

| Target Price   | Market Price   | Recommendation    | Upside Potential | Investment Grade |
|----------------|----------------|-------------------|------------------|------------------|
| <b>AED1.82</b> | <b>AED1.06</b> | <b>STRONG BUY</b> | <b>71 %</b>      | <b>GROWTH</b>    |

### Share Data

|                                |                        |
|--------------------------------|------------------------|
| Report Date                    | October 9, 2008        |
| Company Abbreviation           | Dana                   |
| Sector                         | Energy                 |
| Traded Market                  | ADX                    |
| Report Reason                  | Initiation of Coverage |
| Valuation Methodology          | DCF                    |
| Previous Report Date           | N/A                    |
| Previous Target                | N/A                    |
| Exchange Rate                  | AED3.67/USD            |
| Stock Currency                 | AED                    |
| Reuters Code                   | DANA.AD                |
| Outstanding Shares (mn)        | 6,000                  |
| Par Value/Share (AED)          | AED1                   |
| Financial Year Ending          | December               |
| Mkt. Cap (AED mn)              | 6360                   |
| Weight to (PEMI)               | 1.95%                  |
| Price Low – High (AED) (52Wk.) | 1.04 - 2.74            |
| Relative Performance (52Wk.)   | -76%                   |

### Shareholders

### Ownership Stake

|                         |       |
|-------------------------|-------|
| Initial Public Offering | 34.3% |
| Founding Shareholders   | 32.7% |
| Others                  | 33.0% |

### Prime Research Department

|              |                         |
|--------------|-------------------------|
| <b>Phone</b> | +971 2 6910800          |
|              | +971 4 4070100          |
| <b>Email</b> | research@primegroup.org |

### Stock Performance Chart (AED/Share)



- The Middle-East and North Africa region continues to witness phenomenal growth in natural gas consumption with long run aggregate demand to grow at a CAGR of 4% between 2005-2030. Dana Gas PJSC, Middle East's first and largest regional private-sector natural gas company is at the forefront of this trend with several large projects in the pipeline across upstream, midstream and downstream segments
- The group currently operates through several subsidiaries and affiliates in the MENASA (Middle East, North Africa & South Asia) region across the natural gas value chain: from gas exploration and production, through gas processing and transmission, to the distribution, marketing and utilization of gas as feedstock and fuel to the petrochemical, industrial and power sectors
- During FY2007, which was the maiden year of operating revenues for Dana, gross revenues touched AED1,036 million, with gas sales accounting for ~48% of total revenues and sale of liquids contributing the balance 52%. The Company produced 10.3MMBoe of oil & gas from six development leases with the share of natural gas being ~8.2MMBoe or 79%, followed by condensates 1.2 million barrels (12%), LPG 0.6MMBoe (6%) and oil 0.3 million barrels (3%)
- Dana Gas, operationally, is still in its early phases of development, with several large projects in the pipeline in 2008 and beyond. Most noteworthy ones include, Khor Mor Gas field project in Iraq, LPG plant in Egypt, UAE Gas Project and Sharjah Offshore Gas Development in the UAE, in addition to a massive USD170 million exploration drive in Egypt in FY2008. The company, however, is facing delays in sourcing Iranian gas under the UAE Gas Project, which according to the management is due to infrastructure delays on the Iranian-side. More recently, negotiations relating to UAE Gas Project have picked up pace, leading us to anticipate positive consensus by the end of FY2008 and gas supplies to begin by 1Q2009
- Excluding any future contributions from the UAE Gas Project (conservative scenario), our DCF model yields a fair value of AED1.82 per share, representing 71% upside over the current market price of AED1.06 per share
- However, assuming the UAE Gas Project moves forward as anticipated and gas supplies begin from FY2009, our DCF model yields a fair value of AED3.18 per share, with 200% upside over current price and 75% upside over our conservative target price of AED1.82 per share. We therefore initiate coverage on the stock with a "STRONG BUY" recommendation

| Fiscal Year             | 2007a  | 2008e   | 2009f   | 2010f   |
|-------------------------|--------|---------|---------|---------|
| Revenues                | 1,036  | 1,314   | 2,138   | 2,486   |
| Growth                  | 0.00%  | 26.86%  | 62.64%  | 16.30%  |
| EBITDA Margin           | 71.07% | 71.87%  | 75.34%  | 76.47%  |
| Net Income              | 111    | 201     | 366     | 557     |
| Net Attributable Income | 102    | 191     | 355     | 545     |
| EPS (AED)               | 0.017  | 0.032   | 0.060   | 0.091   |
| EPS Growth              | 0.00%  | 186.26% | 185.00% | 152.41% |
| Book Value/Share (AED)  | 1.18   | 1.22    | 1.28    | 1.37    |
| P/E (x)                 | 62.35  | 33.30   | 17.90   | 11.67   |
| P/BV (x)                | 0.89   | 0.87    | 0.83    | 0.78    |

## **Initiation of Coverage**

**UAE**

### **Introduction**

In the early days of crude oil production, finding gas was akin to finding a dry hole. Early commercial development of natural gas reserves was stalled for various reasons, chief amongst was the inflexibility of pipeline delivery systems and intensive capital outlay required to transport gas by sea. However, today gas is widely touted as the fuel of the future.

Natural gas represents a fossil energy source with growing significance in recent years due to its clean burning characteristics, ample reserves, technological advancements in natural gas transportation and economic competitiveness as a feedstock for power generation and industrial manufacturing. The GCC economies, particularly, are expected to exhibit increased production and consumption of natural gas with demand expected to grow to 6.4 Million Barrels of Oil Equivalent per day (MMBoe/d) by 2020 from 4MMBoe/d in 2010, according to Organization of Petroleum Exporting Countries (OPEC), which expects GCC demand for gas to outpace region's demand for oil.

GCC states have significant reserves of natural gas, accounting for 23.6% of the world's proven reserves. Yet, with the exception of Qatar, where natural gas development has raced ahead as an export industry, the other GCC countries have largely prioritized oil development over gas. However, this is now changing owing to increasing demand for feedstock gas, further driven by rising investment in the refining, petrochemical, fertilizer, metals and other industrial sectors. These developments have led to increasing cooperation among GCC states in recent years and many more of these are expected to be witnessed in the future.

### **What is natural gas?**

*Natural gas is a gaseous fossil fuel consisting primarily of methane but includes significant quantities of ethane, butane, pentane and propane.*

Natural gas is a mixture of combustible gases formed underground by the decomposition of organic materials in plant and animal. Unlike other fossil fuels, however, natural gas is clean-burning and emits lower levels of potentially harmful byproducts into the air. It is described as associated when found in areas where oil is present, although there are several large underground reservoirs of natural gas where there is little or no oil, in which case it is described as non-associated. Its chief component, methane, usually makes up 80% to 95% of its composition. The balance is composed of varying amounts of ethane, propane, butane, and other hydrocarbon compounds. These compounds or byproducts are removed during the refining process and sold separately. Natural gas is widely used as an alternative source of energy across residential, commercial, industrial and transportation sectors.

Natural gas is considered 'dry' when it is almost pure methane (85% or more methane), or after having had most of the other complex associated hydrocarbons such as propane, ethane, butane removed. When other hydrocarbons are present, the natural gas is 'wet'. Gas may also be referred to as 'sour' if it contains significant amounts of deadly hydrogen sulphide (H<sub>2</sub>S), otherwise it is associated as 'sweet' gas. Sour gas is highly corrosive and generally more costly and challenging to process because it requires special handling and infrastructure. Abu Dhabi, with more than 200 trillion cubic feet (Tcf) of gas reserves, boasts one of the biggest basins in the world but much of the gas is sour.

### **LPG vs. LNG**

In its natural form, gas is usually compressed and transported in high-pressured pipelines from producing areas to a spectrum of end-users, storage areas, and local distribution companies. Alternatively, it is liquefied (**Liquefied Natural Gas**) and loaded on to large tankers for transportation to far off (usually inter-country) destinations. **Compressed Natural Gas (CNG)** has a lower cost of transportation and storage compared to LNG since it does not require an expensive liquefying and re-gasification process.

*LNG and LPG share different chemical properties and primary end-uses*

**Liquefied Petroleum Gas (LPG)** is usually confused with LNG and vice versa. Although both fall within the gamut of natural gas, they have very different chemical properties. LPG mainly consists of propane (upwards to 95%) and smaller quantities of butane and is primarily used for domestic and commercial applications such as heating, cooking, etc. LNG and CNG, on the other hand, consist almost entirely of methane and mainly used for transportation and power generation. Due to these characteristics of natural gas, it can readily replace crude oil for electricity generation and as a result combined-cycle power plants can take advantage of relatively lower priced natural gas as a feedstock.

### **Measuring natural gas...**

Natural gas can be measured by volume or energy. Production and transmission companies commonly measure it by volume and is stated in cubic feet. A cubic foot of gas is the amount of gas needed to fill a volume of one cubic foot under set conditions of pressure and temperature. End-user utility distribution companies commonly measure it by amount of energy, where energy content is measured in terms of British Thermal Units (BTUs). One cubic foot is approximately equivalent to 1000BTU where, 1 BTU is equivalent to the amount of energy required to raise the temperature of one pound of water by one degree Fahrenheit at or close to its maximum point of density. In other words, 1 BTU is the amount of energy yielded from lighting one wooden matchstick.

## Initiation of Coverage

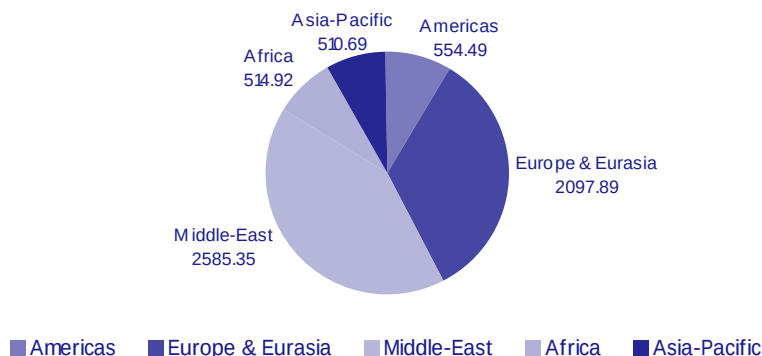
UAE

### World Reserves

World gas reserves registered a CAGR of 0.97% between 1997 and 2007.

World natural gas reserves increased to 6,263 Trillion Cubic Feet (Tcf) at the end of 2007 from 5,170Tcf in 1997, registering a CAGR of 0.97% according to British Petroleum. While aggregate Middle-Eastern gas reserves stood at 2,585Tcf, representing 41.3% of total world reserves, Europe & Eurasia region reserves remained at 2,097.89Tcf accounting for 33.5% of total world reserves.

World Gas Reserves in 2007 (in Tcf)



Source: BP Statistical Review

UAE natural gas reserves rank 5th in the world and stood at 215Tcf at the end of December 2007.

The Russian Federation continues to enjoy highest natural gas reserves in the world, with reserves of 1,576Tcf at the end of 2007, representing 25.2% of world proven reserves. This is followed by Iran and Qatar with proven reserves of 982Tcf and 904Tcf, respectively. Saudi Arabia and UAE possessed fourth and fifth highest natural gas reserves of 253Tcf and 215Tcf respectively at the end of December 2007. Qatar's giant North Field contains single largest natural gas reserves in the world of ~900Tcf at the end of 2007.

| Top Ten Natural Gas Reserves | 2006 (Tcf) | % share | 2007 (Tcf) | % share |
|------------------------------|------------|---------|------------|---------|
| Russian Federation           | 1574.47    | 25.31%  | 1576.75    | 25.2%   |
| Iran                         | 973.40     | 15.65%  | 981.75     | 15.7%   |
| Qatar                        | 904.95     | 14.55%  | 904.06     | 14.4%   |
| Saudi Arabia                 | 249.68     | 4.01%   | 253.03     | 4.0%    |
| United Arab Emirates         | 215.72     | 3.47%   | 215.07     | 3.4%    |
| US                           | 211.00     | 3.39%   | 211.08     | 3.4%    |
| Nigeria                      | 184.09     | 2.96%   | 186.99     | 3.0%    |
| Venezuela                    | 180.03     | 2.89%   | 181.87     | 2.9%    |
| Algeria                      | 159.00     | 2.56%   | 159.45     | 2.5%    |
| Iraq                         | 111.90     | 1.80%   | 111.95     | 1.8%    |

Source: BP Statistical Review

## Initiation of Coverage

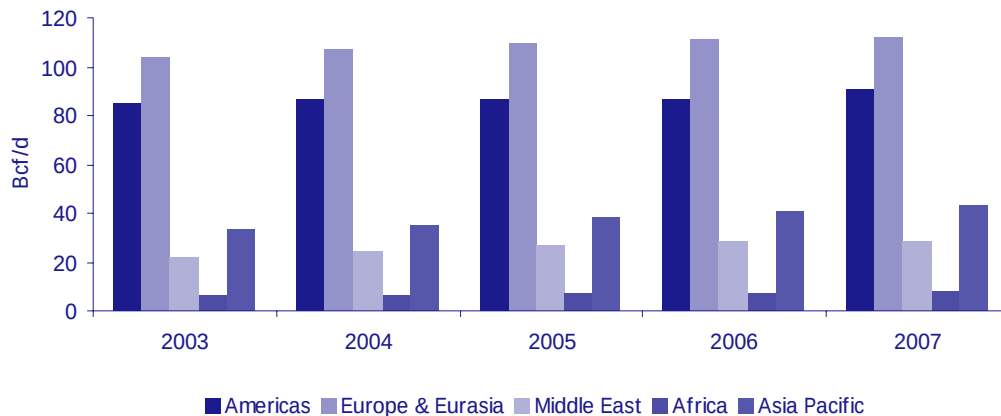
UAE

### World Consumption

World natural gas consumption registered a CAGR of 1.85% between 1997 and 2007. Aggregate world gas consumption averaged 282.7 Billion Cubic Feet per day (Bcf/d) during 2007 as compared to 274.2Bcf/d during 2006, registering an above average growth of 3.1% in 2007. United States continues to be the highest natural gas consumer in the world with average daily consumption of 63.2Bcf during 2007, thus accounting for 22% of total world consumption. Russia and Iran, with their large reserves, continue to remain second and third largest consumers of natural gas recording average daily consumption of 42.5Bcf and 10.8Bcf during 2007. Total Middle-East gas consumption grew at a CAGR of 5.82%, registering the highest regional growth from 1997 to 2007.

World natural gas consumption registered a CAGR of 1.85% between 1997 and 2007.

World Natural Gas Consumption by Region

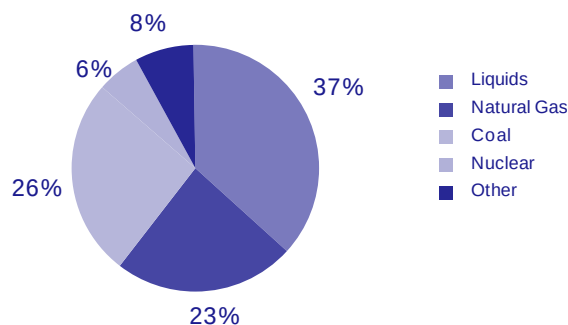


Source: BP Statistical Review

According to OPEC, developing Asian economies are expected to witness stronger growth in natural gas demand, at over 4% p.a. between 2007 and 2030 as they look to reduce their dependence on crude as a means to contain their widening trade deficit. At the same time, Middle-Eastern countries will look to produce and consume more natural gas in order to make more oil available for exports as well as to meet the rapidly increasing needs of the power generation and industrial sector.

Share of natural gas to total energy consumption to rise at a CAGR of 2.1%.

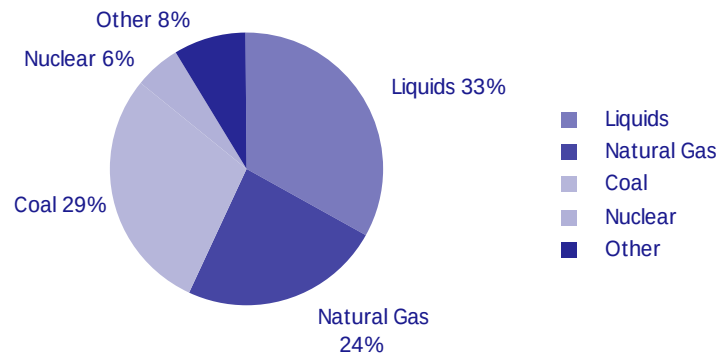
World Energy Consumption by Fuel Type (2005)



Source: EIA Annual Energy Outlook

The share of natural gas to the world's primary energy consumption increased from 23.5% in 2006 to 23.8% in 2007. The fossil fuel has experienced the second fastest growth as an energy resource after coal in the last decade. Going forward, the share of natural gas to the aggregate world energy consumption is expected to increase at a CAGR of 2.1% between 2005 and 2030 according to Energy International Agency (EIA).

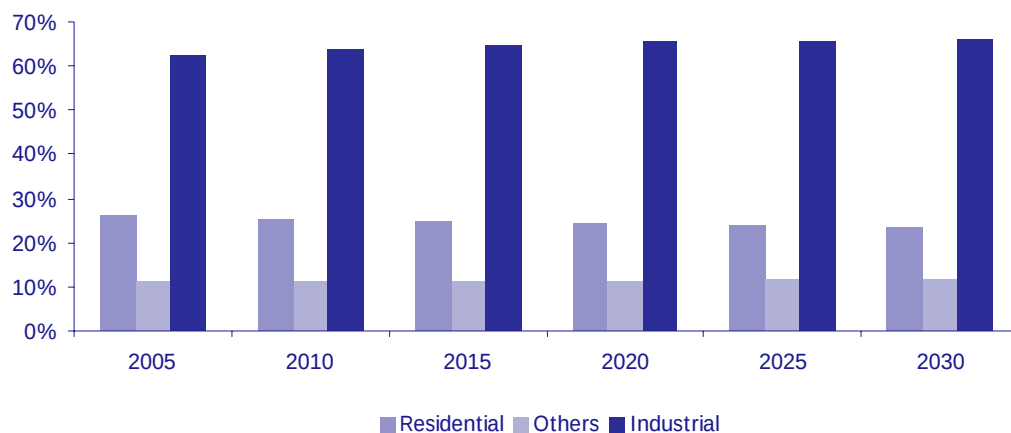
World Energy Consumption by Fuel type (2030)



Source: EIA Annual energy Outlook

Natural gas is expected to remain a key energy source for industrial sector uses and electricity generation from 2007 to 2030. The industrial sector, which is currently the world's largest consumer of natural gas, is expected to consume as much as 63% of projected natural gas production in 2030. In the electric power sector, natural gas is an attractive choice for new generating plants because of its relative fuel efficiency. Gas-fired electricity generation is expected to account for 35% of the world's total natural gas consumption in 2030.

Natural Gas Consumption by End-User Sector



Source: International Energy Agency

## Initiation of Coverage

UAE

### World Production

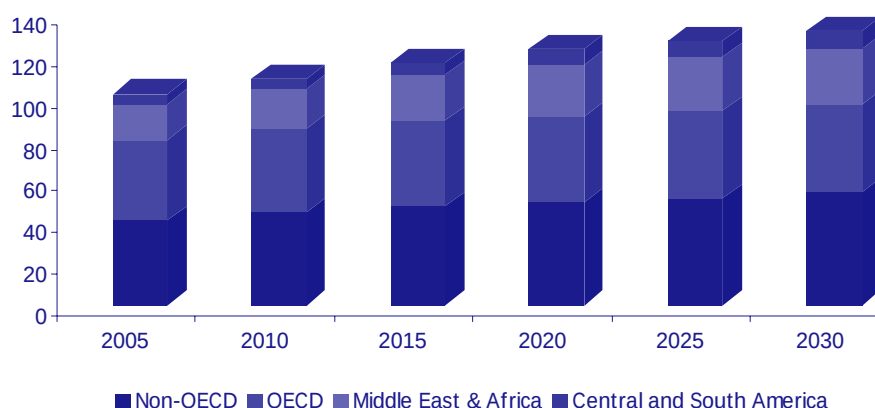
World average daily natural gas production reached 284.5Bcf during 2007, an increase of 2.4% as compared to average daily production of 277.9Bcf in 2006. World production registered a CAGR of 2.4% between 1997 and 2007. Although average daily gas consumption during 2007 (282.7Bcf) increased by 3.1% in 2007, production grew by modest a 2.4% with Russia (58.8Bcf/d) and US (52.8Bcf/d) as the largest producers together accounting for 39.5% of total world production. Total Middle East natural gas production averaged 34.4Bcf/d with Iran (10.8Bcf/d) as the leading producing nation accounting for 3.8% of total Middle-East production. United Arab Emirates natural gas production increased from 4.6Bcf/d during 2006 to 4.8Bcf/d during 2007, registering an increase of 3.8% over 2006 levels as compared to average world production increase of 2.4%.

World natural gas production increased at a CAGR of 2.4% between 1997 and 2007.

| Top Ten Natural Gas Producers | 2006 (Bcf/d) | % Share | 2007 (Bcf/d) | % Share | Change over 2006 |
|-------------------------------|--------------|---------|--------------|---------|------------------|
| Russian Federation            | 59.2         | 21.31%  | 58.8         | 20.6%   | -0.8%            |
| US                            | 50.6         | 18.22%  | 52.8         | 18.8%   | 4.3%             |
| Canada                        | 18.2         | 6.56%   | 17.8         | 6.2%    | -2.5%            |
| Iran                          | 10.5         | 3.78%   | 10.8         | 3.8%    | 3.0%             |
| Norway                        | 8.5          | 3.05%   | 8.7          | 3.0%    | 2.4%             |
| Algeria                       | 8.2          | 2.94%   | 8.0          | 2.8%    | -1.7%            |
| Saudi Arabia                  | 7.1          | 2.56%   | 7.3          | 2.6%    | 3.3%             |
| United Kingdom                | 7.7          | 2.78%   | 7.0          | 2.5%    | -9.5%            |
| China                         | 5.7          | 2.04%   | 6.7          | 2.4%    | 18.4%            |
| Turkmenistan                  | 6.0          | 2.17%   | 6.5          | 2.3%    | 8.4%             |

Source: BP Statistical Review

Natural Gas Production Outlook by Region



Source: EIA Annual Energy Outlook

According to EIA Annual Energy Outlook, Middle-East & Africa contributed 17.01% to world production during 2005. Going forward, the region's share to total world production is expected to increase to 18.78% in 2015 and 20.45% in 2030. The share of OECD countries, including that of United States is expected to decline from 38% in 2005 to 32% in 2030 with majority of the new production expected to come from non-OECD countries, with its share increasing from 39.82% in 2005 to 41.06% in 2030.

## Initiation of Coverage

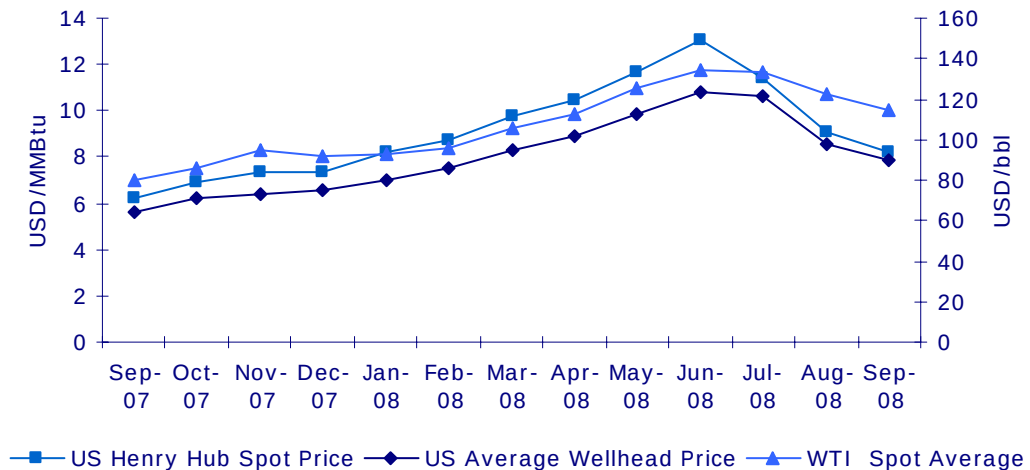
UAE

### Prices

The natural gas market is composed of three major components on the supply side - producers, pipelines and distribution companies. The price of natural gas paid by end-users is layered, in the sense that the wellhead price paid to producers forms a baseline. Pipeline transportation or transmission costs are then added to the wellhead price, which yields the city gate or hub price. Finally local distribution companies add additional charges to yield the price actually paid by end-users. End-users themselves are divided into segments - primarily residential, commercial, industrial, transportation - each of which tends to pay a different, in many case a significantly different, price often depending upon their consumption patterns and prevailing regulatory environment. For instance, end-user gas prices in many oil & gas rich countries are highly subsidized resulting in wide variations in the prices paid by consumers in these regions and international gas prices.

The wellhead price of natural gas is market determined, the result of a complex interaction of forces (weather, storage levels) which influence both the demand and supply of gas. LNG is natural gas that has been chilled (ca. -161 degree centigrade) to a liquid state for shipping on a specially designed tanker. Once it reaches its destination (receiving terminal), it is heated to transform it back to gas. At that point, it is injected back into the pipeline system, identical to natural gas from the wellhead.

Price Performance: Natural Gas vs. WTI Spot



Source: EIA Short Term Energy Outlook

During the last twelve months, US Henry Hub spot prices increased 32% with September 2008 average price touching USD8.25/MMBtu, while average wellhead prices during the same period increased 40% to reach USD7.87/MMBtu. A large percentage of this increase is due to rising crude oil prices, which increased 44% in the trailing twelve months to record an average of USD115/bbl in September 2008. Henry Hub spot price peaked in June 2008 registering an average price of USD13.06/MMBtu as the WTI crude recorded an average of USD134/bbl. Several economic factors link oil and natural gas prices through both supply and demand to a large extent.

- An increase in crude oil prices motivates consumers to substitute natural gas for petroleum products in consumption, which increases natural gas demand and hence prices
- Increases in crude oil prices resulting from an increase in crude oil demand may increase (associated) natural gas produced as a co-product of oil, which would tend to decrease natural gas prices
- Increase in cost of crude oil production may lead to increased costs of associated natural gas production and development, putting upward pressure on natural gas prices

In spite of this, natural gas continues to remain a cheaper & greener alternative to crude oil and coal. It is worth mentioning that crude oil prices are determined in the world markets due to the relative market size of this commodity while natural gas prices are usually determined in regional markets. Nevertheless, a significant and stable relationship between the two prices is identified. So much so, several European and Western countries contractually bind crude and gas purchase prices. In short, oil prices are found to influence the long-run development of natural gas prices.

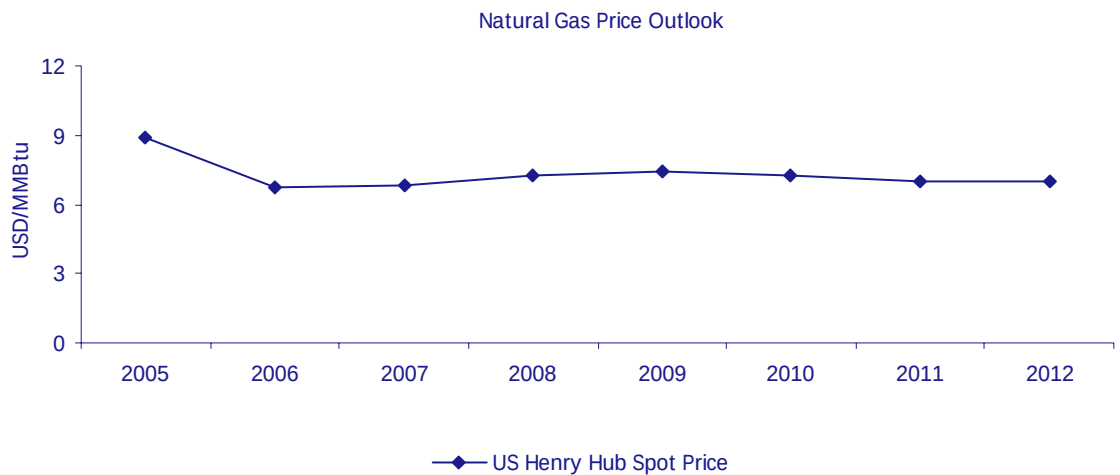
*Oil prices are found to influence the long-run development of natural gas prices*

## Initiation of Coverage

UAE

### Price Outlook:

According to EIA Annual Energy Outlook, the recent run-up in natural gas prices will stabilize going forward, with average 2008 Henry Hub prices expected to settle at approximately USD7.3/MMBtu. There are strong expectations that current high natural gas prices will stimulate development of new gas supplies beyond 2009 and constrain growth in consumption, particularly in advanced economies. An example of the former is significant developments currently ongoing in Russia, Iran and Qatar - world's top 3 natural gas reserve countries - to increase natural reserves, LNG production and export. Greater availability of natural gas supplies are expected to lead a decline in prices in 2010 to USD6.90/MMBtu and further down to USD6.56/MMBtu in 2011 before settling at USD6.37/MMBtu in 2012.



Source: EIA Annual Energy Outlook

## **Initiation of Coverage**

**UAE**

### **Oil:Gas Energy Trade-Off**

*Asia and Middle-East are expected to account for 75% of projected increase in natural gas consumption*

Natural gas use in the Middle-East has almost doubled between 1996 and 2007 with consumption averaging 14.5Bcf/d in 1996 and increasing to 29Bcf/d in 2007 according to British Petroleum. Iran continues to remain the largest consumer in the region averaging 10.8Bcf/d or 38% of region's total consumption. According to International Energy Agency, global energy demand is expected to increase by 55% over the 2005 - 2030 period and rapidly expanding economies of Asia and Middle-East are projected to account for over 75% of this increase in demand. Further, Middle-east is expected to have the third highest average growth rate of energy demand, particularly demand for natural gas and LNG, over the next two decades after China and India.

With the exception of Qatar, which has developed into an LNG export country, other Gulf nations are continuously confronted with the issue of depletion of natural gas in the region. In spite of home to 42% of world's natural gas reserves, gulf countries' share in total world production was a mere 12.1% at the end of 2007 since the region still remains relatively untapped due to its historical emphasis on oil exploration & production.

The Middle East, being a region endowed with natural gas deposits, it is interesting to review the underlying components and drivers of this anticipated growth in gas consumption

*Heavy investments in real estate, industrial and manufacturing sectors have resulted in increased dependence on natural gas for future growth*

- Middle-east countries are witnessing rapid population explosion due to increased economic development on account of increased petrodollar revenues. This expected increase in population is resulting in large investments in power generation and water desalination projects, all of which will require substantial quantities of natural gas as a feedstock. According to World Energy Council, GCC investments in power generation and energy projects are predicted to amount to USD45.6 billion between 2005 - 2015. Most of this growth in power generation demand is expected to come from UAE, where gas provides an estimated 88% of total electricity generated

- In their pursuit to diversify from oil-based to non-oil based economies, Middle-eastern nations have invested heavily in the real estate, manufacturing and industrial (including petrochemicals) sectors, resulting in increased demand for natural gas and byproducts, in turn making the economies more dependent on energy for future growth

- Domestic gas development frees up more oil for exports, including additional volumes of high margin condensates and LPG, thus yielding more diversified earnings

- Additional demand for natural gas will also continue to come from re-injection needs in oil and upstream segments in order to maintain reservoir pressures

The Middle East gas sector is entering a critical transition phase of its development. Its rapidly growing domestic gas demand, driven mainly by the power and water desalination sector and the further expansion of the region's industrial base, is expected to put a lot of pressure on the presently limited allocation of gas supplies, especially under a continued subsidized gas price environment.

Although the Middle East accounts for over 40% of the world's proven gas reserves, only two of its largest reserve holders, Iran and Qatar, have theoretically the potential to produce incremental gas supplies to meet immediate gas demand. One major move to address this imbalance has been the commissioning of the Dolphin Gas Project, GCC's first cross-border refined gas commissioning project involving supply of Qatari gas to UAE and Oman.

In spite of their significant potential to produce incremental gas, there are still uncertainties about Iran and Qatar additional gas output availability due to moratorium on Qatar's North field and Iran's geo-political issues with the West, restricting gas output beyond what they would consider as an adequate production level for their own long-term economic development.

## Initiation of Coverage

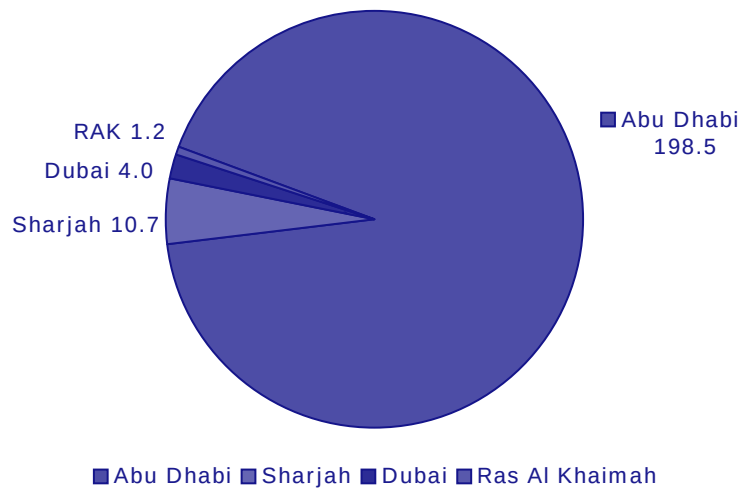
UAE

### United Arab Emirates

*UAE ranks fifth in world natural gas reserves with estimated 214tcf of reserves.*

According to BP Statistical Review, UAE held an estimated 214Tcf of proven recoverable gas reserves in December 2007 making it rank fifth after Russia (1,576.5Tcf), Iran (993Tcf), Qatar (895Tcf), and Saudi Arabia (250Tcf), thus accounting for 3.4% of world and 8.2% of Middle East gas reserves. Within the Emirate, the largest reserves of approximately 199Tcf (92.5% of aggregate UAE reserves) are located in Abu Dhabi, whereas, Sharjah, Dubai, and Ras Al Khaimah contain smaller reserves of 10.7Tcf, 4.0Tcf, and 1.2Tcf, respectively. In Abu Dhabi, the non-associated Khuff natural gas reservoirs beneath the Umm Shaif and Abu al-Bukhush fields in offshore Thamama, rank among the world's largest. At current production rates, UAE's reserves will last for over 100 years.

UAE Natural Gas Reserves by Emirate (in Tcf)

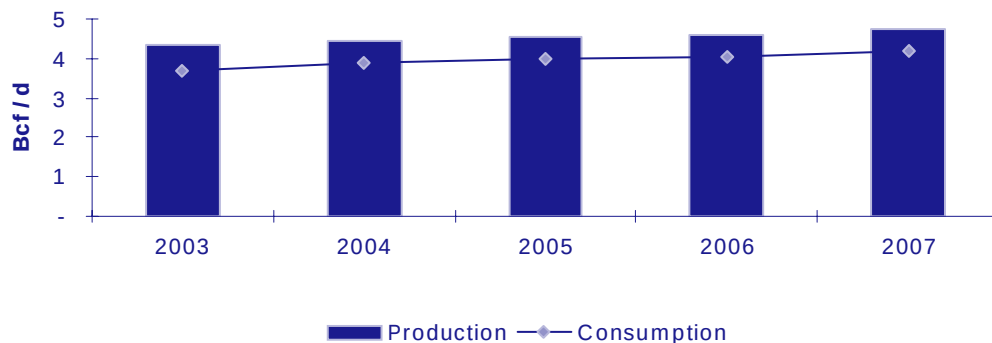


Source: BP Statistical Review, Oil & Gas Journal

*UAE is facing severe shortage of natural gas resulting in increasing dependence on LNG imports*

Natural gas accounted for 64% of UAE's primary energy demand in 2007, with oil taking a 36% share of the energy market. Total natural gas consumption averaged 4.03Bcf/d in 2006 and further accelerated to 4.2Bcf/d in 2007 (Y-o-Y growth of 3.7%). Marketable gas production, however, has shown y-o-y increase of 3.8% in 2007 to 4.8Bcf/d. Despite higher gas production relative to domestic consumption, the country is facing severe shortage of gas due to export commitments of around 6mt/year (approximately 0.8Bcf/d), slower growth in gas infrastructure and growing demand from the electricity and industrial sector. As a result, any shortage in gas availability is being met through imports which stood at 0.17Bcf/d in 2007.

Production vs. Consumption



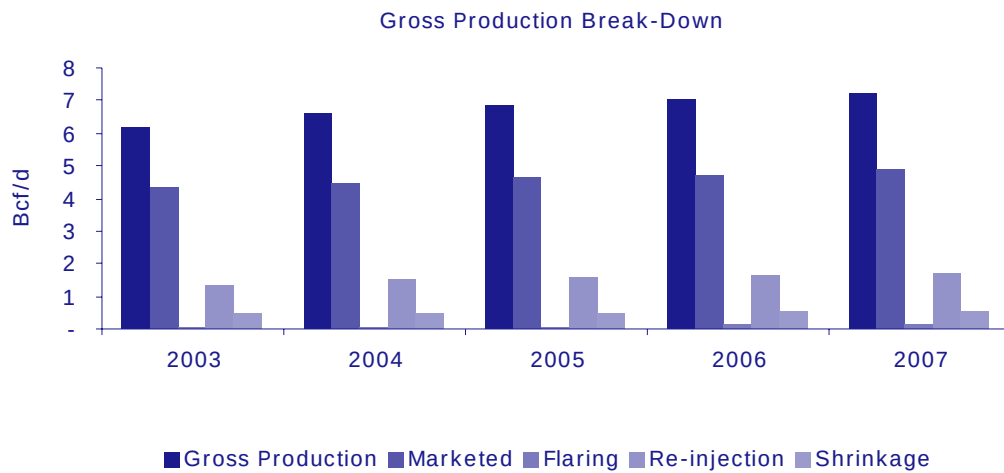
Source: OPEC Annual Statistical Bulletin 2007

## Initiation of Coverage

UAE

The UAE is facing a severe shortage of gas. According to Emirates General Petroleum Corp (Emarat), the current natural gas demand-supply gap in the UAE is between 1Bcf/d and 1.5Bcf/d with expensive liquid fuels (Diesel, Fuel oil) making up for the shortfall. While the current supply for domestic consumption is just over 4Bcf/d, the demand (excluding re-injection needs) is between 5Bcf/d and 5.5Bcf/d. Current marketable gas supplies of approximately 2Bcf/d come from ADNOC, another 2Bcf/d from Dolphin Energy (Imports from Qatar), around 0.3Bcf/d from Dubai and 0.8Bcf/d from Sharjah. Going forward, more demand is expected to come from the power and water desalination plants, petrochemicals, cement and fertilizer manufacturers, aluminum and steel smelters and other industrial users.

Marketable gas represents the amount of gas available for domestic consumption and exports. Although gross production of natural gas remained high during the period 2003 to 2007, marketable production did not increase as much due to shrinkage loss and UAE's re-injection needs to maintain oil & gas reservoir pressure. On the positive side, the percentage of flaring, (gas disposed off by combustion in the open), has significantly reduced due to UAE's commitment to the Climate Change-Kyoto Protocol and other environmental regulations.



Source: OPEC Annual Statistical Bulletin

## **Initiation of Coverage**

**UAE**

### **Sector Structure**

Each Emirate is responsible for its own resources and supplies. The Abu Dhabi National Oil Company (ADNOC) supervises policy in Abu Dhabi, under the guidance of the Supreme Petroleum Council (SPC). ADNOC (through its subsidiaries such as ADGAS & GASCO) manages Abu Dhabi's gas production, processing (liquefaction), re-gasification, distribution, imports and exports. In 2007, Abu Dhabi started importing natural gas from Qatar because its own deposits are very high in sulphur, making it too costly to produce.

*Each emirate is responsible for its own resources and supplies.*

Dubai Petroleum Establishment (DPE), Dubai Natural gas Company (Dugas) and Dubai Supply Authority (DUSUP) manage Dubai's oil & gas assets. Dugas, a wholly-owned subsidiary of the Dubai-Government owns Emirates National Oil Company, oversees the exploitation of Dubai's natural gas reserves, as well as involved in the petrochemicals sector. DUSUP, owns all gas pipelines and has the sole right to supply gas to users within Dubai. Dubai has minimal production and sources most of its supplies from Sharjah and Qatar. Dubai's Jebel Ali industrial area is the main consumer of natural gas, with the top users being DEWA, the rapidly expanding Dubai Aluminum (Dubal) and the LPG/NGL plant of DUGAS. There are various other gas dependent industries in Dubai, including chemical plants built for export.

In the remaining emirates, the respective rulers regulate the natural gas industry. In Sharjah, the Sharjah petroleum Council is responsible for regulating policy regarding the development of natural gas. Dana Gas PJSC, region's first private sector natural-gas company, has signed a 25 year agreement for the exploration and development of the Western Offshore concession in Sharjah. The deal marks Dana Gas' entry into the GCC exploration and production sector, and is also the first offshore upstream asset for the company in the Middle East.

There are signs that the ongoing crunch in supplies will call for an Emirates Gas Grid. According to Emarat, present capacity of the UAE pipeline gas network is 9Bcf/d, sufficient to deliver the gas the federation needs for the immediate future. However, the pressing issue is that the gas network is managed by four different entities. The UAE needs to have the gas grid integrated under a single operator to improve future supplies of natural gas across the emirate.

### **Demand Drivers:**

Gas-fired power generation:

Demand for natural gas continues to grow in the gas-fired power generation sector. This is fueled by UAE's increasing population (locals and expatriates), which is estimated to increase at a CAGR of 7% to 6.41 million in 2010 from 5.2million in 2007. According to Emarat, average annual energy consumption per individual in UAE is around 20,000kwh. Further, the annual growth in UAE gas consumption for power ranges between 10 and 13%, more than double the global growth of 4%. This growth will lead to a significant increase in demand for natural gas in the UAE. Dubai's energy usage growth is the highest in the UAE at 15%, Abu Dhabi is at second with 10% increase, and Sharjah is at 7%.

Environmental issues (Kyoto Protocol):

UAE is among the many countries that has signed the Climate Change - Kyoto Protocol to reduce greenhouse gas emissions (carbon dioxide, etc). This extends the obligation of the emirate beyond simply monitoring and reporting of emissions. Overtime, it is required to reduce greenhouse gas emissions to a reasonable level specified in the treaty. With the growing share of natural gas in total energy consumption (64% in 2007) and moreover the country's obligation under the Kyoto Protocol, UAE has instituted a no-flaring policy on associated gas recovered during the oil production process. Also, it has increased restrictions on the use of non-environmental friendly fossils further escalating demand for cleaner-burning natural gas across most end-user sectors.

Rapid industrial expansion to drive growth:

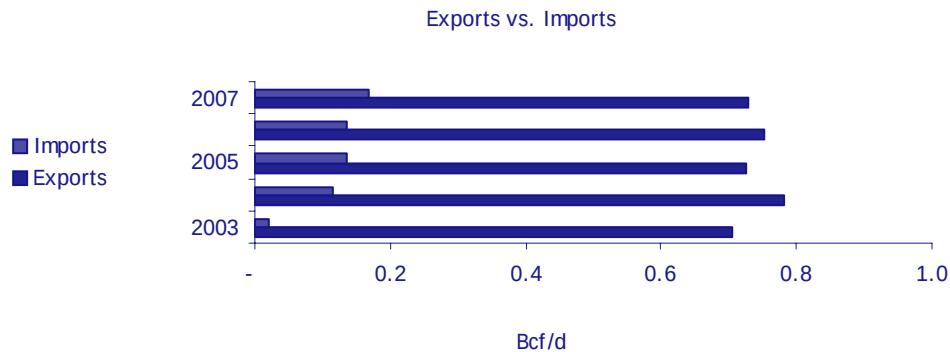
Record oil revenues from over fivefold rise in oil prices since 2002 have fuelled economic expansion and rapidly rising demand for gas from both the power sector and UAE's growing industrial sector, including manufacturing and petrochemicals. Demand from the industrial sector is expected to represent 46% of the estimated total energy consumption. Like other GCC members, UAE has made massive investments in the petrochemicals sector resulting in increased demand for Natural Gas Liquids (NGLs) such as ethane, butane, propane, iso-butane and natural gasoline as feed stocks.

## Initiation of Coverage

UAE

### Supply constraints

UAE continues to face numerous supply-side issues that have led to a severe shortage of gas supplies in the emirate.



Source: OPEC Annual Statistical Bulletin 2007

### Export Commitments:

Abu Dhabi is tied into long term agreements to export up to 6 million t/y (equivalent to 0.75Bcf/d or 15% of 2007 production) of gas produced domestically from its vast Khuff reservoir, with Japan's Tokyo Electric Power Company (TEPCO) as the biggest customer. The contract with TEPCO was initially signed for 20 years beginning in 1977 and was later extended by another 25 years in 1994. In addition to the TEPCO deal, Abu Dhabi's ADGAS has signed a series of short term supply contracts with customers in Spain, Italy, Belgium, South Korea and India. Since UAE is bound by the long term agreements, it became crucial to import gas from Qatar to meet domestic needs and to increase investments in exploration & production (E&P) of associated & non-associated natural gas.

### Increasing production costs:

Most of UAE's natural gas reserves are non-associated sour gas located at onshore Shah and Bab gas fields in Abu Dhabi. Large sour gas reserves are difficult and costly to extract. ADNOC's sour gas has a content of around 30% of potentially harmful hydrogen sulphide, making it tougher and more expensive to produce than conventional gas reserves. The high hydrogen sulphide content of the Shah and Bab fields has made it necessary to use special non-corrosive materials in the production, transportation, and processing of the gas. In addition, due to its toxicity, a completely sealed production chain needs to be created.

*Higher production costs of sour natural gas has led to delays in gas development and supplies*

According to Society of Petroleum Engineers, the technical cost per volume of exported sales gas is roughly doubled every 20-25% of additional acid gases (hydrogen sulfide and CO<sub>2</sub>) present in inlet raw gas. This technical challenge has caused authorities and contractors to hesitate and led delays in gas developments.

### Moratorium on Qatar's North Field to limit supplies:

UAE's Dolphin Energy is currently bringing up to 2Bcf/d of LNG produced at Qatar's giant North Field. Natural gas from Qatar's North Field is brought to Qatar's Ras Laffan Industrial City for processing from where it is transported to Abu Dhabi's Taweelah receiving terminal via a 48 inch diameter, 370km long sub sea pipeline. From Taweelah, the gas is distributed by land pipelines to Abu Dhabi, Dubai and the Northern Emirates. The company supplies gas to Abu Dhabi Water and Electricity Authority (ADWEA), the Union Water and Electricity Authority (UWEA), Dubai Supply Authority (DUSUP) and by the end of October 2008 supplies will begin to Oman Oil Company (OOC).

## Initiation of Coverage

UAE

Since this is a huge boost to energy-starved UAE, Dolphin is in talks with Qatar to increase the flow of gas to the pipeline's maximum capacity of 3.2Bcf/d from the current 2Bcf/d. However, Qatar has called a moratorium on new projects from the North Field, as it studies the effect of rapid development on the largest reservoir of pure, high methane gas in the world. This moratorium is now expected to be in place until the end of 2011 and lowers the prospect for more supplies from Qatar in the immediate future.

Delays in sourcing Iranian gas:

UAE in general, but Northern Emirates in particular, is relying heavily on Dana Gas to bring Iranian pipeline gas to the Emirates. Under the contract signed in 2001 between National Iranian Oil Company (NIOC) and Sharjah's Crescent Petroleum, Iran agreed to supply an initial 600MMcf/d (0.6Bcf/d) of natural gas at a price possibly indexed to an average oil price of USD18/barrel. As construction of necessary infrastructure approached completion in UAE, crude oil price environment changed dramatically with FY2008 Brent prices expected to average USD115/bbl. According to press reports, negotiations are currently ongoing between Crescent and NIOC to revise the initial pricing, however, according to the management, delays are due to incomplete infrastructure (only 95% complete) on the Iranian-side and now expects the supplies to begin by year-end 2008.

Apart from the issues discussed above, Iran's increasing geo-political issues with Iraq, US and Israel due to its alleged uranium proliferation have increased uncertainties in sourcing regular supplies. Finally, due to international isolation and increasing trade sanctions, Iran's gas industry has failed to take off as promised, leaving the escalation of supplies unlikely in the near future.

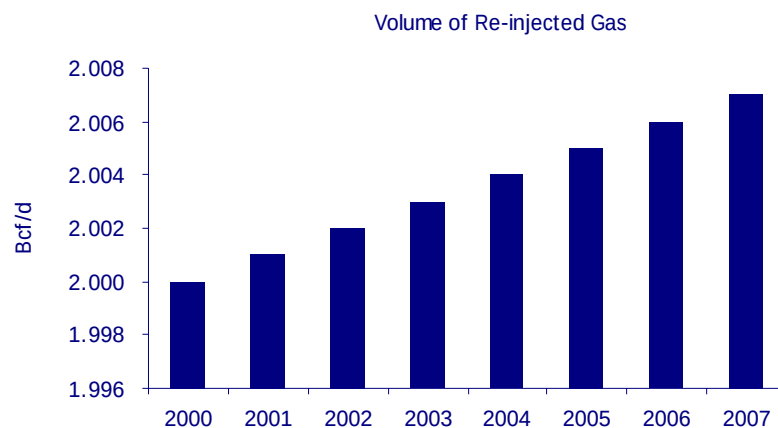
Gas Re-injection:

The UAE, led by Abu Dhabi, is implementing a number of oil & gas expansion projects. As exhibited below, minor but steady increase in re-injected gas during 2000 and 2007 has resulted in natural gas shortage in spite of increased production. Despite sitting on top of some of the world's largest gas reserves, Gulf states continue to face growing shortage of natural gas for power generation and re-injection. According to Middle East Economic Survey, a large portion of the first increment of the 1Bcf/d Shah ultra-sour gas development, which will provide around 0.6Bcf/d of potential sales gas by 2012 at the earliest, is earmarked for re-injection. As such, the project in its initial stages is not expected to completely meet growing domestic needs for natural gas.

Although UAE could free up substantial quantities of its re-injected gas by implementing water injection programs, the process often carries the risk of faster field depletion. As a result, UAE has so far ruled out large-scale water-injection projects, putting continued pressure on natural gas for re-injection needs.

*Commissioning of gas imports from Iran continues to remain a much-needed solution for energy-starved UAE.*

*Significant quantities of natural gas are also used in re-injection operations for oil reservoir pressure maintenance*



Source: OPEC Annual Statistical Bulletin 2007

## **Initiation of Coverage**

**UAE**

Some of the more noteworthy natural gas projects currently underway in the UAE are the Dolphin Project, the expansion of sour gas activities in Abu Dhabi, the proposed Iran pipeline gas imports and the proposed LNG liquefaction, re-gasification and storage terminal in Dubai.

### **Dolphin Energy**

The Dolphin Project develops links between the natural gas infrastructures of Qatar, the UAE, and Oman. It facilitates the import of non-associated natural gas from Qatar's massive offshore North field for 25 years starting from 2007. Mubadala Development, run by the government of the UAE's Abu Dhabi, owns 51% of Dolphin while France's Total and US Occidental each have a 24.5% stake.

UAE's Dolphin Energy is currently bringing up to 2Bcf/d of LNG produced at Qatar's giant North Field. Natural gas from Qatar's North Field is brought to Qatar's Ras Laffan Industrial City for processing from where it is transported via a 48 inch diameter, 370km long sub sea pipeline to Abu Dhabi's Taweelah receiving terminal. From Taweelah, the gas is distributed by land pipelines to Abu Dhabi, Dubai, the Northern Emirates and Oman.

The Dolphin imports into the UAE, where demand is rising rapidly as the economy expands, boosted gas supplies in the UAE to around 5Bcf/d in 2Q2008 from 3Bcf/d in 2007. Dolphin began using the pipeline in March 2007 to bring 0.4Bcf/d of gas processed by state-owned Qatar Petroleum to the emirate of Dubai. Dubai will be taking between 0.6Bcf/d and 0.8Bcf/d once full exports begin.

As mentioned previously, Dolphin is in talks with Qatar to increase the flow of gas to the pipeline's maximum capacity of 3.2Bcf/d. But Qatar has called a moratorium on new projects from the North Field, as it studies the effect of rapid development on the largest reservoir of pure gas in the world. Since the moratorium is now expected to be in place until 2011, increasing supplies of Qatari gas looks out of the question for some time now.

### **UAE Gas Project**

Dana Gas, a regional private-sector natural gas company in the Middle-East currently has assets and projects in gas exploration and production, processing, transportation and marketing in several countries, including UAE, Egypt and Kurdistan Region of Iraq. It operates in the UAE through its subsidiaries SajGas and UGTCL and affiliate CNGCL. These three subsidiaries/affiliates together form Dana's UAE Gas project.

The operating model of the project involves Crescent Petroleum importing gas from National Iranian Oil Company (NIOC) underpinned by a 25-year Gas Sale Agreement. CNGCL, a gas marketing and trading company, has a long term gas purchase agreement in place with Crescent to source Iranian sour gas and long-term off-take agreements with end-user utilities and other industrial gas consuming enterprise in the Humriyah Free Zone of Sharjah, UAE. Dana Gas, through its subsidiaries – UGTC and SajGas will handle processing and distribution of the gas to utilities and industrial users. As per the initial agreement, UGTC will receive and transport 600MMcf/d (~0.6Bcf/d) of natural gas through a 30" diameter, 80kms subsea and land pipeline to the sweetening plant operated by SajGas, after which it is transferred to nearby LPG Extraction Plant (Government of Sharjah owned) for LPG and condensate extractions. CNGCL, which retains title to imported gas throughout the process, will then market the sweetened gas to various end-users in Sharjah through a UGTC:Emarat JV pipeline, while LPG, sulphur and condensates will be sold separately in local and international markets.

According to the management, although the necessary infrastructure to source and process natural gas in the UAE has been in place since late 2005, the project is facing delays due to incomplete infrastructure in Iran. At the same time, negotiations are ongoing in relation to pricing for additional volumes, over and above the contractual basis.

## **Initiation of Coverage**

**UAE**

### **ADNOC Sour Gas Field Development**

The Abu Dhabi National Oil Company (ADNOC) and its group of companies have launched a major push to boost UAE's oil and gas production. According to the Ministry of Energy, UAE is planning to increase its production of natural gas by 33% by the end of 2008 to reach 6.5Bcf/d.

Abu Dhabi has approximately 200Tcf of gas reserves, most of which is sour and thus difficult and costly to extract. In 2006, ADNOC launched its biggest ever non-associated gas development project which involved extracting, processing and supplying 3Bcf/d of sour gas from Abu Dhabi's onshore Shah and Bab gas fields. After several delays due to escalating estimated costs related to the project, ADNOC awarded the project to develop Shah gas-field to ConocoPhillips of US. The project is estimated to cost up to USD10 billion and will be shared by ADNOC and Conoco on a 60:40 basis. Development of Bab Field is expected to take a place at a later stage.

The partners will process approximately 1Bcf/d of gas at Shah-field. The gas has a content of around 30% of potentially deadly hydrogen sulphide, making it tougher and more expensive to produce than conventional gas (sweet) reserves. Development of the project will also involve the construction of sweetening plants and related production facilities, with an expected completion date of 2013. Given the technical challenges related to the project and inadequate details on the agreement, it is difficult to estimate the cost of production of sour gas from Shah Field at this moment. However, according to Middle East Economic Survey (MEES), it could reach as high as USD5/MMBtu, which is significantly more than what Dolphin Energy contracted to buy from Qatar Petroleum (USD1.3/MMBtu).

Considering current international gas prices, cost of USD5/MMBtu is lesser than what Western markets are paying for long-distance LNG imports, but much higher than what Gulf customers have traditionally been used to. On the demand side, along with the staggering growth in the industrial and power generation sectors, lies the expected increase in UAE's oilfield gas injection schemes required to maintain reasonable crude production levels at increasingly mature fields. It is important to note that most of the first increment of the 1Bcf/d Shah ultra-sour gas development, which will provide around 0.6Bcf/d of potential sales gas by 2012 is earmarked for re-injection. Given this situation, the project in its initial stages is not expected to completely meet domestic needs for sales gas and Natural Gas Liquids, and serves to explain the emirate's recent move to secure civil nuclear power capacity.

### **Dubai LNG Re-gasification terminal**

The Emirate of Dubai, which is currently facing the most acute shortage of natural gas among all the emirates has gone a step ahead in addressing its gas shortage problems, particularly during the peak summer months. In April 2008, DUSUP decided to develop a floating Liquefied Natural Gas re-gasification terminal at the DP World Jebel Ali Terminal in Dubai with a capacity to process 3mt/year or ~0.4Bcf/d of natural gas.

The emirate is expected to receive LNG from QatarGas 4 project developed by Royal Dutch Shell and the first gas for the project is expected by the end of 2010. The project will supply LNG to Dubai for approximately 15 years once commissioned.

## **Initiation of Coverage**

**UAE**

### **Qatar**

No GCC country has expanded as rapidly as Qatar in the natural gas sector. Qatar is the smallest of OPEC members in terms of oil, but, it has the third largest natural gas reserves in the world after Russia and Iran, holding 905Tcf or 14.55% of total world reserves. Almost 99.5% or 900Tcf of Qatar's reserves are present in the giant North Field, which is the single largest non-associated gas field in the world.

Qatar's production has almost doubled since 2003 with average daily production rate of 5.8Bcf in 2007. Consumption during the same period grew 68% to reach 2Bcf/d as at the end of 2007. This production surplus has helped Qatar become the highest LNG exporter in the world, surpassing Indonesia in 2007. LNG exports touched 3.7Bcf/d during 2007 with Japan and South Korea importing 56% of Qatari LNG.

### **Sector Structure**

State-owned Qatar Petroleum (QP) plays a dominant role in the natural gas sector. It is the leading natural gas producer and also plays an important role in downstream projects. Qatar's LNG sector is dominated by Qatar Liquefied Gas Company (Qatargas) and Ras Laffan Liquefied Natural Gas Company (RasGas) with QP having a majority stake in both the LNG companies.

### **Major Projects**

According to Qatar Petroleum, the country is targeting to increase its LNG production from 31m/t a year (4.11Bcf/d) currently to 77m/t a year (ca. 10.2Bcf/d) by 2012. This includes increasing the yearly capacity of RasGas from the current 20.7m/t to 37m/t by 2009. Given the size of its North Field, reserves are expected to be sufficient for planned production for the next 200 years.

In March 2007, with the commissioning of its RasGas Train 5, one of the largest LNG plant in the world, Qatar surpassed Indonesia as the world's largest LNG exporter. Having exported much of its production to Japan and South Korea, production from this plant is supplying gas to the European markets. In addition to RasGas, a joint venture between QP and Exxon Mobil to construct the world's two largest LNG trains ever built, with annual capacity of 7.8m/t (1.03Bcf/d) each, is already making progress and full commissioning of both the plants is expected by 2009.

Another major project launched in 2007, is the USD5 billion Dolphin Energy project. Qatar is the upstream party to this project, which involves supplying 2Bcf/d Qatari gas to UAE and Oman through a 350kms subsea pipeline from Qatar's North Field to Taweelah receiving terminal in Abu Dhabi. Although, the contract has a provision to increase gas supplies to pipeline's full capacity of 3.2Bcf/d, supplies may not increase until the moratorium on its North Field is lifted.

Gas-to-Liquids (GTL) technology uses a refining process to turn natural gas into liquid fuels such as low-sulphur diesel and naphtha, among other products. Qatar authorities have been aiming at increasing the production of GTLs, which are usually used in European countries. In February 2007, Shell and QP announced a joint venture to develop an integrated GTL plant - Pearl GTL project - that will utilize 1.6Bcf/d of natural gas feedstock to produce 140,000 bbl/d of GTL products and 120,000 bbl/d of associated condensate and LPG. As such the plant is expected to significantly benefit from the local gas reserves by turning them into high value export products. The project is expected to be fully operational by 2011.

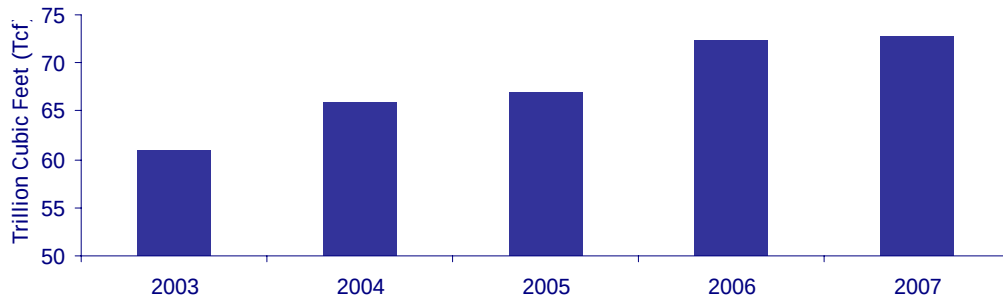
### **Future Outlook**

Qatar's energy sector is expected to remain buoyant as LNG production further expands and new export volumes are added. However, the full impact of Qatar's potential is expected to be realized once further development of North Field commissions and demand for Qatari gas continues to remain strong among GCC and Far-East Asian countries. At the same time, the country may look to reconsider export volumes in the future as domestic demand for LNG continues to grow at a rate of 12% to 13% annually. The moratorium on Qatar's North Field on new Greenfield projects is expected to remain in place until at least 2011 and is believed to have put the drilling of over 100 new wells on hold.

### Egypt

Natural gas will continue to play an increasingly important role in Egypt's economy in the coming years. Due to major recent discoveries, natural gas has become the major growth driver of Egypt's energy sector. Country's proven natural gas reserves stood at 72.85Tcf at the end of 2007, increasing 20% over 2003 levels of 60.89Tcf, thus representing 1.2% of total world and 2.35% of MENA reserves.

Egypt Natural Gas Reserves



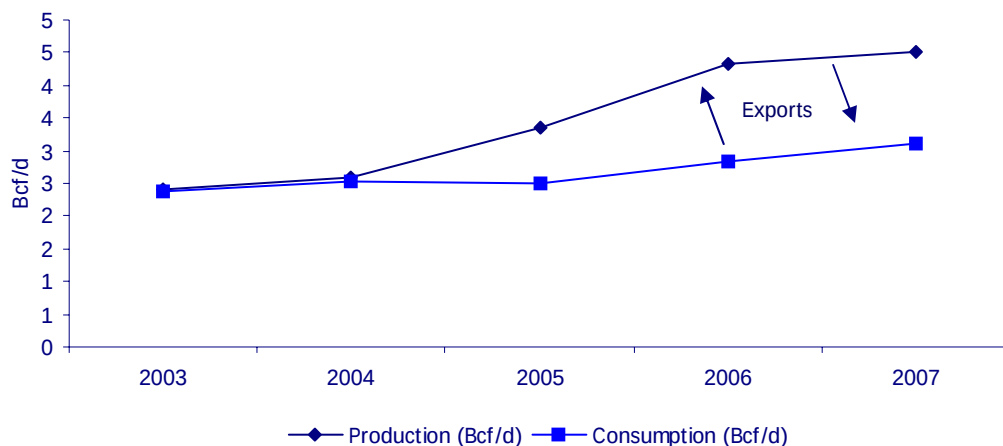
Source: BP Statistical Review

### Production & Consumption

*Widening gap between production and consumption has helped turn Egypt into a major LNG exporter*

Natural gas production averaged 4.5Bcf/d in 2007 as compared to 2.4Bcf/d in 2003, thus increasing 86% in half a decade. Consumption, however grew only 30% during the same period to reach 3.1Bcf/d in 2007 from 2.4Bcf/d in 2003. This widening gap combined with massive investment in the country's LNG projects has enabled Egypt to turn into a net LNG exporter, with total exports reaching 1.54Bcf/d, representing 34% of total 2007 production. Of the total exports, 85% were LNG exports with Spain and United States as the biggest importers during 2007.

Egypt: Production vs. Consumption



Source: BP Statistical Review

According to Egypt's Ministry of Petroleum, the electricity sector has the largest share of natural gas consumption at 58%, followed by the industrial sector at 26% during 2007. Going forward, more demand is expected to come from both these sectors as the government is encouraging households, commercial premises and industries to consider natural gas as a substitute for costlier and more polluting hydrocarbons.

### **Sector Structure**

The Ministry of Petroleum in Egypt oversees the natural gas sector. With the growing importance of natural gas in Egypt in recent years, the government created Egypt Natural Gas Holding Company (EGAS) in 2001. EGAS manages Egypt's foreign investment in natural gas and LNG exploration and development as well as partners with international firms across the natural gas value chain. Egypt's most expansive project is the Arab Gas Pipeline that connects Egypt to Jordan and Syria. In 2008, the Jordan-Syria section of the pipeline was completed and Egypt is expected to export ca. 32Bcf a year initially, rising to 77.3Bcf in 2013.

### **Future outlook**

According to the Ministry of Petroleum in Egypt, there is another 100Tcf to 200Tcf of unproven reserves, and it is optimistically expecting to have proved up to 25Tcf - 30Tcf by the end of 2011, thus increasing the current reserves by up to 50%. This has attracted an influx of foreign investments in to Egypt's energy sector in recent years. Dana Gas Egypt (previously Centurion Energy), 100% subsidiary of UAE's Dana Gas, has been at the forefront of this trend with major exploration interests in Egypt's Nile Delta region. The company's daily production has increased 15-fold from 2060 Barrels of Oil Equivalent per day (Boe/d) in 2002 to 29000Boe/d in 2007. The company announced two major gas discoveries in trailing twelve months and currently has a 19-well exploration program outlined for Egypt in 2008 and 2009.

Going forward Egypt is expected to limit natural gas exports to 25% of total production due to increasing domestic demand from the power generation and industrial sector. Economic growth in Egypt has strengthened in the past two years, while oil output has fallen by 5.5 % since 2003 due to lack of new oil discoveries and ageing fields, putting sustained pressure on natural gas demand and subsequently increasing prospects for companies such as Dana Gas in the natural gas upstream segment.

# Initiation of Coverage

## Iraq

According to British Petroleum, Iraq's proven natural gas reserves stood at ca. 112Tcf at the end of 2007. Oil and Gas journal estimates probable reserves at close to 275-300Tcf, ranking it tenth largest in the world. Almost two-third of Iraq's natural gas reserves are associated with oil fields and the balance are non-associated. The majority of non-associated reserves are concentrated in several fields in the North including, Khor Mor and Chemchemical gas fields.

Iraq's natural gas sector experienced low growth in the last few years across the natural gas value chain due to associated fall in oil production, deterioration of gas processing facilities, further enhanced by US-led invasion. According to EIA International Annual Energy Report, natural gas production has steadily declined over the past decade-and-a-half. In 2005 natural gas production was approximately 87Bcf down from 215Bcf in 1989.

## Structure:

With the reestablishment of Iraq, each governorate will have control over new prospects. Currently, the Supreme Oil & Gas Council has overall authority, with North Gas Company (NGC) and South Gas Company (SGC) being the two main upstream companies in the natural gas sector.

## Stability to enhance E&P activities

The Iraq economy is now witnessing political and economic stability and Government of Iraq has started to invite international oil & gas companies to exploit untapped natural gas resources. The Kurdistan Region of Iraq is the first to move ahead with the development of gas fields within their semi-autonomous territories. The Kurdistan Regional Government (KRG) has slated non-associated gas fields for priority developments and several projects are already underway in the northern governorates.

| Status             | Fields       | Location      | Partners                     | Reserves (Tcf)      | Capacity                                                        | Type                                       |
|--------------------|--------------|---------------|------------------------------|---------------------|-----------------------------------------------------------------|--------------------------------------------|
| Heads of Agreement | Khor Mor     | KRI           | Dana Gas, Crescent Petroleum | ~2.5                | 0.075-0.15Bcf/d (Phase I);<br>0.3Bcf/d (Phase II)               | Non-associated;<br>condensates,<br>LPG     |
| Heads of Agreement | Chemchemical | KRI           | Dana Gas, Crescent Petroleum | 2+                  | N/A                                                             | Non-associated;<br>condensates,<br>LPG     |
| MOU                | Siba, Misan  | South (Misan) | Gulf Sands Petroleum, USA    | Siba 3.1; Misan 1.7 | 46000b/d NGL,<br>0.34Bcf/d gas (Misan),<br>0.12Bcf/d gas (Siba) | Misan: associated,<br>Siba: non-associated |

*Source: Dana Gas, Energy Information Administration*

## Iraq's Natural Gas Development Projects

The Kurdistan Region of Iraq (KRI) is facing a severe power shortage. Currently, the region's power generation capacity is just above 350MW, while the needs of its Erbil province alone are 1,370MW during peak summer season. KRG has invited several international companies in the energy sector with Khor Mor and Chemchemical gas field appraisal and development projects, a significant step in alleviating its energy gap.

Khor Mor gas project involves developing 0.075-0.15Bcf/d of non-associated gas reserves by the end of 2008 with capacity expected to increase to 0.30Bcf/d in early 2009. Gas from the fields will be supplied to two local power plants. Dana gas Egypt is responsible for developing the Khor Mor gas field and has already begun producing 0.075Bcf/d from the field.

## Initiation of Coverage

UAE

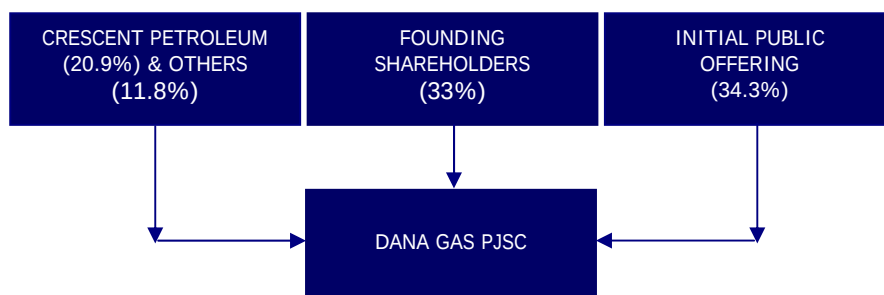
### Dana Gas: Background

Dana Gas was incorporated in the Emirate of Sharjah, UAE, as a Public Joint Stock Company (PJSC) on 20 November, 2005. It is Middle East's first and largest regional private-sector natural gas company. The group currently operates in the MENASA (Middle East, North Africa & South Asia) region across the natural gas value chain: from exploration and production, through gas processing and transportation, to the distribution, marketing and utilization of gas as feedstock and fuel to the petrochemical, industrial and power sectors. Since its establishment, the company has grown from a small core team at its head office in Sharjah to a regional, as well as international, natural gas company with over 380 professional staff with offices in UK, Egypt, Saudi Arabia, Bahrain and Kurdistan Region of Iraq.

### Shareholding Structure

Crescent Petroleum is an independently-owned, upstream oil and gas producing company headquartered in the Emirate of Sharjah, UAE operating for more than 35 years in the country. It is the single largest shareholder in Dana Gas with 20.9% shareholding as of 2Q2008.

Dana Gas was created with the acquisition of almost 100% stake in Sajaa Gas Private Limited Company (SajGas) and United Gas Transmission Company Limited (UGTC) from Crescent Petroleum and certain other private individuals, with further acquisition of 35% stake in Crescent National Gas Corporation Limited (CNGCL) from Crescent Petroleum alone. In exchange, this group of investors received a combined 32.7% stake in Dana Gas, with the share of Crescent being 20.9%. Subsequently, Dana privately placed 33% of its share capital at the time of formation and in December 2005 completed an initial public offering for the remaining 34.3% of total authorized capital.



Source: Dana Gas

### Dana:Crescent Umbrella Agreement

At the time of incorporation, Dana Gas and Crescent Petroleum entered into a 5-year "Umbrella Agreement", which expires in October 2011. According to the management, the agreement was put in place to provide much help and assistance to Dana Gas required during the start-up phase of the company through the deployment of Crescent's managerial and technical staff, at cost, as well as providing access and opportunities via Crescent's network of relationships across the MENASA region. The highlight of the agreement is that "Any new opportunity in the natural gas sector identified by either party shall be offered up to 50% to the other party on a first right of refusal basis". This agreement played a key part in sourcing the Kurdistan Region of Iraq Project for Dana Gas.

## Initiation of Coverage

UAE

### Operating Subsidiaries / Affiliates By Segments

Dana Gas currently operates through its subsidiaries and affiliates in the MENASA region across three segments - upstream, midstream and downstream.

Upstream:

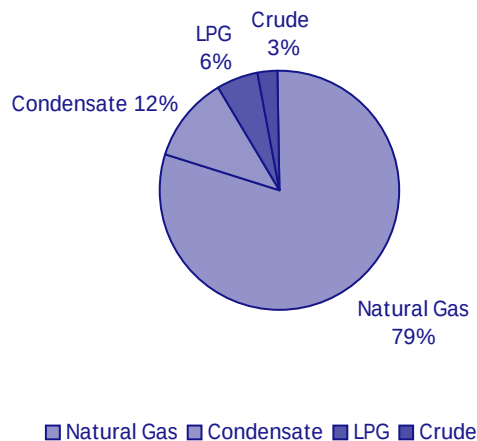
The upstream segment primarily includes exploration and production of natural gas and encompasses the company's activities in Egypt through its only upstream subsidiary "Dana Gas Egypt", as well as its gas field development and appraisal operations in Kurdistan region of Iraq. In addition to major exploration and development projects in Egypt, the company also has exploration interests in Sao Tome/Nigeria and Tunisia.

Dana Gas Egypt (DGE):

In January 2007, Dana gas acquired Centurion Energy (now re-branded as Dana Gas Egypt), a Calgary-based gas exploration and production (E&P) company, thus establishing immediate presence in the natural gas upstream segment. DGE is engaged in exploration, production and sales of oil, gas and associated liquids in Egypt since March 2002, with some exploration interest in Tunisia and Sao Tome/Nigeria. Within Egypt, the company's primary area of activity is in the Nile Delta with aggregate 2007 production of 10.3 Million Barrels of Oil Equivalent (MMBoe), proved reserves of 45.82MMBoe and proved and probable (2P) reserves of 66.75MMBoe at the end of 2007. According to company reports, most of Egypt's gas production is sold locally to the Government at a pre-contracted price of USD2.65 per Million British Thermal Units (MMBtu).

*Dana's FY2007 total production was 10.3MMBoe and sold most of the gas production to Egyptian Government*

FY07: Dana Gas Egypt Production Breakdown

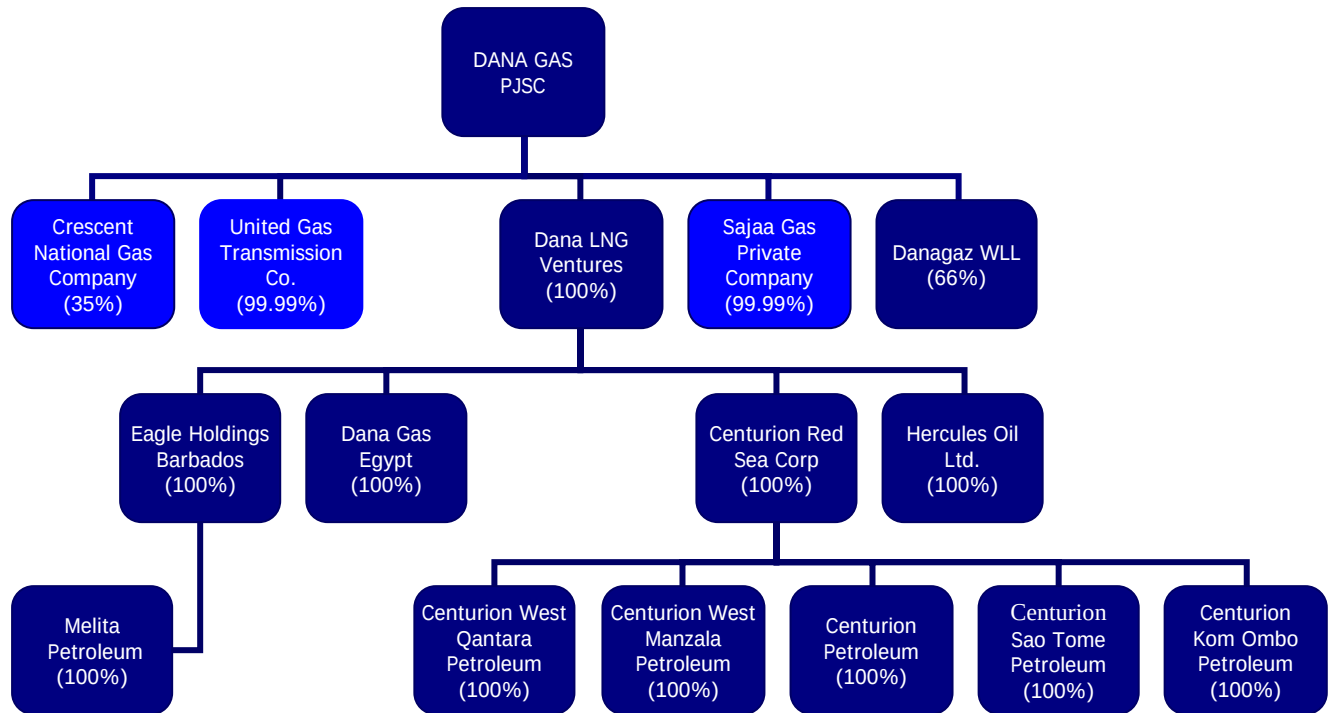


Source: Dana Gas, Prime Research

In 2007, the subsidiary produced oil and gas from a total of 6 development leases, three of which commenced operations during the same year. Of the total 2007 production, it produced approximately 8.2MMBoe of natural gas, 1.2MMBoe of condensates, 0.6MMBoe of LPG and 0.3 million barrels of oil, resulting in average daily production rate of 29,000Boe. Dana Gas has been investing significantly on gas exploration and development in Egypt, resulting in the company making significant discoveries in recent months. Additionally, the company achieved first production from its Al Baraka-1 exploration well on the Komombo Concession in December 2007. Al Baraka, combined with few additional discoveries, helped the company achieve 2007 year-end production rate of 32,000Boe/d.

*Ongoing exploration drive is helping the company maximize value from its only upstream subsidiary*

During 2008, Dana Gas has laid out a highly prospective USD170-180 million drilling programme in Egypt with a primary focus on its Nile Delta and Komombo concessions. Specifically, the company's plans include drilling of 19 new wells, including 15 exploration prospects and 4 development wells. According to the management, if its massive drilling plans prove successful, it could potentially double the size of its reserves. In 1Q2008, the company made its first discovery in its drilling campaign from a new oil zone, thus helping Dana Gas maximize value from its only upstream subsidiary to the fullest.



Source: Prime Research, Dana Gas

### Midstream:

Midstream segment involves transportation and processing of natural gas and gas liquids, including Liquefied Natural Gas (LNG), Liquefied Petroleum Gas (LPG) and condensates. This includes the ownership of gas transmission and reception facilities through UGTC, as well as the SajGas processing and sweetening plant in Sharjah.

### SajGas:

SajGas owns and operates a plant to process sour gas using sophisticated gas sweetening, sulphur recovery and sulphur pastillation facilities in Sajaa, Sharjah. The plant has a capacity to process approximately 600MMcf/d (0.6Bcf/d) of inlet sour gas with expansion potential to process up to 1,000MMcf/d (1Bcf/d) of gas. The company is expected to derive its revenues on a pay-unit basis and currently has a long term contract in place with CNGCL for the processing of gas in the UAE gas project.

### UGTC:

UGTC completes Dana's midstream segment through its major gas reception and transmission facilities. The company has the necessary infrastructure in place to handle gas transmission in the UAE gas project and through its cooperation with Single Buoy Moorings (SBM), is in the process of developing a network of floating LNG terminals in the MENASA region. More recently, UGTC completed the development of a new 32kms, 48inch diameter common-user pipeline, to transport gas from SajGas plant in Sajaa to a spectrum of end-users in the Humriyah Free Zone of Sharjah. Like SajGas, UGTC has a long term contract with CNGCL for gas transmission (UAE Gas Project) and is expected to derive its revenues based on a tolling model.

## **Initiation of Coverage**

**UAE**

### **Downstream:**

Downstream segment encompasses the sale of gas and associated liquids to a broad category of end-user industries, including promotion and development of gas-related industrial complexes (Gas Cities). The company is also developing an LPG extraction plant in the Gulf of Suez of Egypt through its subsidiary, Danagaz, and is in the process of developing a network of floating LNG terminals in the MENASA region.

### **CNGCL:**

Dana Gas acquired 35% stake in CNGCL at the time of formation. The remaining 65% is owned by Crescent Petroleum. CNGCL manages Dana's downstream operations, including marketing and energy trading. Its role in the UAE gas project involves taking titles to raw gas, underpinned by a 25-year agreement between Crescent Petroleum and National Iranian Oil Company (NIOC) and arranging for transport, processing and eventual sale of gas, condensates, recovered sulphur and LPG to end-users.

### **Danagaz Bahrain:**

During 2007, Dana Gas acquired a controlling stake (66%) in Danagaz, registered in the Kingdom of Bahrain. Danagaz, through a joint venture (Danagaz share – 40%) with two other local partners in Egypt, is currently involved in the development of a gas liquids extraction plant in Egypt. The plant involves engineering, fabrication, installation and operation of a high-efficiency gas liquids extraction and manufacturing plant in the Gulf of Suez with a capacity to process 150MMcf/d (0.15Bcf/d) of natural gas, which will help the JV produce 120,000 metric tons (~0.9MMBoe) per year of high margin propane, butane and condensates. Danagaz will be involved in marketing and selling the products to domestic and international markets once the plant begins operations in 3Q2010.

## Initiation of Coverage

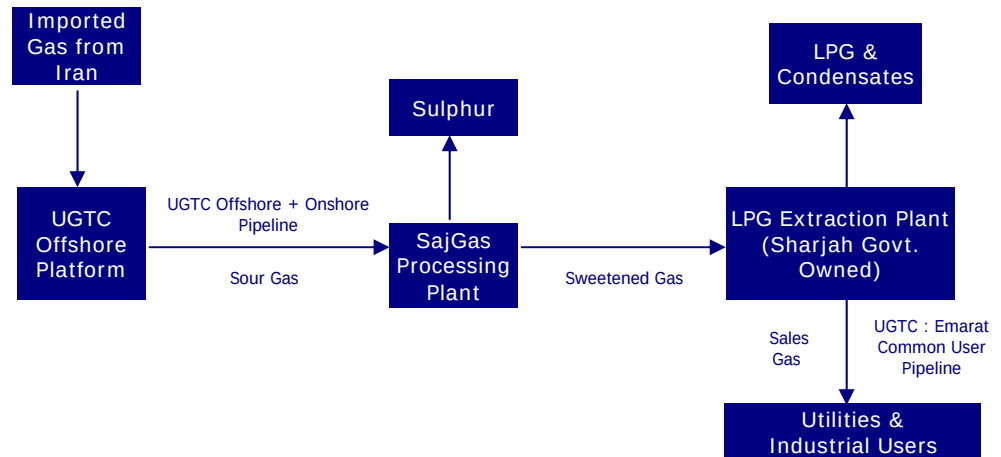
UAE

### Major Projects

UAE Gas Project:

Dana Gas's cornerstone project, in the UAE, is the UAE Gas Project with Dana's subsidiaries - SajGas and UGTC and affiliate CNGCL, owning and managing Dana's operations.

Schematic Diagram of UAE Gas Project:



Source: Dana Gas, Prime Research

**Based on our understanding, the operating model of the project will involve:**

- CNGCL taking title to sour gas (0.6Bcf/d), which Crescent Petroleum will be importing from Iran underpinned by Crescent's 25-year gas purchase agreement with NIOC
- Imported gas will then be transported via a pipeline to UGTC's offshore gas receiving riser platform bridge connected to Crescent's existing facilities at Mubarek field
- UGTC transporting the gas from offshore receiving platform via a 80kms offshore and onshore pipeline to SajGas's sweetening facilities
- Sweetened gas will then travel to a nearby LPG plant, for LPG and condensate extractions, to be sold separately by CNGCL
- CNGCL marketing sales gas processed at LPG plant to end-users in the UAE through a 30kms 48inch diameter gas transmission pipeline jointly owned by UGTC and Emarat

The pipeline JV has a design capacity to transport up to 1Bcf/d of sweetened gas from SajGas and has sold its capacity to SEWA, FEWA and CNGCL on long-term contracts. Further, management expects to market condensates locally, while LPG and sulphur will be sold to Far-Eastern countries, including India.

### Project continues to face delays...

The initial contract between NIOC and Crescent Petroleum was struck in 2001 whereby contracted gas price was agreed upon using certain calculation methodology and possibly indexed to an average oil price of USD18/bbl. Moreover, natural gas prices averaged ~USD0.70/MMBtu in 2001, much lower than Dolphin Energy's gas purchase price of USD1.30/MMBtu. Today, crude oil price dynamics have changed significantly with FY2008 oil price expected to average above USD100/bbl.

As we discussed before, press reports indicate that negotiations are currently ongoing between Crescent and NIOC to revise the initial pricing, however, management states that delays are due to incomplete infrastructure on the Iranian-side and current negotiations pertain to pricing and volumes within the framework of the contract. In the mean time, the expectation of the management is for NIOC to complete the remaining infrastructure and expects gas supplies to commence by year-end 2008.

## **Initiation of Coverage**

**UAE**

Several factors lead us to believe that consensus will be reached in the immediate future with Iran to begin gas supplies from FY2009:

- Our talks with the company affirm our belief that management is highly optimistic and expects gas supplies to begin in the immediate future
- It is in the best interest of both Dana and NIOC to move forward with the project at the earliest since both players combined have invested over USD2.5 billion in the necessary project infrastructure
- Recent reports indicated that Iran could potentially use gas from Salman field for its own domestic purposes if the price dispute was not resolved. However, we believe that natural gas from this field is highly sour i.e. it contains high proportion of hydrogen sulphide, requiring Iran to provide more capital infusion to build the necessary infrastructure for gas sweetening, thus making it difficult and time consuming to move ahead with such alternatives
- Gas supplies from Iran are expected to meet the needs of state-owned utilities such as FEWA and SEWA, who are currently resorting to expensive distillate fuels such as diesel (USD20-25/MMBtu) to fill their energy gaps and hence should find it relatively economical, at present, to pay a higher than previously contracted price (if required) for natural gas and do away with burning expensive fuel oils

*Management remains highly optimistic and expects gas supplies to begin by year-end 2008*

We address the following issues currently facing the project:

- Although we believe that Iran will not use the contracted gas supplies for domestic use due to additional capex associated with sweetening of the gas, it has maintained a strong stance in this direction and claims to have project plans in place to build necessary infrastructure
- Even though Iran enjoys world's second largest natural gas reserves with YE2007 reserves of 981.75Tcf, its production and consumption both remained at ~10.8Bcf/d during 2007 with no excess production for increased domestic consumption or exports. Like other GCC countries, Iran too is facing a shortage of natural gas and could be tempted to back out from the project to boost its own domestic supply in the long run. In this regard, management states that Crescent and NIOC share an almost 40 year relationship, with the contract signed between the parties as internationally binding and cannot be easily breached
- Non project-specific geo-political risks associated with Iran's alleged nuclear proliferation will continue to pose threats to the future of this project
- Apart from the option to supply gas to the UAE or to its domestic industries, Iran could potentially strike an alternative deal to supply gas from offshore Salman field to any other South Asian or European member countries at pricing terms more acceptable to NIOC. However, we note that Iran and UAE share significant trade relations, and any diversion of gas could have adverse trade and political implications, certainly not in Iran's best interest

*UAE gas purchase agreement is internationally binding and cannot be easily breached*

Sharjah Western Offshore Concession – Major Upstream Foray:

In early 2008, Dana Gas and Crescent in a 50:50 partnership signed a 25-year agreement for the exploration & production of the Sharjah Western Offshore Concession, thus making company's foray into the GCC E&P sector. Specifically, the concession agreement includes development of Zora Gas Field found in 1979, completing horizontal drilling of two wells and installation of offshore platforms and construction of 25kms pipeline for gas transmission. Further, the agreement provides for exploration works on approximately 1,000 sq kms of offshore area within the concession. According to the management, initial gas production from this field is expected to begin by mid-2010 and will be sold locally at market-determined prices.

## Initiation of Coverage

UAE

Khor Mor & Chemchemical Gas Field Projects:

During 2007, Dana Gas formed a consortium with Crescent Petroleum to undertake the joint-development of Khor Mor Gas Field and concurrently the appraisal of Chemchemical Gas Field in KRI. The table below digs deeper into the two projects.

| Project      | Scope                                                                                                                                                                                                                                     | Reserves                   | Capacity                                                                                                                                          | Prime Notes                                                                                                                      |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Khor Mor     | <ul style="list-style-type: none"> <li>Appraise, develop &amp; transport gas to Erbil &amp; Suleymania power plants</li> <li>Construction of 180kms gas pipeline + LPG extraction plant</li> <li>Project Capex: USD600 million</li> </ul> | ~2.5Tcf non-associated gas | Phase I (4Q2008):<br>0.075-0.15Bcf/d gas,<br>~2,800bpd condensate<br><br>Phase II (1H2009):<br>0.3Bcf/d gas, 930 t/d<br>LPG, 14,000bpd condensate | No revenues from gas sales<br>Dana to earn from LPG & Condensate sales<br>Capital recovery clause to boost revenues in FY2009-10 |
| Chemchemical | <ul style="list-style-type: none"> <li>Appraisal, including acquiring seismic data &amp; drilling 2 appraisal wells</li> <li>Project Capex: USD50 million</li> </ul>                                                                      | ~2+Tcf non-associated gas  | 0.15-0.20Bcf/d + associated liquids by 2Q2010                                                                                                     | Strong potential for Khor Mor-like risk-service or risk-reward contract in future                                                |

Source: Prime Research, Dana Gas

*Khor Mor project's capital recovery clause to increase revenues substantially in FY2009 & FY2010*

An important element of risk service contract is: sale of gas to the two power plants at no cost combined with a capital recovery program. This arrangement will help the consortium generate revenues from the sale of LPG and condensates (extracted from the rich gas) in the domestic and international markets. According to company reports, the region imports close to 800t/d of LPG, accounting for most of its daily LPG requirements. The consortium plans to compete with these imports since it expects to sell its liquids at competitive prices. The revenues generated from the sale of associated liquids will subsequently help the venture recover its gas development and production costs as well as a earn a contractually defined return on its investment.

Kurdistan Gas City - Dana's Strategic Initiative:

In addition to the appraisal and development of Khor Mor and appraisal of Chemchemical gas fields, the consortium has also signed a "Strategic Alliance Protocol" with Kurdistan Regional Government (KRG) for developing a master plan to set-up an industrial complex in order to promote private-sector investment in a variety of gas-related industries in the Kurdistan region. Not only will this help Dana improve its foothold in the region, but will also open up opportunities to make commercial sale of excess gas production from the two fields to various industries in the proposed Gas City. According to the company, the consortium has already been assigned a 461 million square feet site for developing the proposed Kurdistan Gas City.

**We note two risks inherent with the project:**

- Security situation in Iraq has traditionally been a major cause for concern to operating safely across most parts of the country, with insurgents frequently targeting oil and gas infrastructure. We note that Dana gas has in place a comprehensive security solution since it has hired a security agency with experience in working with oil & gas companies in the Kurdistan region. While security issues of this nature are bound to prevail in the region, till date Dana has not reported any major incidents and has pursued most of its initiatives in a secured and timely manner
- Kurdistan Region of Iraq enjoys limited autonomy in Iraq since the First Gulf War in 1991. Numerous differences between the Central Government of Iraq and the North-east or Kurdish region have resulted in bitter relationships between the two regions threatening national unity. This domestic war has resulted in Central Iraqi government threatening to ban energy companies with operations in Kurdish region, including Dana Gas, from bidding and operating projects in Non-Kurdish regions of Iraq. While this may not affect Dana's Kurdish projects, it could potentially hinder the Company's future involvement in Iraq's energy projects, which have turned very lucrative with the country's redevelopment since the US-led invasion in 2003

*Dana's sale of free gas in Kurdistan has helped the Company avoid major criticisms from Central Iraqi Government*

However, in June 2007 a draft revenue sharing model was approved between Kurdistan Regional Government and Central Government in Baghdad, which states that KRG retains 17% of its net revenues after expenses and distributes the balance 83% to other Iraqi states based on their population distribution. Moreover, Dana's

## Initiation of Coverage

**UAE**

sale of free gas to the two power plants in Kurdistan will help the region save ~USD2 billion a year, while the company expects to generate revenues from liquids extracted from gas processing. This has helped Dana Gas avoid major criticism from the Central Iraqi Government.

Egypt Gulf of Suez - Gas Liquids (LPG) Extraction Plant:

During 2007 Danagaz Bahrain, Dana's affiliate, in which the company has 66% stake, formed a joint venture entity called Egyptian Bahraini Gas Derivative company (EBGDCo.) with the share of Danagaz being 40%, and the remaining held by EGAS (40%) and APICORP (20%). This joint venture is currently developing Gulf of Suez Liquids Extraction Plant on the western shore of Gulf of Suez in Egypt. Specifically, the project involves engineering, fabrication, installation and operation of liquids extraction plant with a capacity to produce 120,000mt/year of propane, butane and other condensates. The table below provides more information:

|             |                                                                                        |
|-------------|----------------------------------------------------------------------------------------|
| Project     | Gulf of Suez - LPG Extraction                                                          |
| Scope       | Engineering, fabrication, installation & operation of liquids extraction plant         |
| Capacity    | Gas Processing: 0.15Bcf/d;<br>Gross Liquids Output : 120,000/yr (~2.5MBoe/d)           |
| Feedstock   | 15-year gas supply agreement with EGPC                                                 |
| Prime Notes | Expected Commissioning in 3Q2010; Model could be replicated across wider MENASA region |

*Dana's future strategy involves increasing contributions from high margin liquids sale*

*Source: Dana Gas, Prime Research*

Based on our conversations with the management, we expect plant commissioning to begin towards the end of 3Q2010. Further, this project will expand Dana's geographical base since the liquids extracted from the plant will be sold to Turkey, France, Spain and other European countries. We believe that the proposed model to extract high value liquids from rich gas and subsequently returning the lean or dry gas to the pipeline will help Dana improve its overall margins in the long term. This is because lean gas is usually sold at pre-agreed contracted prices, where as LPG and condensates, among other liquids, are sold at market-driven international prices often at higher margins. The success of this project could open up similar opportunities for Dana in the wider MENASA region where growing investments in the industrial and petrochemical sectors is pushing up the demand for associated liquids and condensates as a feedstock.

In addition to the above-mentioned major projects, Dana has signed several Memorandum of Understanding (MoU) or cooperation agreements to help achieve strategic objectives across the natural gas value chain. We list few noteworthy ones:

- MoU with Ikarus Petroleum Industries, a major Kuwaiti established company with ownership in several petrochemical ventures in the GCC states. We believe this MoU is aligned with Dana's strategic objective to increase its presence in the downstream natural gas and petrochemicals segment. The MoU will help Dana leverage Ikarus's expertise in the petrochemicals sector, which will particularly be helpful in the assessment and development of Dana Gas city projects across the MENASA region

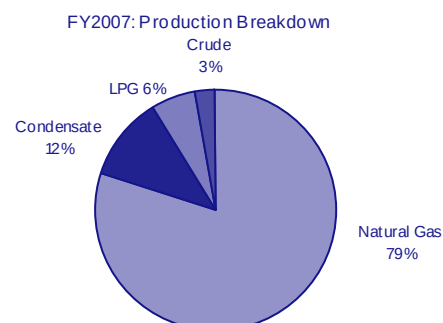
- Dana, through its subsidiary UGTC, signed a cooperation agreement with Single Buoy Moorings (SBM), a provider of offshore solutions to the oil & gas industry, to build LNG floating terminals in several parts of MENASA region. Through this agreement, the company announced its threshold project to build a floating LNG re-gasification terminal in Port Qasim, Pakistan. We believe the venture expects to source LNG from regional suppliers and sell gas to local power plants. This will further help Dana's efforts to foray into LNG marketing, sales and trading. The company expects to deploy similar projects in Kuwait and Lebanon at a later stage

## Initiation of Coverage

UAE

### Financial Highlights

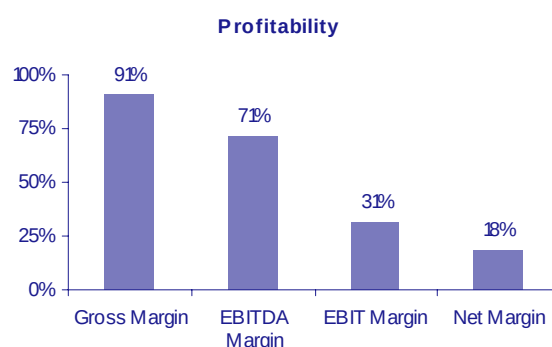
FY2007 was the first year of commercial operations for Dana Gas. During 2007, Dana earned revenues through Dana Gas Egypt, Dana's only operating subsidiary as at the end of FY2007. The subsidiary produced 10.3MMBoe of oil & gas from its six development leases. Of the total production, natural gas represented approximately 8.2MMBoe or 79%, followed by condensates 1.2 million barrels (12%), LPG 0.6MMBoe (6%) and oil 0.3 million barrels (3%).



Source: Dana Gas, Prime Research

DGE's total FY07 production resulted in average daily production of 29,000Boe, a y-o-y decline of 9.65% from FY06 daily production of 32,000Boe (prior to acquisition). The company, however, achieved FY07 year-end production rate of 32,000Boe/d due to two additional discoveries coming on stream in 2H2007. As mentioned previously, natural gas is sold to Egyptian government at a pre-contracted price of USD2.65/MMBtu, while oil, LPG and condensates are sold at world market prices. During 2007, Dana reported gross revenues before royalty of AED1,036 million or USD283 million (including USD1 million UGTC tariff fee). Although, revenue breakdown by product is not available, we estimate contribution from natural gas of ~48%, while liquids contributing the balance 52% to subsidiary's revenues.

Cost of sales during the year came in at AED57 million. Dana's Cost of sales/BOE ratio of USD1.55 during 2007 was low relative to other oil & gas companies in the region, resulting in 2007 gross margin of 90.30%. As of December 2007, the company employed a staff of over 300 resulting in SG&A/gross sales of 11%. The company recorded exploration expenses of AED37 million, reflecting its continuing efforts to increase its proven reserves, which stood at 45.8MMBoe at the end of the year.



Source: Company Data, Prime Research

It is important to note that Dana Gas uses the successful efforts method to account for its exploration & development costs, requiring any exploration costs associated with a dry hole to be immediately expensed in the same accounting period. This conservative accounting methodology thus provides a true picture of Dana's exploratory efforts in any given period. The net effect of SG&A and exploration expenses resulted in Dana reporting EBITDA margin of 71%. Further, depreciation & depletion costs of AED241 million reduced EBIT margin to 31%. Due to the nature of this industry, oil & gas properties are depleted using unit-of-production method and other depreciable assets at their respective rates on a straight line basis. For FY2007, effective depreciation rate to total gross assets was 8.82%.

Net margin for FY2007 was at 18% as a result of increased finance costs of AED153 million associated with Dana's convertible bonds (sukuk) and short-term bridge loan (subsequently redeemed). Net profit which came in at AED111 million, however was boosted by extraordinary income of AED205 million associated with increase in fair value of Dana's investment property. Although this is a weak, non-operating income driver, it helped improve Dana's margins substantially in FY2007. Income tax for the period amounted to AED170 million, representing Egypt government's claim to natural gas production.

| Key Ratios    |       |                    |        |
|---------------|-------|--------------------|--------|
| Current Ratio | 6.91  | Return on Assets   | 1.01%  |
| Quick Ratio   | 6.13  | Return on Equity   | 1.59%  |
| Debt/Equity   | 0.514 | Return on Invested | 44.77% |

Source: Company Data, Prime Research

In spite of high gross margins, Dana's ROA and ROE of 1.01% and 1.59% respectively remain significantly below those of its regional peers. Total Assets include UAE Gas Project infrastructure and properties (SajGas, UGTC, etc) on which Dana did not generate any returns since it awaits gas supplies from Iran. Current and Quick Liquidity ratios however were high due to improved Cash & Bank balance, further boosted by USD1 billion sukuk offering in October 2007, resulting in a Debt to Equity ratio of 0.514 for the company.

## Initiation of Coverage

UAE

### 1H2008 Performance

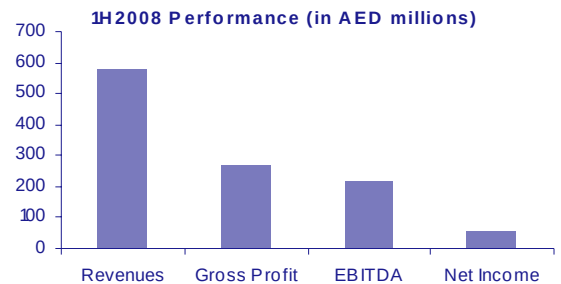
In 1H2008, Dana's aggregate revenues stood at AED581 million, a 28% increase over corresponding period last year. The company's topline growth can be largely attributed to record increases in commodity prices, which subsequently led to better LPG and condensate realizations.

Gross Profit for the period came in at AED271 million, resulting in gross margins of 84.9% as compared to 90.6% for FY2007 due to higher than expected increase in cost of sales associated with new discoveries. Increased scale of activities in Egypt due to Dana's ongoing exploration project in the country resulted in high exploration expenses of AED9 million during the period. SG&A expenses of AED42 million remained relatively flat as a percentage of net sales at 13.17%. The combined effect of exploration and SG&A resulted in Dana recording EBITDA income of AED220 million or an EBITDA margin of 68.97% (71.1% in FY2007).

Non-operating income in the form of increase in fair value of investment property combined with income from sale of West Gharib interest helped Dana record a net income of AED59 million in 1H2008, in spite of AED140 million finance costs associated with the convertible sukuk. As a result, net margins improved marginally to 18.50% as compared to 18.39% in FY2007.

#### Sukuk Update:

More recently, the company fixed a conversion price of AED2.118 per share for its sukuk. It set at exchange ratio of 17,343.4 shares for every USD10,000 certificate. At current share price levels of approximately AED1.06 per share, it is not in the best interest of sukuk holders to opt for the conversion. However, this may change once the share price crosses the conversion price of AED2.118, implying a dilutive effect on the share price, however depending upon the percentage of certificate holders that actually opt for the conversion.



Source: Dana Gas, Prime Research

## Initiation of Coverage

UAE

### Forecasts

Dana Gas, operationally, is still in its early phases of development, with several large projects in the pipeline in 2008 and beyond. Dana's LPG and condensate price realizations are closely linked with market prices of Brent crude, which according to market consensus will average USD115/barrel in 2008, USD96/barrel in 2009 and USD94/barrel in 2010. We expect Brent prices to correct further beyond FY2010, consistent with market consensus. We assume similar pricing environment for Egyptian natural gas, most of which is sold to the government at a pre-contracted price of USD2.65/MMBtu. However, recent reports indicated that Egyptian government has agreed with a number of energy firms to raise offshore gas purchase prices from USD2.65 to USD4.0/MMBtu. We note that 100% of Dana's gas production at present is onshore and will continue to be sold at historical contracted prices.

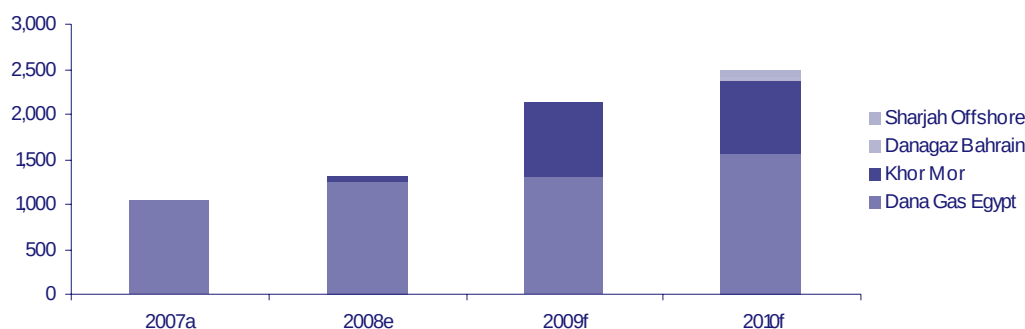
*We expect aggregate revenues to grow by ~27% and ~63% in FY2008 and FY2009.*

For FY2008, we expect Dana's daily production (including liquids) to average 30.70 thousand barrels of oil equivalent (MBoe), thus increasing by 5.9% over FY2007 production of 29.01MBoe/d. For FY2009 and FY2010, we estimate total production to average 66.07MBoe/d and 79.5MBoe/d largely due to the full impact of Khor Mor project and assuming Dana's exploratory efforts successfully translate into additional production in Egypt.

| Revenue Breakdown<br>(in AED millions) | 2007a        | 2008e        | 2009f        | 2010f        |
|----------------------------------------|--------------|--------------|--------------|--------------|
| Total Daily Production (MBoe/d)        | 29.01        | 30.70        | 66.07        | 79.51        |
| Dana Gas Egypt                         | 1,036        | 1,236        | 1,316        | 1,562        |
| Khor Mor                               | 0            | 78           | 821          | 823          |
| Danagaz Bahrain                        | 0            | 0            | 0            | 34           |
| Sharjah Offshore                       | 0            | 0            | 0            | 68           |
| <b>Aggregate</b>                       | <b>1,036</b> | <b>1,314</b> | <b>2,138</b> | <b>2,486</b> |

Source: Dana Gas, Prime Research

Revenue Forecasts (in AED millions)



Source: Dana Gas, Prime Research

### Dana Gas Egypt:

Our production and pricing estimates translate into aggregate revenues of AED1,236 million from Dana gas Egypt (Upstream segment) in FY2008, with a marginal increase in FY2009 to AED1,316 million. Beginning FY2010, we expect current exploratory efforts to increase production and revenues from Egypt significantly and consequently help the company achieve gross revenues of AED1,562 million in FY2010.

### Khor Mor:

With regards to the Khor Mor project in KRI, the company does not expect to generate any revenues from LPG sales in FY2008. According to the management, LPG plant is expected to commission in 1H2009, at which time full impact of the Khor Mor project should reflect in the company's financial statements. However, recovery of condensates from Early Production Facilities (EPF) will generate revenues of AED78 million in FY2008. We expect significant capital and development costs recovery from revenues of AED821 million and AED823 million generated in Iraq in FY2009 and FY2010 respectively, as per the agreement signed between Dana (& Crescent) and Kurdistan Regional Government (KRG). Net Revenues from Khor Mor in FY2011 and henceforth, are expected to decline once the company recovers its initial investment costs, begins to make tariff payments to KRG and continues to earn a contractually defined rate of return on its investment.

## **Initiation of Coverage**

**UAE**

### **Other Projects:**

Due to delays in project commissioning, production and revenues from Danagaz Liquids Extraction Plant in Egypt and Sharjah Offshore project in the UAE are not expected to begin before 3Q2010. There are strong indications that Dana Gas will be able to strike Khor-Mor like risk-service contract on the Chemchemical Gas Field in Iraq. Since this only remains a possibility, we have not included projections from Chemchemical in our valuations at this stage.

As we discussed previously, the UAE Gas Project is currently facing delays due to several factors. Moreover, recently-held talks between Crescent and NIOC still do not provide complete clarity for us to assume that gas supplies will begin before FY2009. We have therefore not included estimated free cash flows from the UAE Gas Project in our conservative fair value estimate of AED1.82 per share. Alternatively, if the gas supplies were to begin from FY2009, we estimate Dana's fair value to be AED3.18 per share, which is 75% more than our current target price.

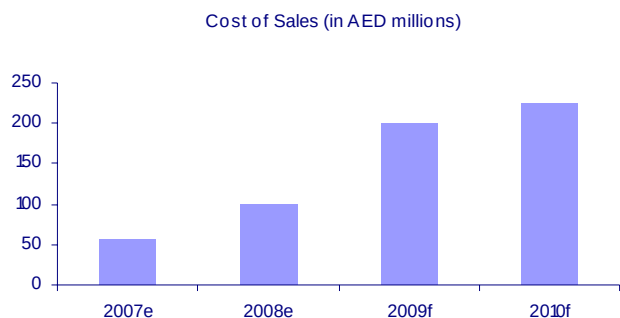
## Initiation of Coverage

UAE

### Forecasts

#### Cost of Sales:

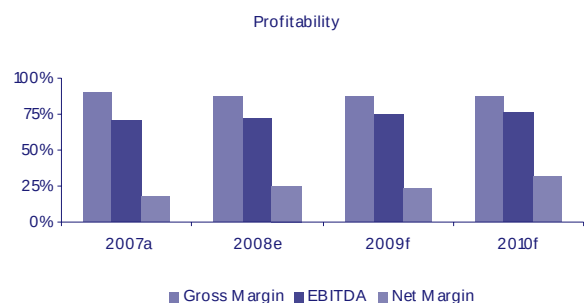
Dana has so far enjoyed one of the lowest Cost of Sales/Barrels of Oil Equivalent of Production (COS/BOE) ratio, which stood at ~USD1.51 (AED5.53) in FY2007. In absolute terms, cost of sales came in at AED57 million during 2007. The ratio, however, spiked to USD3.2 in 2Q2008 on account of increased production costs related to new Al Baraka discovery. Going forward, we estimate COS/BOE to average ~USD2.48 during FY2008, before settling at ~USD2.20 in FY2010. It is important to note that more than anticipated increase in deep offshore exploration and production activity will increase Dana's COS/BOE. Our estimations translate into aggregate FY2008 COS of ~AED99 million, eventually rising to ~AED225 million in FY2010 once Danagaz and Sharjah Offshore projects begin operations.



Source: Dana Gas, Prime Research

#### Profitability:

Our revenue and cost of sales assumptions result in FY2008 estimated gross margins of 87.5% as compared to 90.6% in FY2007. Margins in FY2009 will remain flat at 87.31% before settling at 87.27% in FY2010, since historic cost advantages associated with Egypt operations subside with the commissioning of Sharjah *offshore* project. We estimate EBITDA margins of 71.8% in FY2008, which is a marginal improvement from FY2007 EBITDA margin of 71%. On one hand, Dana is expected to start generating revenues from Khor Mor condensate sales and on the other SG&A expenses are expected to witness a decline to 10.7% of net sales, compared to 13.35% in FY2007. We estimate Dana to record ~AED39 million towards FY2008 exploration expenses, resulting from its ongoing exploration operations in Egypt. Further, including full year non-operating income of AED315 million based on management guidance, we estimate Dana's FY2008 net margins to rise to 25.3% or ~AED201 million from 18.35% or AED111 million in FY2007.

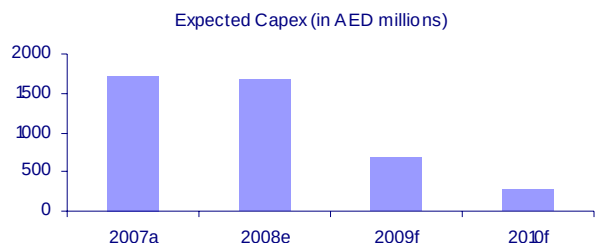


Source: Dana Gas, Prime Research

Net margins in FY2008 expected to rise to 25.3% from 18.35% in FY2007.

#### Capex:

Lastly, Dana's massive exploration efforts in Egypt and numerous financial commitments related to upcoming projects in UAE, Egypt and Iraq are expected to result in FY2008 and FY2009 capex of AED1,678 million and AED688 million, respectively, before settling at AED284 million in FY2010. Our capex estimations do not include any potential acquisitions that Dana may make in the future, in which case the amount of capex and subsequently the Company's leverage will significantly change. Our FY2010 capex/depreciation ratio stands 0.84 and is expected to normalize further as the company matures.



Source: Dana Gas, Prime Research

## Initiation of Coverage

UAE

### Valuation

Using a risk free rate of 5.01%, Beta of 1 and risk premium 7%, we arrive at a CAPM derived Cost of Equity of 12.01%. Assuming 7.5% after-tax cost of debt, and Dana's current market-derived debt and equity weights, we arrive at a WACC of 10.44%. Further, we have assumed perpetual growth rate of 4%, consistent with long term growth rate of natural gas demand in the region.

We have valued Dana Gas under two scenarios:

Base (*Conservative*) scenario - assuming further delays in sourcing Iranian gas and hence no cash flows from the UAE Gas Project, we arrive at a fair value estimate of AED1.82 per share, with 71% upside from Dana's current market price of AED1.06 per share, thus leading us to ***initiate coverage on Dana Gas with a "STRONG BUY" recommendation.***

Figures in AED millions  
except for per share data.

| Base Scenario - Excluding UAE Gas Project | 2008e  | 2009f | 2010f  |
|-------------------------------------------|--------|-------|--------|
| Revenues                                  | 1,314  | 2,138 | 2,486  |
| Net Income                                | 201    | 366   | 557    |
| Capex                                     | 1,678  | 688   | 285    |
| Free Cash Flows                           | -1,038 | 55    | 639    |
| Total Shareholder Value (Net of Debt)     |        |       | 10,905 |
| Value per share                           |        |       | 1.82   |

Source: Prime Research

Alternative Scenario - assuming no further delays in sourcing Iranian gas, with the expectation that supplies will begin effective FY2009, we arrive at a fair value estimate of AED3.18 per share, with 200% upside from the current market price and 75% more than our current target price of AED1.82 per share.

| Alternative Scenario - Including UAE Gas Project | 2008e  | 2009f | 2010f  |
|--------------------------------------------------|--------|-------|--------|
| Revenues                                         | 1,314  | 2,138 | 2,486  |
| Net Income                                       | 201    | 988   | 1,168  |
| Capex                                            | 1,678  | 688   | 285    |
| Free Cash Flows*                                 | -1,037 | 677   | 1,250  |
| Total Shareholder Value (Net of Debt)            |        |       | 19,094 |
| Value per share                                  |        |       | 3.18   |

Source: Prime Research

\*An important assumption here relates to Dana's affiliate CNGCL. For modeling purposes, we have assumed *CNGCL Gas Revenues - gas purchase - processing & transmission costs = 0* and project to bring in cash flows from sulphur, LPG and condensate sales

## Initiation of Coverage

UAE

| Income Statement (in AED millions)   | 2007a        | 2008e        | 2009f        | 2010f        |
|--------------------------------------|--------------|--------------|--------------|--------------|
| <b>Revenues</b>                      | <b>1,036</b> | <b>1,314</b> | <b>2,138</b> | <b>2,486</b> |
| Less: Royalty                        | (431)        | (519)        | (553)        | (718)        |
| <b>Net Revenues</b>                  | <b>605</b>   | <b>795</b>   | <b>1,585</b> | <b>1,768</b> |
| Growth                               |              | 26.9%        | 62.6%        | 16.3%        |
| COGS                                 | 57           | 99           | 201          | 225          |
| S,G & Admin. Expenses                | 81           | 85           | 93           | 98           |
| Exploration expenses                 | 37           | 39           | 96           | 93           |
| <b>EBITDA</b>                        | <b>430</b>   | <b>571</b>   | <b>1,194</b> | <b>1,352</b> |
| Growth                               |              | 32.9%        | 108.9%       | 13.2%        |
| EBITDA Margin                        | 71%          | 72%          | 75%          | 76%          |
| Depreciation & Amortization          | 241          | 310          | 416          | 338          |
| <b>Operating EBIT</b>                | <b>189</b>   | <b>262</b>   | <b>778</b>   | <b>1,014</b> |
| Net Interest Income/(Expense)        | (118)        | (246)        | (273)        | (277)        |
| Non-operating income                 | 210          | 315          | -            | -            |
| <b>Pre Tax Income</b>                | <b>281</b>   | <b>331</b>   | <b>505</b>   | <b>737</b>   |
| Pre Tax Income Growth                |              | 17.8%        | 52.5%        | 46.0%        |
| Income Tax                           | 170          | 130          | 138          | 180          |
| <b>NPAT</b>                          | <b>111</b>   | <b>201</b>   | <b>366</b>   | <b>557</b>   |
| Growth                               |              | 81.2%        | 82.2%        | 52.1%        |
| <b>Net Income</b>                    | <b>111</b>   | <b>201</b>   | <b>366</b>   | <b>557</b>   |
| Profit Share to Employees & Board    | 9            | 10           | 11           | 12           |
| <b>Net Attributable Income - NAI</b> | <b>102</b>   | <b>191</b>   | <b>355</b>   | <b>545</b>   |
| Growth                               |              | 87.3%        | 86%          | 53%          |

| Balance Sheet (in AED millions)              | 2007a         | 2008e         | 2009f         | 2010f         |
|----------------------------------------------|---------------|---------------|---------------|---------------|
| Cash & Marketable Securities                 | 2,125         | 817           | 820           | 1,244         |
| Trade Receivables-Net                        | 286           | 376           | 749           | 836           |
| Inventory                                    | 145           | 199           | 240           | 357           |
| <b>Total Current Asset</b>                   | <b>2,556</b>  | <b>1,392</b>  | <b>1,810</b>  | <b>2,437</b>  |
| Net Fixed Assets                             | 1,329         | 2,217         | 2,962         | 3,117         |
| Other Assets                                 | 6,966         | 7,548         | 7,075         | 6,868         |
| <b>Total Assets</b>                          | <b>10,850</b> | <b>11,158</b> | <b>11,848</b> | <b>12,422</b> |
| Short Term Bank Debt                         | 2             | 2             | 2             | 2             |
| Accounts Payable                             | 360           | 445           | 754           | 757           |
| Other Current Liabilities                    | 8             | -             | -             | -             |
| <b>Total Current Liabilities</b>             | <b>370</b>    | <b>447</b>    | <b>756</b>    | <b>759</b>    |
| Long-Term Debt                               | 3,358         | 3,384         | 3,410         | 3,436         |
| Provisions & Minority Interest               | 15            | 28            | 28            | 28            |
| <b>Total Shareholders' Equity</b>            | <b>7,107</b>  | <b>7,298</b>  | <b>7,653</b>  | <b>8,198</b>  |
| <b>Total Liab.&amp; Shareholders' Equity</b> | <b>10,850</b> | <b>11,158</b> | <b>11,848</b> | <b>12,422</b> |

| Free Cash Flow Statement (in AED millions)     | 2007a         | 2008e         | 2009f        | 2010f        |
|------------------------------------------------|---------------|---------------|--------------|--------------|
| <b>NOPLAT</b>                                  | <b>229</b>    | <b>403</b>    | <b>639</b>   | <b>834</b>   |
| Non-Cash Items                                 | 241           | 310           | 416          | 338          |
| <b>Gross Cash Flow</b>                         | <b>470</b>    | <b>712</b>    | <b>1,056</b> | <b>1,172</b> |
| Gross Investments                              | 4,499         | 1,794         | 1,000        | 533          |
| Non -Operating Cash Flow                       | 0             | 44            | 0            | 0            |
| <b>Free Cash Flow</b>                          | <b>-4,029</b> | <b>-1,038</b> | <b>55</b>    | <b>639</b>   |
| Interest Income After-Tax                      | -35           | -29           | 0            | 0            |
| Increase in Excess Cash & M. Sec.              | -872          | -1,357        | -203         | 376          |
| Change in Subsidiaries & Long Term Investments | 282           | 103           | 0            | 0            |
| After-Tax Interest Expense                     | 153           | 275           | 273          | 277          |
| Decrease in Debt & Bonds                       | -3,360        | -26           | -26          | -26          |
| Provisions Used                                | -15           | -13           | 0            | 0            |
| Non-Appropriation Items                        | 9             | 10            | 11           | 12           |
| Shareholders Equity                            | -191          | 0             | 0            | 0            |
| <b>Total Financing Flow</b>                    | <b>-4,029</b> | <b>-1,038</b> | <b>55</b>    | <b>639</b>   |

Source: Dana Gas, Prime Research

**Stock Recommendation Guidelines**

| Recommendation | Target-to-Market Price (x) |
|----------------|----------------------------|
| Strong Buy     | $x > 25\%$                 |
| Buy            | $15\% < x < 25\%$          |
| Accumulate     | $5\% < x < 15\%$           |
| Hold           | $-5\% < x < 5\%$           |
| Reduce         | $-15\% < x < -5\%$         |
| Sell           | $-25\% < x < -15\%$        |
| Strong Sell    | $x < -25\%$                |

| Investment Grade | Explanation                                       |
|------------------|---------------------------------------------------|
| Growth           | 3 Yr. Earnings CAGR > 20%                         |
| Value            | Equity Positioned Within Maturity Stage of Cycle  |
| Income           | Upcoming Dividend Yield > Average LCY IBOR        |
| Speculative      | Quality Earnings Reflect Above Normal Risk Factor |

## Initiation of Coverage

UAE

### PRIME EGYPT SALES TEAM

|                |   |                |   |                             |
|----------------|---|----------------|---|-----------------------------|
| Yasmine Guindy |   |                | ✉ | yguindi@egy.primegroup.org  |
| Sandy Morcos   | ☎ | +202 3300 5666 | ✉ | smorcos@egy.primegroup.org  |
| Sherief Sobhy  |   | (25 lines)     | ✉ | ssobhy@egy.primegroup.org   |
| Ramy El Agamy  |   |                | ✉ | relagamy@egy.primegroup.org |

### PRIME UAE SALES TEAM

|                      |   |                |   |                            |
|----------------------|---|----------------|---|----------------------------|
| Ahmad Hamdi          | ☎ | +971-2-6910701 | ✉ | ahamdi@uae.primegroup.org  |
| Bilal Samad          | ☎ | +971-2-6910700 | ✉ | bsamad@uae.primegroup.org  |
| Mohamed Kamal        | ☎ | +971-4-4070112 | ✉ | mkamal@uae.primegroup.org  |
| Mohamed Khaled Hafez | ☎ | +971-4-4070102 | ✉ | mkhaled@uae.primegroup.org |

### PRIME EGYPT RESEARCH

|                 |                          |   |                |   |                               |
|-----------------|--------------------------|---|----------------|---|-------------------------------|
| Shirin Panicker | Senior Analyst           | ☎ | +202 3300 5717 | ✉ | spanicker@egy.primegroup.org  |
| Mohamed Seddiek | Senior Analyst           | ☎ | +202 3300 5720 | ✉ | mseddiek@egy.primegroup.org   |
| Rehab Taha, CFA | Senior Analyst           | ☎ | +202 3300 5724 | ✉ | rtaha@egy.primegroup.org      |
| Monette Doss    | Senior Analyst           | ☎ | +202 3300 5726 | ✉ | mdoss@egy.primegroup.org      |
| Ahmed Hindawy   | Analyst                  | ☎ | +202 3300 5719 | ✉ | aelhindawy@egy.primegroup.org |
| Karim Osman     | Junior Analyst           | ☎ | +202 3300 5716 | ✉ | kosman@egy.primegroup.org     |
| Sherif Mounir   | Junior Analyst           | ☎ | +202 3300 5721 | ✉ | smounir@egy.primegroup.org    |
| Hind Panicker   | Junior Analyst           | ☎ | +202 3300 5727 | ✉ | hpanicker@egy.primegroup.org  |
| Nihal Zaki      | Technical Analyst        | ☎ | +202 3300 5725 | ✉ | nzaki@egy.primegroup.org      |
| Heba Mounir     | Administrative Assistant | ☎ | +202 3300 5722 | ✉ | hmonir@egy.primegroup.org     |

### PRIME UAE RESEARCH

|                   |                  |   |                 |   |                               |
|-------------------|------------------|---|-----------------|---|-------------------------------|
| Sara Shaheed      | Head of Research | ☎ | +971-4-407 0115 | ✉ | sshaheed@uae.primegroup.org   |
| Usman Rauf        | Senior Analyst   | ☎ | +971-2-6910 756 | ✉ | urauf@uae.primegroup.org      |
| Mostafa Maghraby  | Junior Analyst   | ☎ | +971-4-407 0116 | ✉ | mmaghraby@uae.primegroup.org  |
| Dheeraj Lakhwani  | Junior Analyst   | ☎ | +971-4-407 0117 | ✉ | dlakhwani@uae.primegroup.org  |
| Sleiman Aboulhosn | Junior Analyst   | ☎ | +971-4-407 0118 | ✉ | saboulhosn@uae.primegroup.org |
| Angad Rajpal      | Senior Analyst   | ☎ | +971-4-407 0119 | ✉ | arajpal@uae.primegroup.org    |

#### HEAD OFFICE

#### PRIME SECURITIES S.A.E.

Regulated by CMA license no. 179  
Members of the Cairo Stock Exchange  
2 Wadi El Nil St., Liberty Tower,  
7th-8th Floor, Mohandessin, Giza, Egypt  
Tel: +202 33005700/770/650/649  
Fax: +202 3760 7543

#### PRIME EMIRATES LLC. (UAE)

Members of the ADX and DFM  
Sheikh Zayed 1st Street, Khaldiyyah, Abu Dhabi, UAE, PO Box  
60355  
Tel: +971 2 6910800 Fax: +971 2 6670907  
Email: research@primegroup.org

## Disclaimer

Information included in this report has no regard to specific investment objectives, financial situation, advices or particular needs of the report users. The report is published for information purposes only and is not to be construed as a solicitation or an offer to buy or sell any securities or related financial instruments. Unless specifically stated otherwise, all price information is only considered as indicator.

No express or implied representation or guarantee is provided with respect to completeness, accuracy or reliability of information included in this report.

Past performance is not necessarily an indication of future results. Fluctuation of foreign currency rates of exchange may adversely affect the value, price or income of any products mentioned in this report.

Information included in this report should not be regarded by report users as a substitute for the exercise of their own due diligence and analysis based on own assessment and judgment criteria. Any opinions given are subject to change without notice and may significantly differ or be contrary to opinions expressed by other **Prime** business areas as a result of using different assumptions and criteria. **Prime** Group is under no obligation responsible to update or keep current the information contained herein.

Prime Group, its directors, officers, employees or clients may have or have had interests or long or short positions in the securities and/or currencies referred to herein, and may at any time make purchases and/or sales in them as principal or agent.

Prime Group, its related entities, directors, employees and agents accepts no liability whatsoever for any loss or damage of any kind arising from the use of all or part of these information included in this report. Certain laws and regulations impose liabilities which cannot be disclaimed. This disclaimer shall, in no way, constitute a waiver or limitation of any rights a person may have under such laws and/or regulations.

Furthermore, **Prime Group** or any of the group companies may have or have had a relationship with or may provide or have provided other services, within its objectives to the relevant companies.

Copyright 2008 **Prime Group** all rights reserved. You are hereby notified that distribution and copying of this document is strictly prohibited without the prior approval of **Prime Group**.