



**Energy Brief  
March 2009**

Written by Tim Guinness, Lead Manager of the Global Energy Fund ([GAGEX](#))

Welcome to the March 2009 Guinness Atkinson Energy Brief.

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**HIGHLIGHTS**

**Oil market**

- **Oil price at \$40 – 45/barrel plateau but stronger towards end of month**
- **There was a high degree of OPEC compliance in achieving production cuts in February.**
- **Latest gasoline consumption data from the US (February 2009 demand up 1.7% year-on-year) may indicate demand destruction from the recession is being offset by demand recovery from lower prices**

**Natural gas market**

- **US market which was in balance in 2008 now suffering from excess supply and weakening demand; Gas price very weak and could remain weak until Q4**
- **However rebalancing is under way: drilling rig count decline is very rapid**
- **December US Department of Energy data showing US gas supply growth halting and onshore supply starting to decline**

**Energy equities.**

- **Having stabilised in January saw further weakness in February but held up better than broad market**

**1. Oil market – February 2009 in review**

**Oil price (WTI \$/barrel) 18 months – 31 August 2007 to 28 February 2009**



Source: Bloomberg

The West Texas Intermediate (WTI) oil price opened the month at \$41.68 and, after staying reasonably firm over the few days of February, fell 18% to \$33.98 on 12 February. It then traded in the \$33-38 range until the final week of the month before recovering good ground to close the month at \$44.76, an overall 7% rise during the month.

Since the start of 2009 there appear to be specific factors which are depressing WTI relative to other global crude oil benchmarks. The discount between Brent and WTI, for example, reached 24% on 12 January, with WTI at \$33.98 and Brent at \$44.38. Whilst Brent did weaken mid-month, it never dropped below \$39, and closed on 28 February at \$44.76. Other crude oil benchmarks, such as Asian Tapis and the OPEC<sup>1</sup> crude oil basket, have also stayed firmer in the \$40-45 range, rarely dipping below \$40. Local oversupply of crude oil at Cushing, Oklahoma (the hub for WTI supply) seems the most plausible explanation for this pricing gap.

As a more general comment, the oil price since the start of the year seems to be in a trading range of \$40-45 with a balance being struck between, on the upside, anticipation of OPEC production cuts, both current and pending, and on the downside, lingering concerns over prospects for oil demand as the recession takes hold.

Factors which supported the price in February included:

- OPEC production cuts.** Of the 4.2 million barrels per day (m b/day) cut in production from September 2008 levels currently targeted by OPEC, data released at the start of February indicated that OPEC member countries had reduced production by 2.8m b/day in January 2009 (i.e. around two-thirds compliant). Initial indications suggest that OPEC production cuts may have increased in February by a further 1m b/day to 3.8m b/day, or 90% compliance. OPEC has encountered regular problems with quota compliance in recent years, therefore the extent of compliance in this latest round of production cuts is being seen as positive in terms of supporting the oil price.

Factors which weakened the WTI oil price in February included:

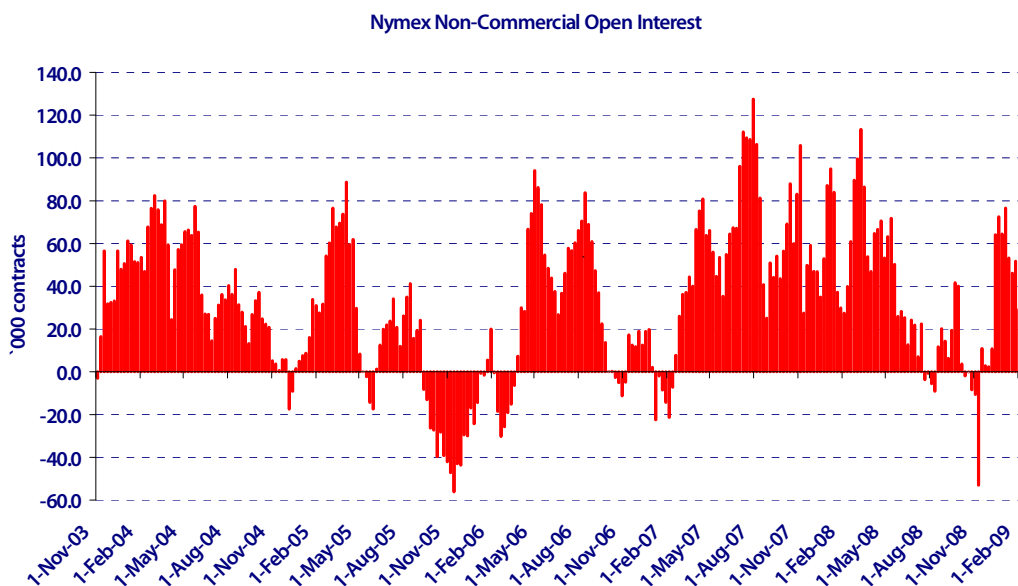
<sup>1</sup> OPEC: Organization of Petroleum Exporting Countries. Member countries are Algeria, Angola, Ecuador, Iran, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, U.A.E., Venezuela

- **Oil inventories.** At 351 million barrels, the US crude oil stocks (excluding the Strategic Petroleum Reserve) were at their highest February-end level since 1983 and 42 million barrels above February 2008 levels. OECD inventories as a whole are unfortunately only available as at end December: here we saw them up 4% from last year (2.67 billion barrels of oil equivalent vs. 2.57 billion last year).
- **Oil demand forecast downgrades.** Following the 1m b/day cut in its 2009 global demand forecast released 16 January, the International Energy Agency (IEA) reduced its 2009 forecast by a further 0.6m b/day in the 11 February Oil Market Report. Since last summer the IEA has removed 3m b/day from its 2009 demand forecast. Global oil demand projected by the IEA was 86.1m b/day in 2007, 85.8m b/day in 2008 and is now 84.7m b/day in 2009. The anticipated two-year contraction is the first since 1982 and 1983.

### Speculative and investment flows

The New York Mercantile Exchange (NYMEX) net non-commercial crude oil futures open position remained unchanged, starting and ending the month at 29,000 contracts long.

### Non-commercial net futures: NYMEX crude contracts 4 November 2003 to 24 February 2009

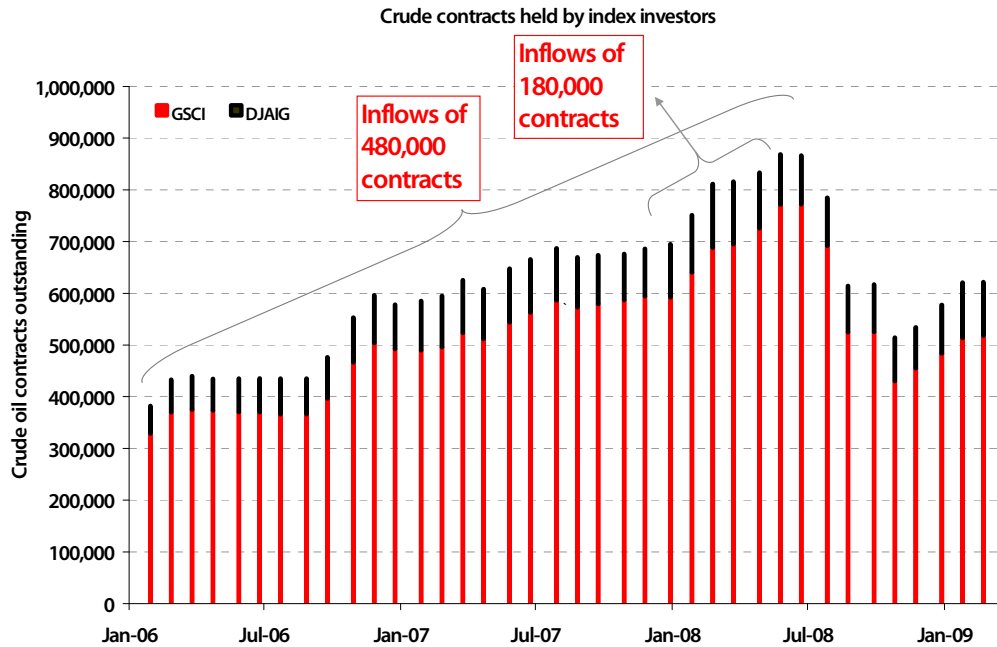


Source: Bloomberg/Nymex

### Analysis of commodity index tracking investor flows<sup>2</sup>

Net flows in terms of contracts were flat in February.

<sup>2</sup> Analysis is based on the testimony presented by Michael Masters before the Committee of Homeland Security and Governmental Affairs, United States Senate, 20 May 2008. We have sought to use Masters' methodology to quantify the weight of money flowing into WTI and Brent futures contracts from buying by investors tracking the Goldman Sachs Commodity Index or the DJ AIG Commodity Index.

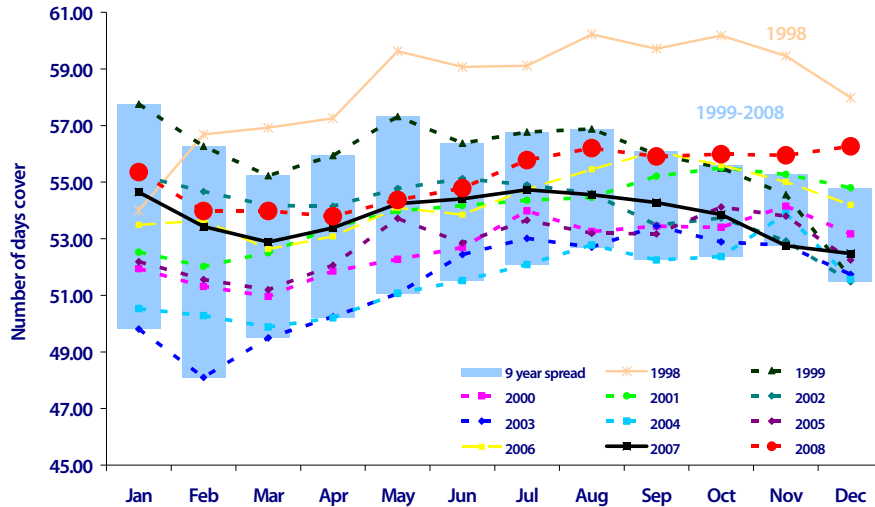


Source: Guinness Asset Management calculations (2009)

### OECD stocks

The December 2008 OECD total crude and product number published in the February IEA Oil Market Report was slightly down and showed a decline of 20 million barrels, giving a total stock of 2,673 million barrels (vs. 2,693 million barrels in November 2008). When expressed as number of days of demand cover (56.3 days), however, we see that we are well above last year's level (52.5 days) and above the top of the tight/loose spread of the last 10 years. This serves to underline the need for OPEC action to bring stocks down. In that regard, because of the reporting time lag, it will likely not be until April or even May that we see the full effect of the increased cuts OPEC is implementing from January 1, 2009.

### OECD total product and crude inventories – monthly 1998 to 2008



Source: IEA Oil market report (11 February 2009)

## 2. Oil market – outlook

### Supply and demand recent past plus 2009 forecasts

The table below illustrates the difference between world oil demand growth and non-OPEC supply growth over the last 9 years together with the IEA and our forecasts for 2009. For 2009 we have compared a scenario where global demand declines 2.4m b/day with the latest IEA forecast of a global demand decline of 1.0m b/day. We regard the current global economic slowdown as likely to generate a sharper fall in demand than the IEA and discuss this and our slightly lower non OPEC supply assumptions below.

### Estimated annual world oil supply & demand growth 2000 – 2009

(million barrels per day)	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009e IEA (A)	2009e GA (B)
World Demand	76.7	77.4	77.7	79.3	82.5	84.0	85.1	86.0	85.7	84.7	83.3
Non-OPEC supply (includes Angola and Ecuador for periods when each country was outside OPEC <sup>1</sup> )	46.2	47.2	48.1	49.1	50.3	50.4	51.2	50.1	49.6	50.9	50.5
Angola supply adjustment <sup>1</sup>	-0.8	-0.7	-0.9	-0.9	-1.0	-1.2	-1.4	0.0	0.0	0.0	0.0
Ecuador supply adjustment <sup>1</sup>	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.5	-0.5	0.0	0.0	0.0
Indonesia supply adjustment <sup>2</sup>	1.2	1.2	1.1	1.0	1.0	0.9	0.9	1.0	1.0	0.0	0.0
Non-OPEC supply (ex. Angola/Ecuador and inc. Indonesia for all periods)	46.2	47.3	47.9	48.8	49.8	49.6	50.2	50.6	50.6	50.9	50.5
OPEC NGLs	3.1	3.4	3.7	3.9	4.2	4.3	4.4	4.5	4.7	5.0	5.4
Non-OPEC supply plus OPEC NGLs (ex. Angola/Ecuador and inc. Indonesia for all periods)	49.3	50.7	51.6	52.7	54.0	53.9	54.6	55.1	55.3	55.9	55.9
Call on OPEC-12 <sup>3</sup>	27.4	26.7	26.1	26.6	28.5	30.1	30.5	30.9	30.4	28.8	27.4
Iraq supply adjustment <sup>4</sup>	-2.6	-2.4	-2.0	-1.3	-2.0	-1.8	-1.9	-2.1	-2.5	-2.5	-2.5
Call on OPEC-11 <sup>5</sup>	24.8	24.3	24.1	25.3	26.5	28.3	28.6	28.8	27.9	26.3	24.9

<sup>1</sup>Angola joined OPEC at the start of 2007, Ecuador rejoined OPEC at the end of 2007 (having previously been a member in the 1980s)

<sup>2</sup>Indonesia left OPEC as of the start of 2009

<sup>3</sup>Algeria, Angola, Ecuador, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi, U.A.E. Venezuela

<sup>4</sup>Iraq has no official quota

<sup>5</sup>Algeria, Angola, Ecuador, Iran, Kuwait, Libya, Nigeria, Qatar, Saudi, U.A.E. Venezuela

Source: 2000 - 2008 IEA oil market reports; (A) February 2009 Oil market Report (B) GA: Guinness Atkinson/Guinness Asset Management calculations

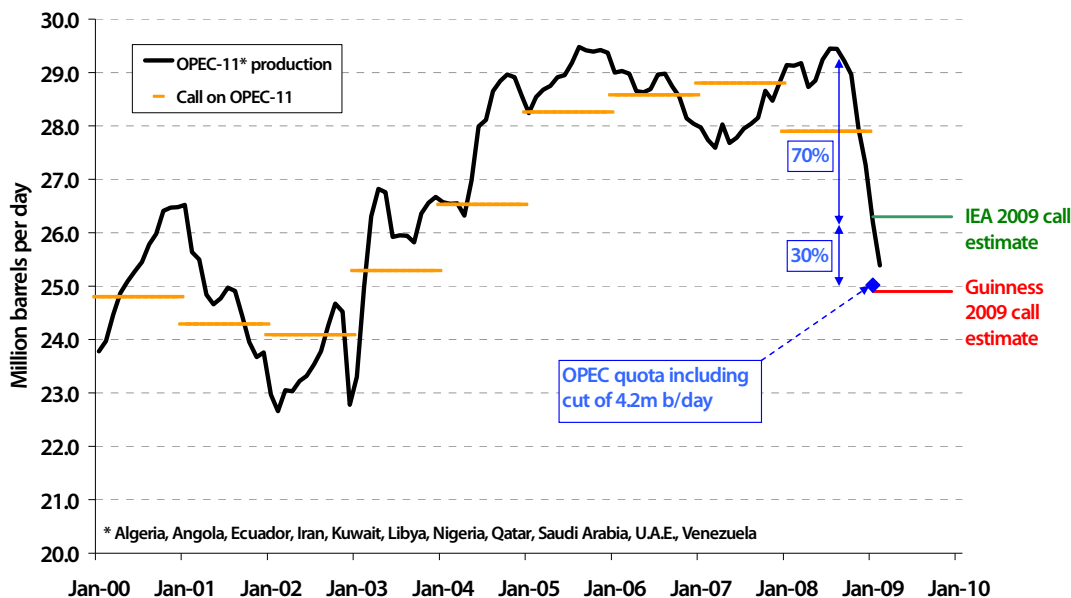
## OPEC

At its extraordinary meeting on 17 December 2008, OPEC announced a 4.2m b/day cut from the actual OPEC-11 September 2008 production level of 29.2m b/day, giving a new quota target of 25.0m b/day

with effect from January 1, 2009. The previous quota was 27.3m b/day, implying an effective quota cut from this meeting of 2.3m b/day – the largest single cut in OPEC history.

OPEC production for February 2009 was reported as 25.4m b/day. If this proves to be accurate, OPEC will have achieved ~90% compliance, which is impressive, and will move to near the bottom of the estimated range for the 2009 call.

### OPEC apparent production vs call on OPEC 2000 – 2009



Source: Bloomberg/IEA Oil Market Report (11 February 2009)

We have included a 2.5m b/day demand decline scenario to compare with the 1.1m b/day decline of the IEA because we estimate that net global demand destruction in 2009 is quite likely to be 2.5m b/day, all or mostly in the OECD (1.5m b/day IEA) with no growth in demand in non OECD territories (0.4m b/day IEA). When added to declines that have already occurred in the OECD in 2007 and 2008, (2.1m b/d), this gives a total decline in the OECD between 2007 and 2010 of 4 – 5m b/day, or 8%-10%. We consider this to be a good ballpark estimate if one tries to extrapolate from the past demand destruction periods of 1974 and 1980.

The total cut which OPEC is now working towards should, if the IEA is right, ensure that the market reverts to balanced/tight quite soon. If we are right, however, and the fall off in demand is rather more than the IEA projects, then the market will tend towards loose until the autumn. If this latter scenario plays out we believe OPEC will make the further cuts needed to ensure the market does indeed revert to balanced/tight. We would then expect the oil price to bottom after these subsequent cuts. It is worth recalling that in both 1998 and 2002 it took 8 months from the first OPEC cuts for the oil price to bottom. Lastly we take seriously Al Naimi's (the Saudi Oil Minister) explicit comment: "OPEC will meet as often as needed to ensure stability", bearing in mind Saudi's importance in OPEC. The Saudi King has also commented that an oil price of \$75 is fair.

The next OPEC meeting is scheduled for March 15, 2009 in Vienna, Austria.

### Supply looking forward

Non-OPEC supply growth is still some way off, if possible at all. The truth is that the non-OPEC world is struggling to grow production. The growth was 2% per annum between 1998-2003, 1% from 2003-2008 and is forecast at 0.5% from 2008-2013 and we believe that has a good chance of not being realised.

### Demand looking forward

We think that a comparison with the 1973-1975 and 1979-1983 periods is appropriate.

If we are lucky the structural shift away from oil as a source of heating and power generation in OECD countries and the recent rapid retreat in the oil price should mean that the demand drop will not be as severe as the 17% OECD fall in 1979-83.

It is likely, however, to be somewhat greater than the 7% OECD demand fall in 1973-75.

We project a drop of 8 - 10%.

This drop equates to around 5mb/day (vs. IEA 3.8m b/day), of which we have already seen almost 2m b/day (OECD demand was 49.8m b/day in 2005). An inherent difference between the current outlook and the 1979-83 period is that back then the world was faced with a prolonged high oil price environment after the collapse of the Shah in Iran, as well as the attendant recession: this time the recession might be deeper, but the high oil price effect will likely be less. The other point of comparison - the 1973-5 recession - saw an oil price spike similar in scale to the recent one (although the price did not weaken as quickly as it has recently), and a recession of slightly smaller magnitude to the one we are entering. In non-OECD we expect growth to be flat from Asia, the Middle East and others - down from 1 – 1.5m b/day in 2008. Here again we are more cautious than the IEA which continues to forecast non-OECD growth of 0.4m b/day.

### Inventory levels

As we discussed earlier in the report, OECD total crude and product inventories look loose as shown by the fact the December 2008 inventory level is above the top of the ten-year range.

### Conclusions about oil

From the low of \$31.42 on 22 December 2008 we have seen the oil price (WTI) recover to over \$50 only to ease back to well below \$40 and now move above \$45 as I write. We are now beginning to see signs of OPEC members conforming to their quotas and working in unison and sentiment swinging towards our view that OPEC can, and will, succeed in stabilising the price.

The table below illustrates our target oil price estimates and for comparison the rises in percentage terms that we have seen in the period from 2002 to 2008.

	2002	2003	2004	2005	2006	2007	2008	2009e	2010e	2011e
Average WTI (\$)	26.1	31.2	41.7	56.6	66.1	72.2	99.9	50	60	70
Change y-o-y (\$)	-	5.1	10.5	14.9	9.5	6.1	27.7	-49.9	+10.0	+10.0
Change y-o-y (%)	-	+20%	+34%	+36%	+17%	+9 %	+38%	-50%	+20%	+17%

e = estimate

Source: Bloomberg, Guinness Asset Management estimates (February 2009)

### 3. Natural gas market – February 2009 in review

The US spot natural gas price (Henry Hub, Louisiana) opened the month at \$4.78 per Mcf (1000 cubic feet) and ticked up to \$5.05 over the first two days of the month. It then moved lower over the remainder of February, trading down to a low of \$4.03 by the end of the month. The spot gas price has only fallen below \$4 once since 2002, in September 2006. From a high of \$13.31 on 2 July 2008, the gas price has fallen 70% in the eight months to the end of February. The 12-month gas strip price (a simple average of settlement prices for the next 12 months' futures prices) also fell in February, reaching a low of \$4.78 on 20 February before closing the month at \$5.07.

**Henry Hub Gas price (\$/Mcf) 18 months – 31 August 2007 to 28 February 2009**



Source: Bloomberg

Factors which weakened the gas price in February included:

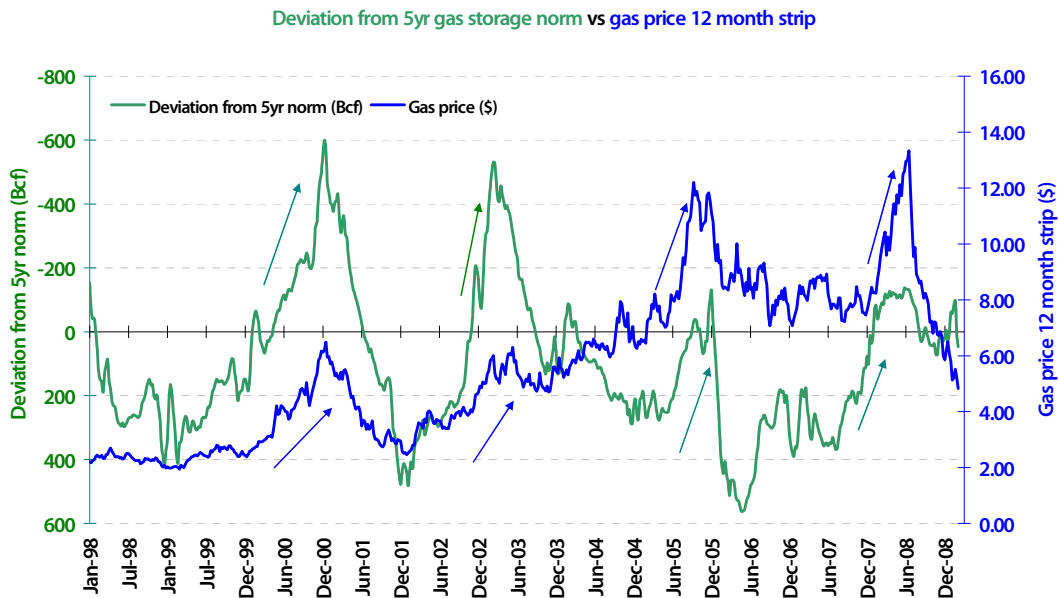
- **Continued strong year-on-year US production increase.** The sharp fall in the natural gas rig count is only starting to take its toll on US domestic natural gas production. Although month on month growth has halted, the December data released at the end of February showed gross onshore production up 10.2% year-on-year, at 57.5 billion cubic feet per day (Bcf/day) versus 52.1 Bcf/day in December 2008.
- **Unseasonably warm weather in the US North East.** This led to a withdrawal from storage of only 24 Bcf on 13 February versus market expectations of 60-100, and a five-year average withdrawal of 131 Bcf. This left storage levels at 20 February (the most recent data point) at 1,895 Bcf, 17% higher than last year and well above the five-year average.
- **Fears about the likely effect of a recession on US natural gas demand.**

Factors which supported the gas price in February included:

- **Drilling rig count cuts.** The US natural gas rig count, which gives the number of land rigs actively drilling in the US, had fallen by the end of February to 970 rigs (as reported by Baker Hughes) from a high on September 9, 2008 of 1,606 rigs (a drop of 40%).
- **Hurricane effects on offshore production.** Gross Gulf of Mexico production remained below full capacity.

### Natural gas storage

Swings in the supply/demand balance for US natural gas should, in theory, show up in movements in gas storage data. The following graph shows the 12 month gas strip price (in blue) against the amount of gas in storage expressed as the deviation from the 5 year storage average (in green). Swings in storage have frequently been a leading indicator to movements in the gas strip price.



Source: Bloomberg, EIA (March 2009)

The surplus of gas in the second half of 2008 can be seen in gas storage data, with the inflection point in storage occurring in July 2008 and the storage line moving from negative (i.e. deficit) to positive (i.e. surplus) territory at the end of the year. This coincided with the gas strip price falling from a peak of over \$13 in July to around \$6 by the end of the year. We expect the storage deviation to move significantly into excess territory and the moment when it turns will likely be a coincident indicator for the start of a gas price recovery.

## 4. Natural gas market - outlook

### Supply & demand recent past

The sharp contraction in the gas price since July 2008 reflects both the move down in the oil price and the fact that supply/demand fundamentals have changed materially.

The supply side fundamentals for natural gas in the US are driven by 5 main moving parts: onshore and offshore domestic production, net imports of gas from Canada, exports of gas to Mexico and imports of liquefied natural gas (LNG). In the last 2 years onshore production has been growing at an accelerating pace as gas shales have been developed using advances in horizontal drilling and “fracking” techniques; by contrast offshore production and imports from Canada and of LNG have been declining.

On the demand side, industrial gas demand and electricity gas demand, each about a third of total US gas demand, are key. Commercial and residential demand, which make up the final third, have been fairly constant on average over the last decade - although yearly fluctuations due to the coldness of winter weather can be marked. Growth in gas' market share of the residential and commercial heating market has been balanced by efficiency gains.

Industrial demand tends to trend up and down depending on the strength of the economy; the level of the US dollar; and the differential between US and international gas prices. Until mid-2008 a weaker dollar, high international gas prices and a strong economy saw industrial demand recovering after declining in the first half of this decade. Not surprisingly, just recently demand has turned down (December 2008 industrial demand was 21.3 Bcf/day vs. 23.3 Bcf/day for December 2007).

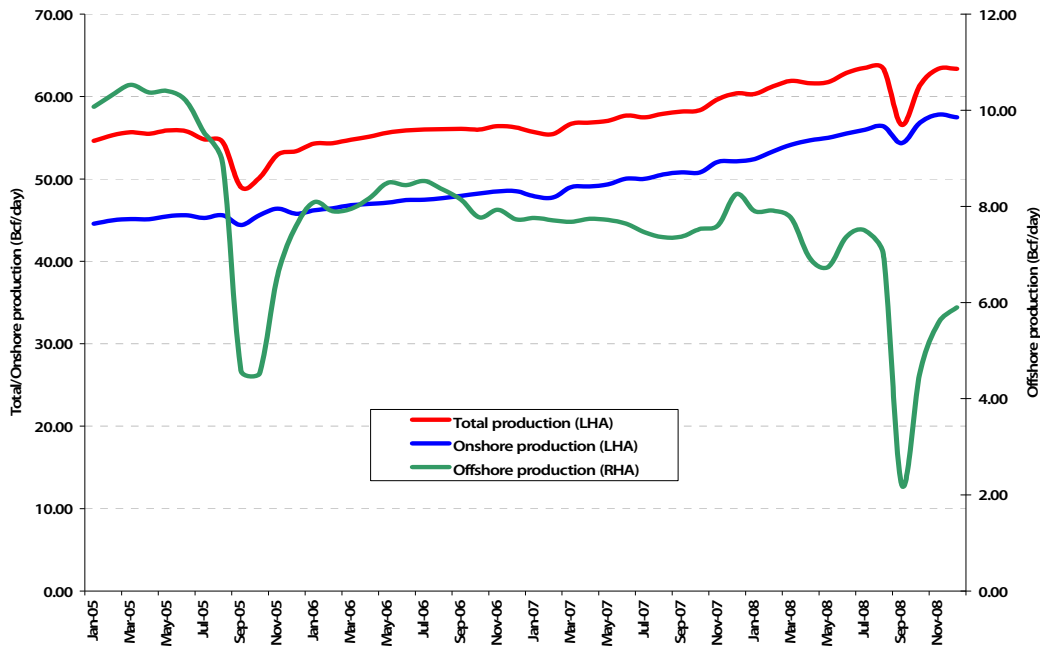
Generally speaking, the majority of incremental electricity demand over the last few years has been met by gas rather than coal, nuclear or hydro power. While electricity demand has grown 1-2% per annum (pa), gas demand for electricity generation has grown by on average 5% pa (1 Bcf/day per year).

## **Supply Outlook**

### *Fall in Rig Count*

The most important immediate short term supply driver is a sharply dropping rig count. The rig count has dropped from a peak of 1,600 gas land rigs to 970 as of end of February 2009. This should halt supply growth this spring and according to our forecasts bring supply down by 3-3.5 Bcf/day by September 2009 and by 5-6 Bcf/day by year end. Recently published data by the US Department of Energy (DOE) show production growth flattening out in December 2008.

US natural gas production 2005 – 2008 (Lower 48 States)



### *Liquid natural gas (LNG) arbitrage*

The UK national balancing point (NBP) gas price – which serves as a proxy to the European gas price – fell dramatically in February, down in dollar terms from \$9.10 to \$4.80 over the month. The differential to Henry Hub remains sufficient to divert LNG cargoes away from the US, although that gap has shrunk significantly. We are currently assuming unchanged LNG imports for 2009.

### *Canadian imports into the US*

These are down approximately 5% for full year 2008 vs. 2007, though 10% for the second half of the year. Falling rig counts, a less attractive royalty regime enacted in 2007, and increased demand from Canadian oil sands development are all factors at work here. We expect some further decline in 2009, say 0.5 Bcf/day

### **Demand Outlook**

The likely effect of this current recession on US natural gas demand is more difficult to ascertain. Gas demand splits roughly a third each between residential/commercial for heating; electricity generation and industrial. Residential/commercial and most of electricity demand are principally weather rather than economy sensitive. Industrial demand is economy sensitive. Between 1972-5, industrial demand for natural gas fell 18%, and the 1979-83 period saw a fall of 21%. However the mix of industrial use today appears to be less business cycle sensitive so the effect this time may be less marked. We are assuming we may see a 20% decline in industrial demand and 7% in electricity giving a total decline of 5-6 Bcf/day. This forecast for demand decline is more pessimistic than many other commentators but follows the logic of what has happened in past slowdowns.

### **Other**

#### *Relationship between gas price and other energy commodity prices in the US*

The oil/gas price ratio (\$ per bbl WTI/\$ per mcf Henry Hub) of 11.1x at the end of February was down from nearly 14.0x at the end of September but is still outside the more normal ratio of 6-9x. If oil

averages, say, around \$60 in 2010 and the relationship between the oil and gas price returns to its longer-term average of 6-9x, this implies the gas price increasing back to around \$8 once the market has returned to balance.

The following chart of the front month US natural gas price against heating oil (No2), residual fuel oil (No5) and coal (Sandy Barge adjusted for transport and environmental costs) seeks to illustrate how coal and residual fuel oil switching provide a floor and heating oil a ceiling to the natural gas price. The recent sharp pullbacks in the coal and residual oil prices has seen the price of gas end up above the coal support level but below the residual oil support level. Though to be fair it has been trading below residual oil for some 16 months now.

**Natural gas price (black) vs. residual fuel oil (light blue) and heating oil (dark blue) and Sandy Barge (adjusted) (green) 2000 – 2009**



Source: Bloomberg LP

**Conclusions about US natural gas**

We expect weakness in the US natural gas price to continue until a reduced US land rig count is seen to be working its time honoured function of reducing supply to bring it back into balance with demand reduced by the current recession by 5-6 Bcf/day. We judge the earliest this could occur is Q3 2009.

**5. Guinness Atkinson Global Energy Fund performance review**

The main index of oil and gas equities, the MSCI World Energy Index<sup>3</sup>, was down 8.88% over the month of February. The S&P 500<sup>4</sup> was down 10.65% in February. The Fund performed better than the MSCI World Energy Index falling by 7.12% (all in US dollar terms).

Within the Fund, February’s stronger performers were Addax, Suncor, Transocean, Singapore Petroleum and Petrobras. Poorer performers were Swift, Helix, Nexen, Opti-Canada, ConocoPhillips and Apache.

<sup>3</sup> MSCI World Energy Index is the energy sector of the MSCI World Index (an unmanaged index composed of more than 1400 stocks listed in the US, Europe, Canada, Australia, New Zealand, and the Far east) and as such can be used as a broad measurement of the performance of energy stocks. Indices do not incur expenses and are not available for investment

<sup>4</sup> Standard and Poor’s 500 index is a capitalization-weighted index of 500 stocks. The index is designed to measure performance of the broad US economy through changes in the aggregate market value of 500 stocks representing all major industries. Indices do not incur expenses and are not available for investment

**Performance as of December 31<sup>st</sup>, 2008**

<b>Inception date June 30, 2004</b>	<b>Q4 2008</b>	<b>Q3 2008</b>	<b>Full Year 2007</b>	<b>Full Year 2008</b>	<b>One year (annualised)</b>	<b>Last 2 years (annualised)</b>	<b>Inception to end 2008 (annualised)</b>
<b>Global Energy Fund</b>	<b>-33.86%</b>	<b>-34.08%</b>	<b>37.25%</b>	<b>-48.56%</b>	<b>-48.47%</b>	<b>-15.91%</b>	<b>10.23%</b>
<b>MSCI Energy Index</b>	<b>-21.26%</b>	<b>-27.98%</b>	<b>30.86%</b>	<b>-37.88%</b>	<b>-37.80%</b>	<b>-9.80%</b>	<b>8.81%</b>
<b>S&amp;P 500 Index</b>	<b>-21.94%</b>	<b>-8.37%</b>	<b>5.49%</b>	<b>-37.00%</b>	<b>-36.92%</b>	<b>-18.41%</b>	<b>-3.16%</b>

**Performance as of February 28<sup>th</sup>, 2009**

<b>Inception date June 30, 2004</b>	<b>Q4 2008</b>	<b>February 2009</b>	<b>Full Year 2007</b>	<b>Full Year 2008</b>	<b>One year (annualised)</b>	<b>Two years (annualised)</b>	<b>Inception to end 2008 (annualised)</b>	<b>Since inception (annualised)</b>
<b>Global Energy Fund</b>	<b>-33.86%</b>	<b>-7.12%</b>	<b>37.25%</b>	<b>-48.56%</b>	<b>-54.16%</b>	<b>-19.52%</b>	<b>10.23%</b>	<b>7.14%</b>
<b>MSCI Energy Index</b>	<b>-21.26%</b>	<b>-8.88%</b>	<b>30.86%</b>	<b>-37.88%</b>	<b>-44.04%</b>	<b>-13.86%</b>	<b>8.81%</b>	<b>5.50%</b>
<b>S&amp;P 500 Index</b>	<b>-21.94%</b>	<b>-10.65%</b>	<b>5.49%</b>	<b>-37.00%</b>	<b>-44.85%</b>	<b>-26.08%</b>	<b>-3.16%</b>	<b>-7.13%</b>

Gross Expense Ratio 1.34%\*

The Global Energy Fund has an expense cap in place and the advisor is contractually obligated to cap the total expenses at least through June 30, 2009.

*Performance data quoted represent past performance and does not guarantee future results. The investment return and principal value of an investment will fluctuate so that an investor's shares, when redeemed, may be worth more or less than their original cost. Current performance of the Fund may be lower or higher than the performance quoted. For most recent month-end and quarter-end performance, visit [www.gafunds.com/performance.asp](http://www.gafunds.com/performance.asp) or call (800) 915-6566.*

*The Fund imposes a 2% redemption fee on shares held for less than 30 days. Total returns reflect a fee waiver in effect and in the absence of this waiver, the total returns would be lower.*

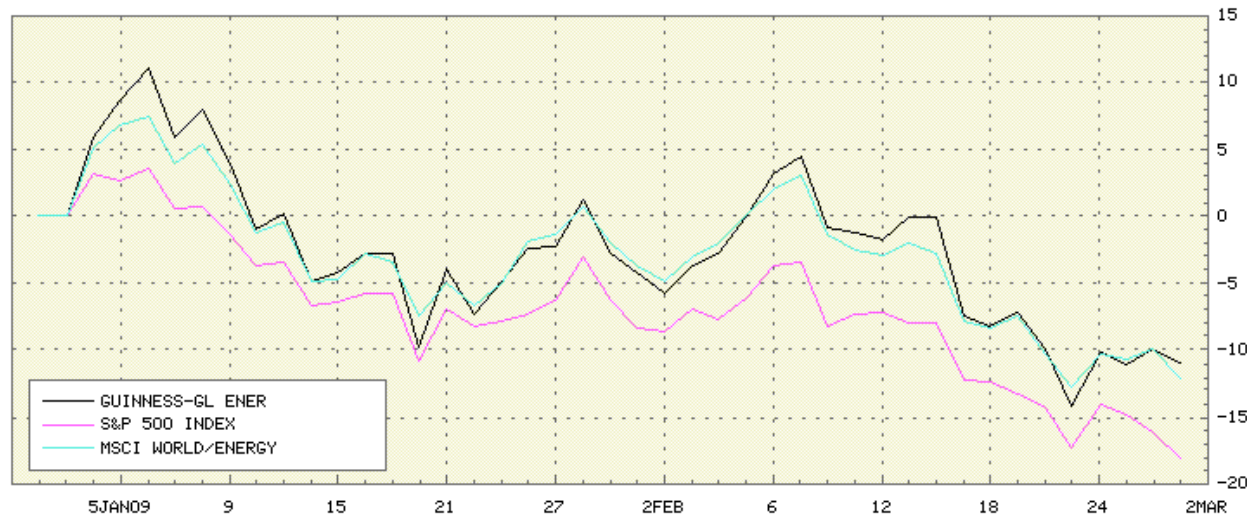
*Performance data does not reflect the redemption fee and, if deducted the fee would reduce the performance noted.*

The following chart shows the Fund's performance year to date to 28 February 2009.

### Guinness Atkinson Global Energy Fund vs. S&P 500 and MSCI World Energy Index – YTD to 28 February 2009

Range		12/31/08	-	2/27/09	Period	D	Daily	58 Day	Period
Securities		Crncy		Prc	Appr		Total Ret	Difference	Annual Eq
1	GAGEX US Equity	USD		-11.03	%		-11.03 %	7.15 %	-52.08 %
2	SPX Index	USD		-18.62	%		-18.18 %		-71.71 %
3	MXW00EN Index	USD		-12.78	%		-12.22 %	5.95 %	-55.98 %

(\* = No dividends or coupons)



Source: Bloomberg

### Buys/Sells

There were no buys or sells during the month.

### Sector Breakdown

The following table shows the asset allocation of the Fund at 28 February 2009.

(%)	31 Dec 2006	31 Dec 2007	31 Dec 2008	28 Feb 2009	Change in 2009
<b>Oil &amp; Gas</b>	<b>95.4</b>	<b>103.5</b>	<b>96.4</b>	<b>95.8</b>	<b>-0.6</b>
Integrated	45.2	66.2	53.7	54.7	+1.0
Exploration and production	30.3	25.8	28.7	27.0	-1.7
Drilling	9.9	8.1	5.2	5.9	+0.7
Equipment and services	3.4	3.4	6.4	5.1	-1.3
Refining and marketing	6.6	0.0	2.4	3.1	+0.7
<b>Coal and consumables</b>	<b>3.3</b>	<b>2.5</b>	<b>2.3</b>	<b>2.5</b>	<b>+0.2</b>
<b>Construction and engineering</b>	<b>0.0</b>	<b>0.0</b>	<b>0.4</b>	<b>0.5</b>	<b>+0.1</b>
<b>Cash</b>	<b>1.3</b>	<b>-6.0</b>	<b>0.9</b>	<b>1.2</b>	<b>+0.3</b>
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>-</b>

Source: Guinness Asset Management  
 Basis: Global Industry Classification Standard (GICS)

### Equity valuation

While it is hard to be precise, the current price of energy equities reflects a medium to long-term oil price of \$29-\$40/barrel. You can make a rough calculation that takes the 2007 PER<sup>5</sup> of the Fund (5.5x) which reflected earnings when the oil price was \$72 and work out what oil price would reduce earnings by enough to put the Fund on the same P/E ratio as the broad market is currently. The reduction in earnings depends on which 2008 P/E ratio you take for the S&P500 – either 13.6x (S&P 500 operating earnings which exclude write-downs) or 28.9x (S&P 500 reported earnings which include write-downs). Today that implied oil price is \$29-\$40. These sums are very crude and make heroic assumptions (for instance, that F&D and lifting costs are \$20/barrel) but is in my view a perfectly respectable approach to give an indication of oil price implicit in current energy equity valuations.

### 6. Guinness Atkinson Global Energy Fund portfolio

The fund at February 28, 2009 was on a PER (2008) of 6.0x (5.5x 2007) with a median PER (2008) of stocks held of 5.9x. By comparison the S&P 500 Index at 735.1 was on a PER of 13.6x (2008) (*Based on S&P 500 'operating' earnings per share estimates of 54.19 for 2008*). This is shown in the following table:

At 28 February 2009	2007	2008	2009
Fund PER	5.5	6.0	9.5
S&P 500 PER	8.9	13.6	15.3
Premium (+)/Discount (-)	-38.2%	-55.9%	-37.9%
<b>Fund 2007 vs S&amp;P 500 2008</b>	<b>-59.5%</b>	<b>Fund 2008 vs S&amp;P 500 2009</b>	<b>-60.8%</b>
Average oil price (WTI) \$	\$72.2/bbl	\$99.9/bbl	\$40.6/bbl (YTD)

Source: Standard and Poor's; Guinness Asset Management Ltd (S&P500 'operating' EPS consensus 2009 48.14)

### Portfolio Holdings

Our **Integrated** and similar stock exposure (c.55%) is comprised of a mix of mid-cap and large-cap stocks. Mid-caps are ConocoPhillips, Marathon, Statoil, Occidental, OMV, Hess, Petro-Canada, Repsol and ENI. Our four large caps are Royal Dutch Shell, BP, Total and Chevron. At the end of February the median PER of this group was 6.0x 2008 earnings.

Our **Exploration & production** exposure (c.27%) gives us exposure most directly to any recovery in the oil price after its 72% fall from \$145 per barrel to \$40 per barrel. The stocks with oil sands exposure are Imperial Oil, Encana, OPTI Canada, Suncor and Nexen. The pure E&P stocks are all now largely in the US (Anadarko, Newfield, Pioneer Natural Resources and Swift), although Apache and Noble have

<sup>5</sup> The price/earnings ratio (PER) compares the price of a share to the company's earnings per share (EPS). It directly relates the price of a share to the proportion of the company's profits (PER = share price ÷ EPS). EPS is the profit attributable to shareholders divided by the number of shares in issue. It is the amount of a company's profit that belongs to a single ordinary share

significant international production as well. The metrics behind three of the E&P stocks held are low enterprise value<sup>6</sup>/proven reserves (Noble, Swift, and Pioneer). All of them also give us exposure to North American natural gas (they are each maximum 50% oil) and they include one of the industry leaders (Apache) and one of the more leveraged companies (Anadarko). We also have smaller positions in two non-US E&P stocks, Dragon Oil and Addax Petroleum, both of which were previously held in our 'research' portfolio. Dragon Oil has producing oil assets in the Caspian Sea and trades on 5.0x 2007 earnings (3.0x 2008 earnings) whilst Addax, mainly an oil producer in offshore Nigeria, also trades on attractive metrics. Both companies also have sizeable contingent gas assets.

We have exposure to two **Emerging Markets** stocks (Petrobras and CNOOC). They are both mainly E&P focused and have significant growth potential and advantages as national champions. For Petrobras, the recent Tupi, Jupiter and Carioca discoveries and the surrounding acreage in the offshore Brazilian subsalt could yield substantial value.

We have useful exposure to **North American Oil Service** stocks. On estimated 2008 earnings they are all trading with PERs of between 1.3x and 7.5x - Transocean (4.6x), Halliburton (7.5x), Patterson UTI (3.8x), Helix (1.3x).

Our independent **Refining** exposure is now in the Far East, and with PERs of 2.7x 2007 and 6.0x 2008 earnings Singapore Petroleum looks good value provided refining margins hold up in 2009 as we expect them to.

Of other holdings, Peabody gives exposure to the huge differential between the coal and oil prices in British Thermal Unit (Btu) terms. Their energy reserves (on a Btu basis) are greater than Exxon's despite a market capitalisation of less than 2% of Exxon's.

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<sup>6</sup> Enterprise value is defined as the market capitalisation of a company plus debt minus total cash and cash equivalents.

## Portfolio at 28 February 2009

GAGEX - Global Energy Fund 28 February 2009									
Stock	Country	% of NAV	2007	2008	2009	2010	Sector	31.12.08 Mkt. Cap. (bn)	
			B'berg mean PER	B'berg mean PER	B'berg mean PER	B'berg mean PER			
Chevron Corp	US	2.9	6.9	5.2	10.7	7.7	Integrated Oil & Gas	150.3	
BP PLC	GB	3.0	8.2	7.3	8.1	6.4	Integrated Oil & Gas	143.7	
Total SA	FR	3.3	6.3	5.9	8.4	7.2	Integrated Oil & Gas	128.7	
ConocoPhillips	US	2.7	3.7	3.5	9.5	5.6	Integrated Oil & Gas	77.2	
ENI SpA	IT	3.2	5.8	6.5	8.4	7.0	Integrated Oil & Gas	94.7	
Royal Dutch Shell PLC	NL	3.1	4.7	7.4	7.7	6.4	Integrated Oil & Gas	92.8	
StatoilHydro ASA	NO	3.9	8.5	8.6	10.3	8.0	Integrated Oil & Gas	51.8	
Occidental Petroleum Corp	US	3.7	8.6	6.2	17.7	9.4	Integrated Oil & Gas	48.6	
Repsol YPF SA	ES	2.9	4.6	5.4	6.4	5.5	Integrated Oil & Gas	26.0	
Marathon Oil Corp	US	3.5	4.1	4.7	8.1	5.4	Integrated Oil & Gas	19.3	
Hess Corp	US	4.6	9.2	7.6	51.6	15.0	Integrated Oil & Gas	17.5	
Petro-Canada	CA	3.8	5.1	4.4	9.6	5.6	Integrated Oil & Gas	10.6	
OMV AG	AT	4.1	3.9	4.5	5.2	4.5	Integrated Oil & Gas	7.9	
Petroleo Brasileiro SA	BR	5.0	6.4	13.9	16.6	15.2	Integrated Oil & Gas	75.5	
Afren PLC	GB	0.1	nm	nm	1.8	1.1	Oil & Gas Exploration & Produc	0.2	
Shandong Molong Petroleum M HK		0.2	9.0	5.4	4.2	3.2	Oil & Gas Equipment & Services	0.1	
EnCana Corp	CA	2.2	9.8	5.9	12.0	11.7	Oil & Gas Exploration & Produc	35.1	
Suncor Energy Inc	CA	1.4	8.8	11.7	20.0	10.2	Integrated Oil & Gas	18.2	
Imperial Oil Ltd	CA	3.6	12.3	9.1	19.7	12.4	Integrated Oil & Gas	29.1	
Nexen Inc	CA	3.1	8.5	5.4	13.2	7.0	Oil & Gas Exploration & Produc	9.2	
OPTI Canada Inc	CA	0.3	nm	nm	nm	3.1	Oil & Gas Exploration & Produc	0.3	
Apache Corp	US	2.1	7.0	28.3	16.5	7.1	Oil & Gas Exploration & Produc	25.0	
Anadarko Petroleum Corp	US	2.5	4.3	5.1	nm	18.7	Oil & Gas Exploration & Produc	17.7	
Noble Energy Inc	US	3.5	8.4	6.0	15.9	10.4	Oil & Gas Exploration & Produc	8.5	
Pioneer Natural Resources Co	US	1.3	7.3	7.8	nm	7.4	Oil & Gas Exploration & Produc	1.9	
Addax Petroleum Corp	CA	1.9	7.8	3.6	9.5	4.9	Oil & Gas Exploration & Produc	2.7	
Newfield Exploration Co	US	2.4	14.6	nm	6.0	5.7	Oil & Gas Exploration & Produc	2.6	
Dragon Oil Plc	GB	2.0	4.9	2.9	5.1	3.5	Oil & Gas Exploration & Produc	1.2	
Swift Energy Co	US	1.5	1.4	nm	nm	3.3	Oil & Gas Exploration & Produc	0.5	
Coastal Energy Co	CA	0.4	nm	158.0	1.7	6.2	Oil & Gas Exploration & Produc	0.1	
Grey Wolf Exploration Inc	CA	0.0	nm	nm	nm	nm	Oil & Gas Exploration & Produc	0.0	
WesternZagros Resources Ltd	CA	0.1	nm	nm	nm	nm	Oil & Gas Exploration & Produc	0.1	
Transocean Ltd	US	4.0	4.2	4.6	4.4	4.3	Oil & Gas Drilling	15.1	
Halliburton Co	US	3.8	6.1	7.5	9.4	8.8	Oil & Gas Equipment & Services	16.3	
Patterson-UTI Energy Inc	US	2.0	3.1	3.8	nm	78.1	Oil & Gas Drilling	1.8	
Helix Energy Solutions Group Inc	US	1.1	0.9	1.3	2.5	2.1	Oil & Gas Equipment & Services	0.7	
Kentz Corp Ltd	GB	0.5	7.9	5.8	5.0	5.0	Construction & Engineering	0.2	
CNOOC Ltd	HK	3.7	9.3	5.7	9.3	7.1	Oil & Gas Exploration & Produc	41.5	
Singapore Petroleum Co Ltd	SG	3.1	2.7	5.9	7.8	5.5	Oil & Gas Refining & Marketing	0.8	
Peabody Energy Corp	US	2.6	15.2	6.5	7.2	6.5	Coal & Consumable Fuels	6.1	
	Stocks	98.8							
Cash	Cash	1.2	33.0	33.0	33.0	33.0	Av. mkt cap	29.5	
	Total	100.00					Med. mkt cap	12.9	
<b>Average PER of Fund</b>			<b>5.5</b>	<b>6.0</b>	<b>9.5</b>	<b>6.8</b>			
<b>Median PER stocks held</b>			<b>6.9</b>	<b>5.9</b>	<b>8.4</b>	<b>6.5</b>			

The Fund's portfolio may change significantly over a short period of time; no recommendation is made for the purchase or sale of any particular stock.

## 7. Manager's concluding comments

For much of the last 10 years we have enjoyed a favourable environment for energy investing. In 1999 - 2000 oil was recovering from a very cheap level. In 2003 – 2008 oil demand growth exceeded supply growth due to strong developing world demand and accelerating depletion rates in mature basins.

In the second half of 2008 the landscape changed.

How long and deep the recession turns out to be is still unclear. We incline to the view that the recapitalisation of our banks that has now occurred and the sizeable fiscal and government spending stimuli are large enough to do the job of preventing a depressionary spiral. We expect the recession to be the deepest since the war – 5% peak to trough in US GDP – and to have its nadir around Q3 2009. We expect the US broad market (S&P 500) to trade between 700 and 1200. We expect S&P earnings to trough in the \$40s (the 2007 high was \$90) and to recover by 2011 to around \$60. It may yo-yo between a PER in the 12-14x range (fearing the single digits of 1929 and 1974) and the 18-20x range of past non-inflationary recessions (1957, 1991 and 2001).

As for energy equities our view is that they remain a great store of value and potential for above average returns as the oil price recovers first to the long term level sought by OPEC (\$60 - \$80) and then in maybe three years time resumes its rise to the level that should match dwindling supply and relentless demand from developing economies.

We recognise there are risks. OPEC may fail to stabilise the price at the \$60 – \$80 level. The US natural gas market may not rebalance as fast as we hope. But we keep coming back to one key proposition: oil and gas are running out and it does seem reasonable to believe that before they do run out they should trade at much higher prices than we have yet seen and shareholders in companies that are part of that world will likely be duly rewarded.

Overall, the Fund continues to seek to be well placed to benefit from the oil price environment described above and to enable investors to benefit from a recovery in energy markets when it comes.

### **Tim Guinness**

Chairman & Chief Investment Officer  
9 March 2008

The Fund's holdings, industry sector weightings and geographic weightings may change at any time due to ongoing portfolio management. References to specific investments and weightings should not be construed as a recommendation by the Fund or Guinness Atkinson Asset Management, Inc. to buy or sell the securities. Current and future portfolio holdings are subject to risk.

**Mutual fund investing involves risk and loss of principal is possible. The Fund invests in foreign securities which will involve greater volatility, political, economic and currency risks and differences in accounting methods. The Fund is non-diversified meaning it concentrates its assets in fewer individual holdings than a diversified fund. Therefore, the Fund is more exposed to individual stock volatility than a diversified fund. The Fund also invests in smaller companies, which involve additional risks such as limited liquidity and greater volatility.**

The Goldman Sachs Commodity Index is a global production weighted index composed of 24 commodity futures contracts. The index is managed by Goldman Sachs Group Inc. The DJ AIG Commodity Index is also an index composed of commodity futures contracts. The index is managed by Dow Jones and Company. Bloomberg Active Indices for Funds (BAIF) are used to measure a fund's performance against

its peers. BAIF indices represent a composite of funds in the same peer group. This index (BBOENRUS) represents open-ended energy funds domiciled in the United States. They are not available for investment.

Earnings per share is the portion of a company's profit allocated to each outstanding share of common stock. The amount is computed by dividing net earnings by the number of outstanding shares of common stock.

Cash flow is equal to cash receipts minus cash payments over a given period of time.

This information is authorized for use when preceded or accompanied by a prospectus for the Guinness Atkinson Global Energy Fund. The prospectus contains more complete information, including investment objectives, risks, charges and expenses related to an ongoing investment in the Fund. Please read the prospectus carefully before investing.

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## Appendix: oil and gas markets, historical context

### Oil price (WTI \$) last 20 years.



Source: Bloomberg

For the oil market, the period since the Iraq Kuwait war (1990/91) can be divided into two distinct periods: the first 9-year period was broadly characterized by decline. The oil price steadily weakened 1991 - 1993, rallied between 1994 -1996, and then sold off sharply, to test 20 year lows in late 1998. This latter decline was partly induced by a sharp contraction in demand growth from Asia, associated with the Asian crisis, partly by a rapid recovery in Iraq exports after the UN Oil for food deal, and partly by a perceived lack of discipline at OPEC in coping with these developments.

The last 9 years, by contrast, have seen a much stronger price and upward trend. There was a very strong rally between 1999 and 2000 as OPEC implemented 4 mb/d of production cuts. It was followed by a period of weakness caused by the rollback of these cuts, coinciding with the world economic slowdown, which reduced demand growth and a recovery in Russian exports from depressed levels in the mid 90's that increased supply. OPEC responded rapidly to this during 2001 and reintroduced production cuts that stabilized the market relatively quickly by the end of 2001.

Then, in late 2002 early 2003, war in Iraq and a general strike in Venezuela caused the price to spike upward. This was quickly followed by a sharp sell-off due to the swift capture of Iraq's Southern oil fields by Allied Forces and expectation that they would win easily. Then higher prices were generated when the anticipated recovery in Iraq production was slow to materialise. This was in mid to end 2003 followed by a much more normal phase with positive factors (China demand; Venezuelan production difficulties; strong world economy) balanced against negative ones (Iraq back to 2.5 mb/d; 2Q seasonal demand weakness) with stock levels and speculative activity needing to be monitored closely. OPEC's management skills appeared likely to be the critical determinant in this environment.

By mid 2004 the market had become unsettled by the deteriorating security situation in Iraq and Saudi Arabia and increasingly impressed by the regular upgrades in IEA forecasts of near record world oil demand growth in 2004 caused by a triple demand shock from strong demand simultaneously from China; the developed world (esp. USA) and Asia ex China. Higher production by OPEC has been one response and there was for a period some worry that this, if not curbed, together with demand and supply responses to higher prices, would cause an oil price sell off. Offsetting this has been an opposite worry that non OPEC production could be within a decade of peaking; a growing view that OPEC would defend

\$50 oil vigorously; upwards pressure on inventory levels from a move from JIT (just in time) to JIC (just in case); and pressure on futures markets from commodity fund investors.

Since 2005 we saw a further strong run-up in the oil price. Hurricanes Katrina and Rita which devastated New Orleans caused oil to spike up to \$70 in August 2005, and it spiked up again in July 2006 to \$78 after a three week conflict between Israel and Lebanon threatened supply from the Middle East. OPEC implemented cuts in late 2006 and early 2007 of 1.7 million barrels per day to defend \$50 oil and with non-OPEC supply growth at best anaemic demonstrated that it could to act a price-setter in the market at least so far as putting a floor under it.

Continued expectations of a supply crunch by the end of the decade, coupled with increased speculative activity in oil markets, contributed to the oil price surging past \$90 in the final months of 2007 and as high as \$147 by the middle of 2008. This latest spike has now unwound and the oil price has fallen back to below \$50 as fears that a global recession might result in oil demand destruction outweigh supply crunch concerns in the shorter-term.

### North American gas price last 17 years (Henry Hub \$/Mcf)



Source: Bloomberg

With regard to the US natural gas market, the price traded between \$1.50 and \$3/Mcf for the period 1991 - 1999. This was followed by two significant spikes up to \$8-10/Mcf, one in late 2000 and one early in 2003. The spikes were caused by very tight supply situations because there is an underlying problem with supply in the rapid depletion of North American gas reserves. On both occasions, the price spike induced a spurt of drilling which brought the price back down. More recently we have seen another period of very firm (over \$5/Mcf) gas prices followed by a hurricane induced spike. Since the big spike in late 2005 the gas price has traded mainly in the \$6-\$8 range, with a significant move down precipitated by the collapse of Amaranth in 2006 and most recently a new but short-lived spike in 2008 above \$10.

North American gas prices are important to many E&P companies. In the short-term, they do not necessarily move in line with the oil price, as the gas market is essentially a local one. (In theory 6 Mcf of gas is equivalent to 1 barrel of oil so \$60 per barrel equals \$10/Mcf gas). It is a regional market more than a global market because Liquid Natural Gas imports cannot rapidly respond to increased demand because of the high infrastructure spending needed to increase capacity but that is slowly becoming less true as LNG infrastructure is put in place.