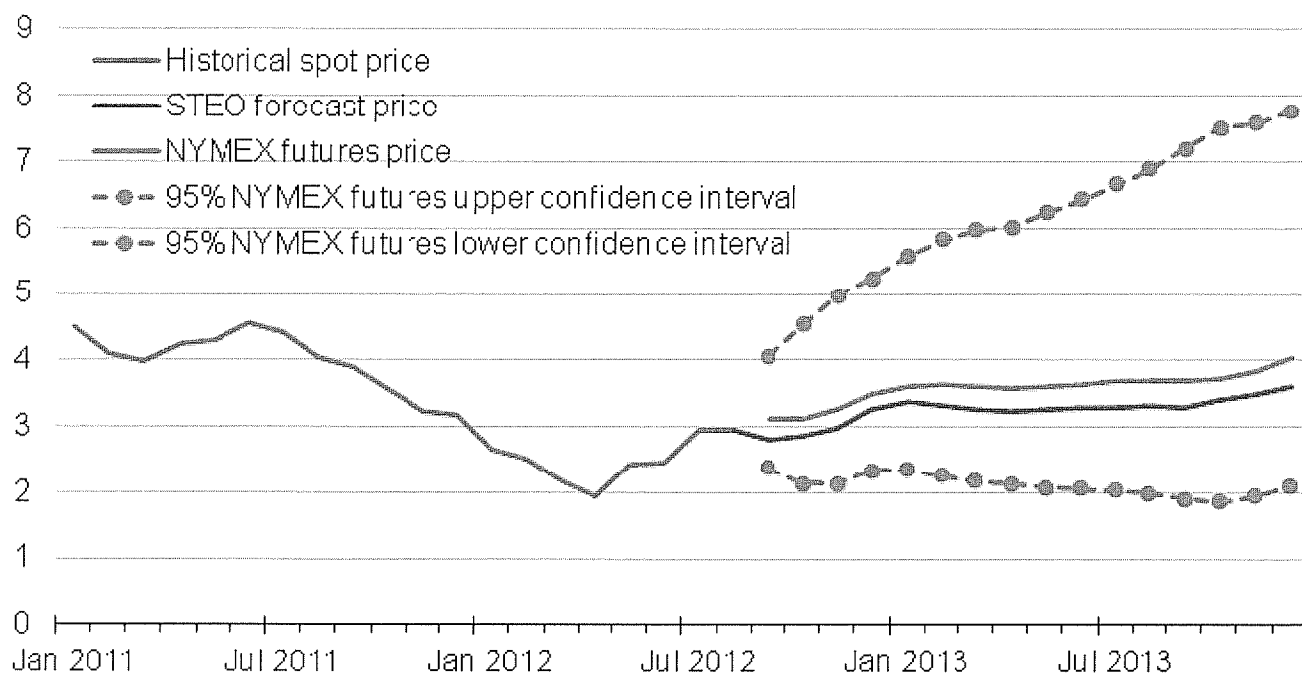
As a result of drought conditions affecting corn harvests throughout the Midwest, EIA has reduced its ethanol production forecast for the second half of 2012 from an average of 900 thousand bbl/d in last month's *Outlook* to 830 thousand bbl/d. EIA expects ethanol production to recover in the second half of 2013, averaging 880 thousand bbl/d (13.5 billion gallons) for the year. The projected decline in ethanol production is generally matched by lower ethanol exports.

EIA estimates that biodiesel production in 2011 averaged about 63 thousand bbl/d (971 million gallons of total annual production). Forecast biodiesel production averages 72 thousand bbl/d in 2012 and 79 thousand bbl/d in 2013.

U.S. Energy-Related Carbon Dioxide Emissions. After declining by 2.4 percent in 2011, fossil fuel emissions are projected to further decline by 2.3 percent in 2012, but increase by 1.0 percent in 2013. Petroleum emissions decline in 2012 (1.1 percent) and then remain flat in 2013, while natural gas emissions rise by 5.3 percent and 1.3 percent in 2012 and 2013, respectively. Coal emissions decline by 9.0 percent in 2012 but rise by 1.9 percent in 2013.

Henry Hub Natural Gas Price

dollars per million btu



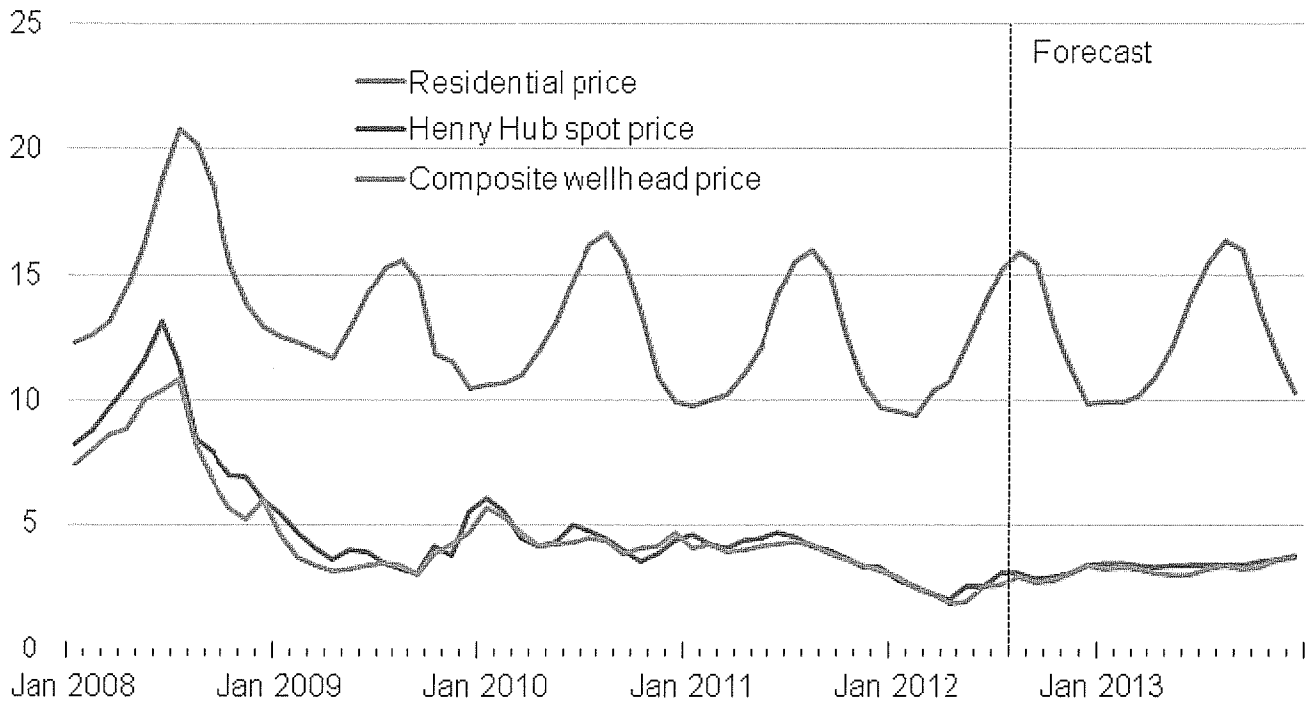
Note: Confidence interval derived from options market information for the 5 trading days ending August 2, 2012. Intervals not calculated for months with sparse trading in near-the-money options contracts.

Source: Short-Term Energy Outlook, August 2012



U.S. Natural Gas Prices

dollars per thousand cubic feet



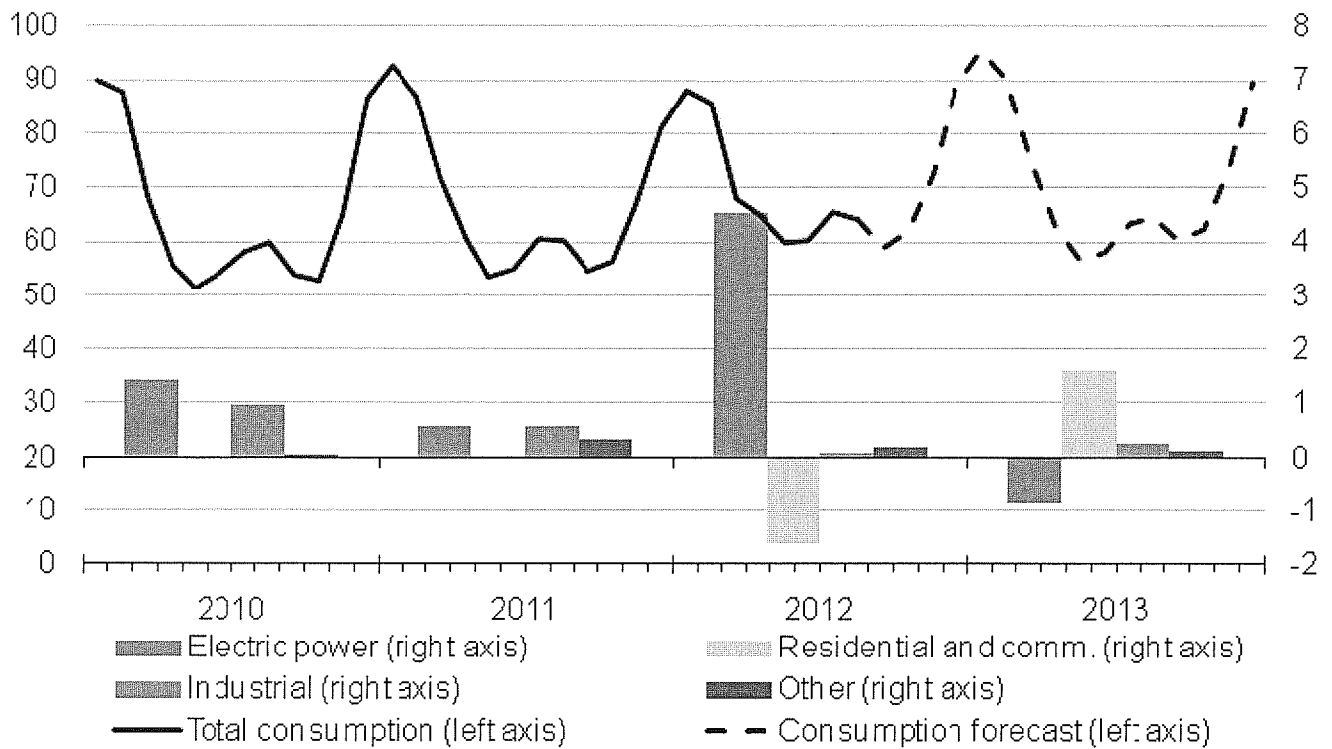
Source: Short-Term Energy Outlook, August 2012



U.S. Natural Gas Consumption

billion cubic feet per day (bcf/d)

annual change (bcf/d)



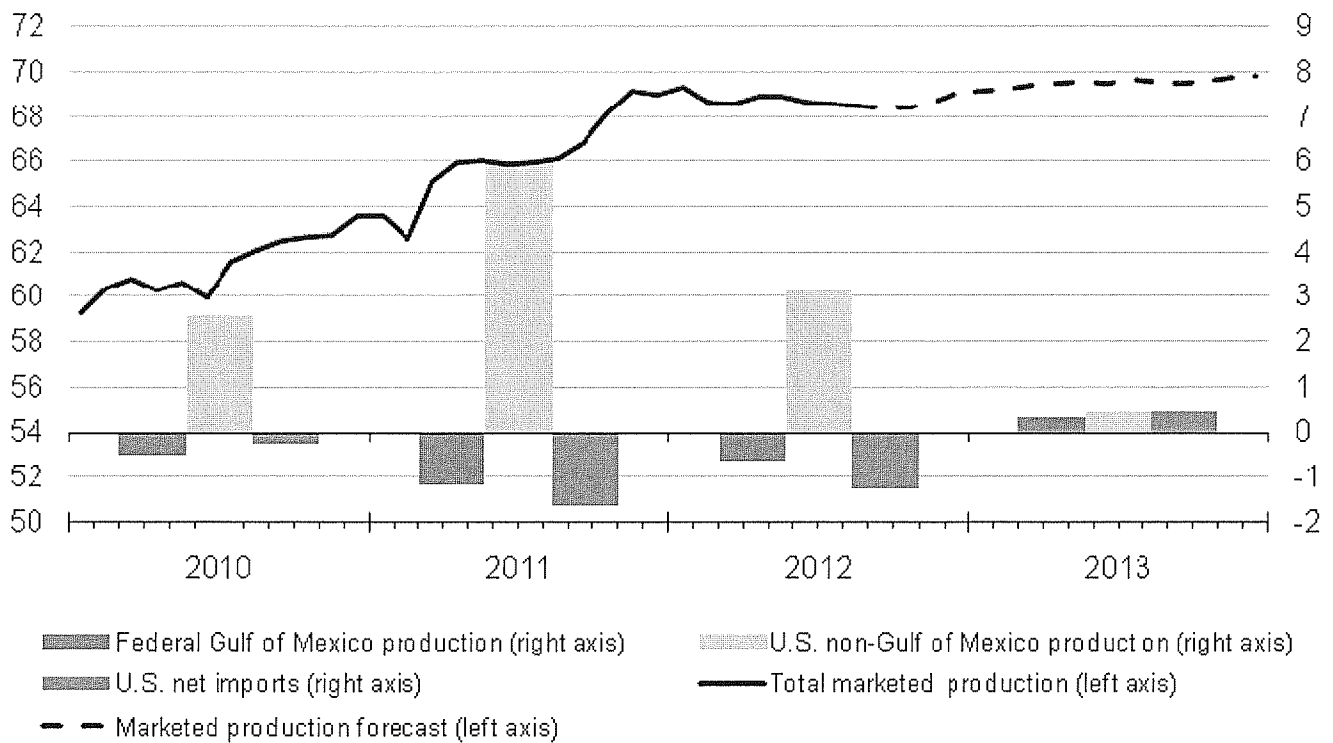
Source: Short-Term Energy Outlook, August 2012



U.S. Natural Gas Production and Imports

billion cubic feet per day (bcf/d)

annual change (bcf/d)



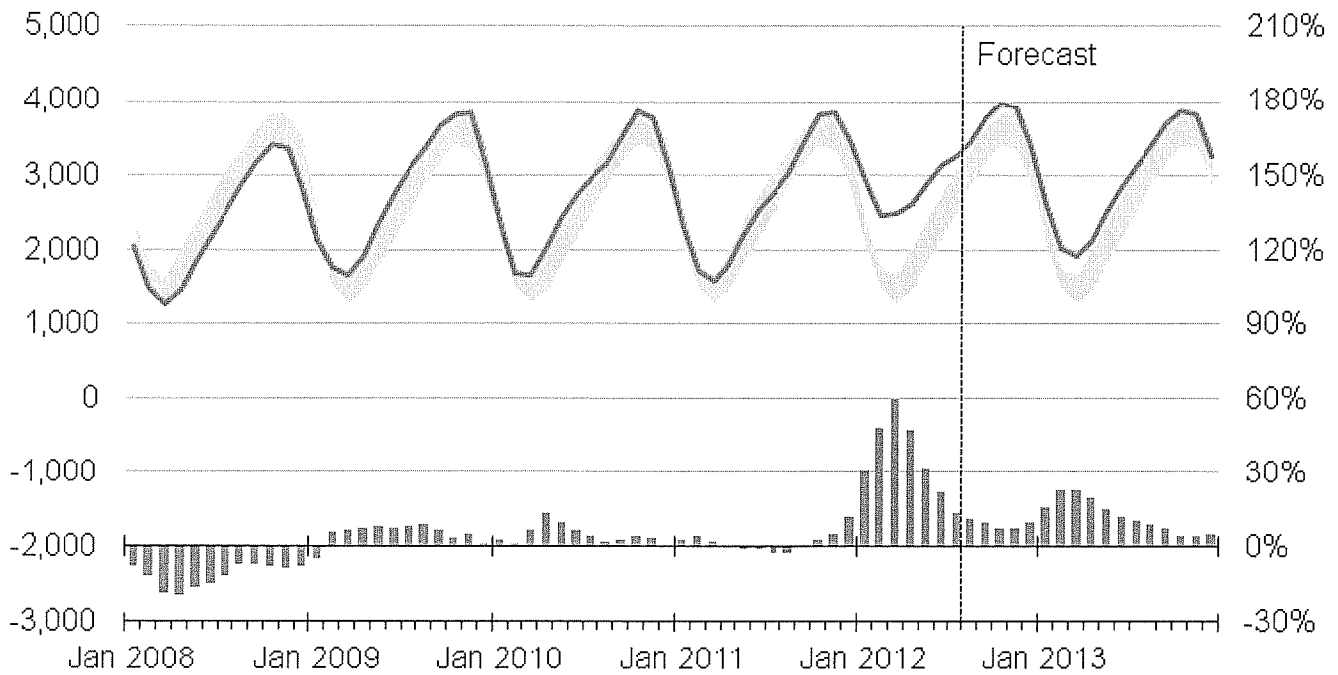
Source: Short-Term Energy Outlook, August 2012



U.S. Working Natural Gas in Storage

billion cubic feet

deviation from average



Note: Colored band around storage levels represents the range between the minimum and maximum from Jan. 2007 - Dec. 2011.

Source: Short-Term Energy Outlook, August 2012



**GREAT PLAINS NATURAL GAS CO.
COMPUTATION OF (OVER) / UNDER RECOVERED GAS COST ACCOUNT BALANCE
APPLICABLE TO NORTH DAKOTA
FIRM**

	(Over) Under Recovery	Refunds & Other	Interest 1/ Interest	Total Net Additions	Actual Mcf Sales	Adjustment Per Mcf	Total Adjustment Amount	Net Change- Additions less Adjustment	Cumulative Balance
Balance @ April 30, 2012									\$311,764
May	\$30,099	\$0	\$2,016	\$32,115	13,138	\$0.5102	\$6,702	\$25,413	337,177
June	52,819	0	2,192	55,011	6,558	1.0137	4,625	50,386	387,563
July	57,568	0	2,542	60,110	5,776	1.0137	5,855	54,255	441,818
Balance @ July 30, 2012									\$441,818

1/ Interest calculated at 13.3%, the authorized rate of return.
2/ Reflects 4,017.3 dk @ \$0.5102 and 2,540.6 dk @ \$1.0137.

**GREAT PLAINS NATURAL GAS CO.
COMPUTATION OF (OVER) / UNDER RECOVERED GAS COST ACCOUNT BALANCE
APPLICABLE TO NORTH DAKOTA
INTERRUPTIBLE**

	(Over) Under Recovery	Refunds & Other	Interest 1/ Interest	Total Net Additions	Actual Mcf Sales	Adjustment Per Mcf	Total Adjustment Amount	Net Change- Additions less Adjustment	Cumulative Balance
Balance @ April 30, 2012									<u>(\$72,396)</u>
May	(\$11,426)	\$0	(\$557)	(\$11,983)	23,670	(\$0.0178)	(\$422)	(\$11,561)	(83,957)
June	(6,055)	0	(637)	(6,692)	13,697	(0.2915)	(1,509) 2/	(5,183)	(89,140)
July	(16,584)	0	(671)	(17,255)	13,108	(0.2915)	(3,821)	(13,434)	(102,574)
Balance @ July 30, 2012									<u>(\$102,574)</u>

1/ Interest calculated at 13.3%, the authorized rate of return.

2/ Reflects 9,073.4 dk @ (\$0.0178) and 4,623.6 dk @ (\$0.2915).