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Schedule FowerPoint

Short-Term Model

Previous Outlooks

Special Analysis

Documentation Contacts Petroleum Prices

T-Mail Lists

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Short-Term Energy Outlook

December 7th, 2004 Release (Next Update: January 11th, 2004)

Short-Term Energy Outlook - December 2004

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STEO Query System Winter Fuels Update (Figure 1)

propane-heated households are expected to increase about 22 percent this winter projected usage. three fuels, relative to last month's estimates, reflects reductions in both prices and Expected increases in expenditures for natural gas-heated households have also been averaging \$1.85 per gallon for the October-to-March period. Expenditures for expected to average 34 percent above last winter's levels, with residential fuel prices lowered in this Outlook to 9 percent. The reduction expected in expenditures for all expenditures. Heating oil expenditures by typical Northeastern households are now projections of winter heating fuel prices and winter household heating fuel Lower petroleum and natural gas prices in this Outlook marginally reduced our

## Crude Oil and Petroleum Products (Figures 2 to 8)

average WTI price for the fourth quarter of 2004 is \$49 per barrel, about \$18 per barrel During the last 3 weeks, U.S. spot prices for crude oil (West Texas Intermediate  $(\overline{\mathrm{WTI}})$ ) have ranged from over \$50 per barrel to about \$43 per barrel. The projected

end of November. Ivan; this situation improved to less than 200,000 barrels per day still shut in at the 500,000 barrels per day of Gulf of Mexico oil output was shut in due to Hurricane November. According to the Minerals Management Service, in early October about for the fourth quarter provided in the previous Outlook. WTI prices eased sharply in higher than in the fourth quarter of 2003 but nearly \$2 per barrel below the projection

increase in demand for oil-generated power that is not likely to be repeated growth in 2005 is expected to moderate from its 2004 rate, which reflected a dramatic to 2 million barrels per day (2.5 - percent growth) in 2005 as global economic growth strong 3.3-percent growth for the year. Global oil demand growth is expected to slow Lower global oil demand growth in 2005 also reflects the fact that Chinese oil demand slows toward more sustainable rates, influenced in part by high world oil prices the previous Outlook to 2.6 million barrels per day over 2003 levels, but still shows a World petroleum demand growth for 2004 has been revised downwards slightly from

implying a global utilization rate of about 99 percent. capacity remains about 0.5-1.0 million barrels per day above current output levels, remains high at about 30 million barrels per day. OPEC (and world) production remain in the mid-\$40s range through 2005, even though OPEC crude oil production Petroleum Exporting Countries (OPEC) in the near term, suggest that oil prices will prospects for large increases in production from outside the Organization of compared to historical standards. These lower inventories, together with limited inventories and inventories in the other industrialized countries remain relatively low In response to the strong oil demand growth this year and expected in 2005, US. oil

Production Forecast, 2004 - 2013," Minerals Management Service, MMS OCS Report production in the Federal Offshore Gulf of Mexico (see "Gulf of Mexico Oil and Gas growth is partly due to recovery from Hurricane Ivan but also due to rising day), something that has not happened on an annual basis since 1991. This expected U.S. crude oil production is expected to increase next year (by 160,000 barrels per

2004-065, October 2004).

stems from slower economic growth and market adjustments to higher prices growth slows. The slower overall growth rate in petroleum demand expected for 2005 for the last 2 years, is expected to grow more slowly in 2005 (1.4 percent) as industrial 2004 and 2005. Distillate fuel demand, which has grown by about 4 percent per year recovery in both capacity and utilization, is projected to climb nearly 3 percent in both up 2.1 percent from the 2003 level. An additional 1.4-percent growth is anticipated for <u>U.S. petroleum demand</u> in 2004 is projected to average 20.5 million barrels per day, 1.3 percent this year and 1.8 percent in 2005. Jet fuel demand, buoyed by continued 2005. Motor gasoline, the largest component of petroleum demand, is projected to rise

suggest that gasoline prices will likely rise 10-15 cents per gallon by May 2005 of their normal range for this time of year. Still, current and projected crude oil costs reflecting the typical seasonal increase has been stimulated by robust gasoline inventories, which are close to the upper end \$1.91 per gallon, down 11 cents per gallon from one month ago. Until recently, spot December, both crude and gasoline prices plunged. The drop in spot gasoline prices gasoline prices were rising in response to higher crude oil prices. In the first 2 days of On December 6, 2004, the U.S. monthly average pump price for regular gasoline was

## Natural Gas (Figures 9 to 10)

These price projections are lower than last month due to continued high natural gas average \$6.03 per mcf in 2004 (compared to \$5.64 in 2003) and \$6.01 per mcf in 2005. mcf on November 19. Still, with the peak winter weather closing in, natural gas prices are poised to rise over the next several months. Henry Hub prices are expected to weather restrained heating demand, spot prices for natural gas fell to under \$5.00 per production recovered from the impact of Hurricane Ivan and mild November (mcf) in September and \$6.54 per mcf in October. However, as Gulf of Mexico The average Henry Hub natural gas spot price was \$5.15 per thousand cubic feet

## inventories.

the five-year average. of November. This is 8 percent higher than one year ago and 11 percent higher than Working gas in storage is estimated to have reached 3,280 billion cubic feet at the end

contribute to moderate improvement in the supply picture in 2005. growth, and carryover from the robust storage levels noted above are expected to 1.9 percent. Steady increases in liquefied natural gas imports, restrained export America continue, 2005 domestic natural gas production is projected to increase by increase by 3.7 percent in 2005. As high rates of drilling for natural gas in North In response to continued economic growth, natural gas demand is projected to

## **Electricity and Coal Outlook (Figures 11 to 13)**

normal weather prevails. 2005. Hydroelectric power availability is expected to rebound in 2005, provided more by 3.1 percent in 2004 and is expected to continue to grow by another 2.7 percent in increase as oil and gas prices remain high. <u>U.S.</u> coal production is estimated to grow show a solid gain of 3.1 percent in 2005. Power sector demand for coal continues to growth of 1.7 percent in 2004. Coal demand in the electric power sector is expected to Electricity demand is expected to increase by 2.8 percent in 2005, following estimated

2002 2003 2004	2005	2002-2003	2002-2003 2003-2004 2004-200	02-2003 2003-2004 2004-2005	
Real Gross Domestic Product (GDP)					
(billion chained 2000 dollars) 10075 10381 10837	11184	3.0	4.4	3.2	
Imported Crude Oil Price a					
(nominal dollars per barrel) <b>23.71 27.74</b> 36.74	40.62	17.0	32.4	10.6	
Petroleum Supply (million barrels per day)					
Crude Oil Production b 5.75 5.68 5.43	5.59	<u>.</u>	4.3	2.9	
Total Petroleum Net Imports( Million Barrels per Day)					
(including SPR) 10.54 11.24 11.78	11.91	6.6	4.9	1.0	
Energy Demand					
World Petroleum					

<u>.,</u>	Dollar of GDP		Total Energy Demand f		Other Use/Sales e		Hectricity (billion kilowatthours)	million short tons)		trillion cubic feet)		million barrels per day)		million barrels per day)
9.66		97.4		3639	177	3463		1066		23.00		19.76		78.4
9.39		97.4		3674	174	3500		1095		21.93		20.03		79.8
9.07		98.2		3735	178	3556		1102		21.94		20.45		82.4
9.02		100.9		3841	182	3658		1133		22.74		20.73		84.4
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-0.5	!	2.7	!	2.8	2.3	2.9	!	28	Ç	37	;	1 4	!	\ 5 5
	<b>9.66 9.39</b> 9.07 9.02 <b>-2.9</b> -3.4	9.39 9.07 9.02 <b>-2.9</b> -3.4	97.4 97.4 98.2 100.9 0.1 0.8 arofGDP 9.66 9.39 9.07 9.02 -2.9 -3.4	97.4 97.4 98.2 100.9 0.1 0.8 ar of GDP 9.66 9.39 9.07 9.02 -2.9 -3.4	3639 3674 3735 3841 0.9 1.7 97.4 97.4 98.2 100.9 0.1 0.8 ar of GDP 9.66 9.39 9.07 9.02 -2.9 -3.4	177 174 178 182 -1.7 2.7 3639 3674 3735 3841 0.9 1.7 97.4 97.4 98.2 100.9 0.1 0.8 ar of GDP 9.66 9.39 9.07 9.02 -2.9 -3.4	3463 3500 3556 3658 1.1 1.6 177 174 178 182 -1.7 2.7 3639 3674 3735 3841 0.9 1.7 ar of GDP 9.66 9.39 9.07 9.02 -2.9 -3.4	3463 3500 3556 3658 1.1 1.6 177 174 178 182 -1.7 2.7 3639 3674 3735 3841 0.9 1.7 ar of GDP 97.4 97.4 98.2 100.9 0.1 0.8 9.66 9.39 9.07 9.02 -2.9 -3.4	1066 1095 1102 1133 2.7 0.6  3463 3500 3556 3658 1.1 1.6 177 174 178 182 -1.7 2.7 3639 3674 3735 3841 0.9 1.7  ar of GDP  9.66 9.39 9.07 9.02 -2.9 -3.4	1066 1095 1102 1133 2.7 0.6  3463 3500 3556 3658 1.1 1.6 177 174 178 182 -1.7 2.7 3639 3674 3735 3841 0.9 1.7  ar of GDP  9.66 9.39 9.07 9.02 -2.9 -3.4	23.00 21.93 21.94 22.74 4.6 0.0  1066 1095 1102 1133 2.7 0.6  3463 3500 3556 3658 1.1 1.6 177 174 178 182 1.7 2.7 3639 3674 3735 3841 0.9 1.7  arof GDP  9.66 9.39 9.07 9.02 -2.9 -3.4	23.00 21.93 21.94 22.74 4.6 0.0  1066 1095 1102 1133 2.7 0.6  3463 3500 3556 3658 1.1 1.6 177 174 178 182 1.7 2.7 3639 3674 3735 3841 0.9 1.7  97.4 97.4 98.2 100.9 0.1 0.8  ar of GDP 9.66 9.39 9.07 9.02 -2.9 -3.4	19.76 20.03 20.45 20.73 1.4 2.1 23.00 21.93 21.94 22.74 4.6 0.0 1066 1095 1102 1133 2.7 0.6 177 174 178 182 1.7 2.7 3639 3674 3735 3841 0.9 1.7 ar of GDP 9.66 9.39 9.07 9.02 -2.9 -3.4	19.76 20.03 20.45 20.73 1.4 2.1 23.00 21.93 21.94 22.74 4.6 0.0 1066 1095 1102 1133 2.7 0.6 177 174 178 182 1.7 2.7 3639 3674 3735 3841 0.9 1.7 97.4 97.4 98.2 100.9 0.1 0.8 177 9.66 9.39 9.07 9.02 -2.9 -3.4

<sup>&</sup>lt;sup>a</sup>Refers to the refiner acquisition cost (RAC) of imported crude oil

Sources: Historical data: Latest data available from Bureau of Economic Analysis and Energy Information Administration; latest data available from EIA databases supporting the following reports: Petroleum Supply Monthly, DOE/EIA-0109; Petroleum Supply Annual. DOE/EIA-0340/2; Natural Gas Monthly, DOE/EIA-0130; Electric Power Monthly, DOE/EIA-0226; and Quarterly Coal Report, DOE/EIA-0121; International Petroleum Monthly DOE/EIA-0520; Weekly Petroleum Status Report, DOE/EIA-0208 Macroeconomic projections are based on Global Insight Model of the US Economy, November 2004

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<sup>&</sup>lt;sup>b</sup>Includes lease condensate

<sup>&</sup>lt;sup>c</sup>Total Demand includes estimated independent Power Producer (IPP) coal consumption

<sup>&</sup>lt;sup>d</sup>Total of retail electricity sales by electric utilities and power marketers Utility sales for historical periods are reported in Energy Information Administration (EIA) *Electric Power Monthly* and *Electric Power Annual* Power marketers' sales for historical periods are reported in EIA's *Electric Sales and Revenue*, Appendix C Data for 2003 are estimates

<sup>&</sup>lt;sup>e</sup>Defined as the sum of facility use of onsite net electricity generation plus direct sales of power by industrial- or commercial-sector generators to third parties, reported annually in Table 75 of the *Monthly Energy Review (MER)* Data for 2003 are estimates

published in the MER or the Annual Energy Review (AER) performed for gross energy consumption in EIA's MER Consequently, the historical data may not precisely match those The conversion from physical units to Btu is calculated by using a subset of conversion factors used in the calculations

bought nor sold, either directly or indirectly, as inputs to marketed energy EIA does not estimate or project total consumption of non-marketed renewable energy <sup>9</sup>Renewable energy includes minor components of non-marketed renewable energy, which is renewable energy that is neither

Notes: Minor discrepancies with other published EIA historical data are due to independent rounding Historical data are printed in bold; estimates and forecasts are in italics The forecasts were generated by simulation of the Short-Term Integrated Forecasting SPR: Strategic Petroleum Reserve

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Page law wordliber on 12/07/2004 14/10/55