

Heren LNG Markets

Published by Heren Energy | www.heren.com



HEREN® Monthly Indices November 2006 (\$/MMBtu)

NBP: 9.047	Zeebrugge: 8.913	TTF: 8.888
------------	------------------	------------

HEREN® Monthly Rolling Indices December 2006 (\$/MMBtu)

NBP: 10.296	Zeebrugge: 10.043	TTF: 10.237
-------------	-------------------	-------------

Nymex Henry Hub Nov (\$/MMBtu)

Henry Hub: 7.497

Nymex Henry Hub Dec (\$/MMBtu)

Henry Hub: 7.955

China pushing market into gas pricing

Chinese gas policy makers are at last paying real attention to the problems of their gas suppliers, delegates at the China Gas Summit told *Heren Energy* this week. Chinese suppliers are faced by state-set caps keeping the selling price artificially low at the same time as exploration and production costs rise. Meanwhile, the gas price on world markets has doubled since the signing of China's first LNG deal, making it hard for the country to buy the long term supply it is interested in even if deals were available.

As long as the domestic price is kept artificially low, the affordability of LNG will remain a barrier to China reaching

high levels of gas imports, numerous speakers told the conference. But according to Tang Yali, v.p. at state run PetroChina's Natural Gas and Pipeline Company, change is just around the corner.

Asked what progress his company was making on introducing market mechanisms to the gas sector, Tang said, predictably, that the matter was in the hands of the National Development and Reform Committee (NDRC), which oversees energy policy. However, he went on: "On December 26th last year the state council sent a circular on

-> continued on page 2

Market comment

Buyer's market in Atlantic **5**

Focus on Caribbean LNG

Dreams, talk and no action **6**

Iran

Total, CNOOC make commitments **7**

Tanker tracker

The last week worldwide **11**

Atlantic: more than a week ago **11**

Pacific: more than a week ago **12**

Far East

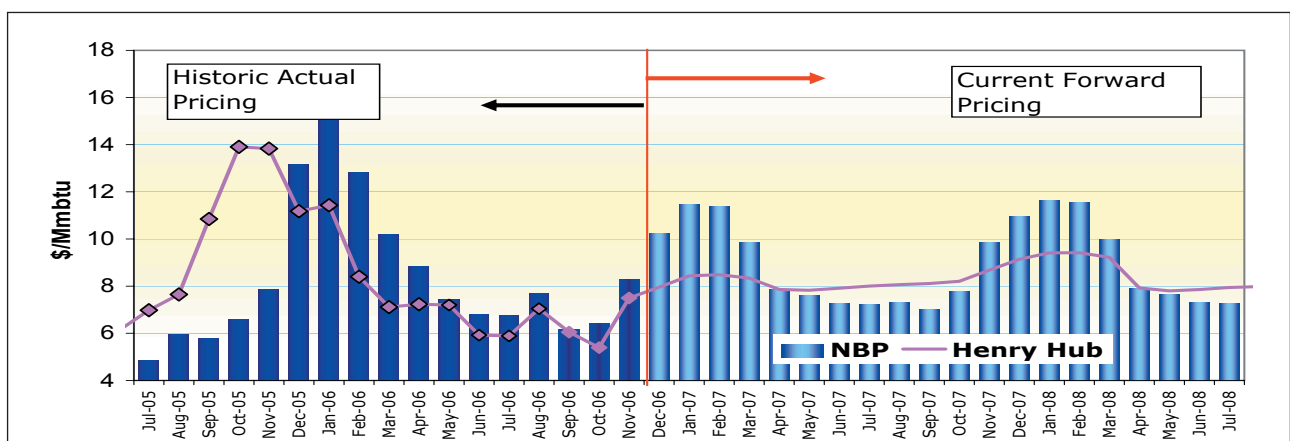
Tokyo Gas frets on Indonesia shortfalls, calls for buyers' cooperation

Tokyo Gas, one of Asia's largest LNG buyers by volume, has said it is still depending on the spot market to make up shortfalls caused by reduced Indonesian supplies. Yutaka Kunigo, general manager of the gas resources department, told *Heren*

Energy on the sidelines of the China Gas Summit in Beijing: "We are concerned about Indonesian deliveries and the effect on the whole Asian market. There is a risk [of supply contracts not being met]. We don't know what will happen."

However, Yutaka said he was confident that the spot market would provide surplus gas. "We are not concerned about volumes; we are concerned about price," he said, but declined to say how much Tokyo -> continued on page 2

LNG arbitrage outlook



China price

-> continued from page 1

introducing a price forming mechanism. We hope this will be imposed in three to five years time.” He said the mechanism would involve a “pegging process between LNG and petroleum”, and added: “If in three to five years time supply-demand relations cannot be harmonised, major measures will be taken.”

Although those measures were not outlined, other delegates claimed there were real signs of a political will to bring some sort of market-related pricing in to China’s gas sector. Azfar Shaukat, director of Mott MacDonald’s Oil and Gas Studies Group, said the political will to do so was “absolutely” there, and discussions on the issue were going on at the very highest levels of the NDRC. “There are two aspects to it – one is not being able to secure gas supply, and the other not being able to pass on the price to customers,” he said. Shaukat reckoned that realistically it would take three or four years for policy to change, but the state “knows what’s going on,” he said, and change is afoot.

PetroChina’s Tang also called for the state to rationalise the LNG financing structure to make it more attractive to investors. He pointed out that expansions of regasification

capacity at the three terminals in China that have sales agreements – Guangdong, Fujian and Shanghai – could undermine plans for other terminals. Few delegates at the conference thought China would have more than five terminals up and running by 2010, and most acknowledged that even that was an optimistic outlook. “We also need to use a price leverage mechanism to encourage public awareness of energy saving measures,” Tang added.

Liu Enxue, deputy general manager at state-run Sinopec, said meeting gas demand through LNG would be a slow process because of high world prices. He also called for domestic pricing reforms, saying that prices should be decided by the market, not the government. A Chinese source at a private energy company based in Hong Kong said the state was deeply challenged by attempting to balance the needs of society and business. But with development being the main priority, gas market reform would happen sooner rather than later; possibly within six months to a year, he reckoned. A representative from the NDRC declined to comment on the issue.

Japan spot

-> continued from page 1

Gas might pay for a cargo in a tight supply scenario.

The risk inherent in depending on new projects for future suppliers was slightly lower for Tokyo Gas than some other Japanese utilities, Yutaka said, because its major contract with Indonesia – Badak IV – expires in 2014 rather than 2009/10, giving it marginally more wriggle room to find other resources. In the meantime, though, little can be depended on, and that scenario gives Japanese buyers a headache. “If sellers provide contracted volumes and new projects come on stream on time there shouldn’t be a problem,” he said, but accepted that neither of those were reliable scenarios. “Timely launch of new LNG projects is desirable”, he added, in a masterpiece of understatement.

In a presentation to the conference, Yutaka called for buyers to work more closely together to counteract the effect of a perceived seller’s market. “Japan, Korea and Taiwan already cooperate closely and we wish to do the same with Chinese and Indian buyers”, he said, adding that their bargaining power would be increased by doing so.

Yutaka told *Heren Energy* he was confident that China and Japan could work together on sourcing supplies and negotiating deals, despite the very different approaches to pricing that each has demonstrated so far. However, he did not mention what impact an attempt at forming some kind of a buyers’ cartel might have on sellers, nor its legal implications.

Less controversially, but possibly equally unrealistically, Yutaka stressed the importance of buyers sharing information and co-ordinating their LNG purchases, exercises that he said would reduce costs and increase supply security for all. “The trend for buyers taking stakes upstream shows a willingness to cooperate,” he said, adding that cooperation on adjustment of delivery schedules and operational flexibility through reassigning cargoes where necessary would help balance supply and demand.

Tokyo Gas buys about 10 million tonnes per annum (mtpa)

of LNG, of which about 2% is met by spot cargoes. “The two percent represents where sellers have been unable to meet their obligations, Yutaka said. That proportion more or less reflects the Japanese LNG sector as a whole – of the 58 mtpa imported in 2005, 97% came in under long term contracts, and about 3%, or 1.2 million tonnes, from the spot market.

Japanese buyers re-sign to NWS

One source of relief to Japan’s supply fears over Indonesia is Australia’s North West Shelf Venture. This week, another of the original eight Japanese companies to sign up to supplies from NWS in the 1980s has agreed to a longer, larger deal.

Japan’s Kansai Electric Power Company Inc has signed a binding heads of agreement supply deal with NWS for an eight-year supply of 0.4 mtpa of LNG starting from April 2009.

The deal increases NWS’ LNG sales to Kansai Electric, Japan’s second largest power generator, to 1 mtpa from 2009. Kansai Electric has been served by NWS since 1989. It is also a near-identical HoA to that signed last month between NWS and Chubu Electric Power Company Inc, which has also been supplied for 17 years from NWS. Chubu signed for a seven-year supply of just under 0.5 mtpa from April 2009, expanding NWS’ sales to Chubu to over 1 mtpa.

In May Chugoku Electric Power Co signed a 12-year supply deal for 1.2-1.4 mtpa (some 22 cargoes a year) from NWS from April 2009, expanding on the 1.11 mtpa deal running from 1985-2009.

The six equal participants in the North West Shelf Venture are: BHP Billiton Petroleum (North West Shelf) Pty Ltd; BP Developments Australia Pty Ltd; Chevron Australia Pty Ltd; Japan Australia LNG (MIMI) Pty Ltd; Shell Development (Australia) Proprietary Limited; and Woodside Energy Ltd (Operator). CNOOC NWS Private Limited is also a member.

News

Gorgon project in balance over appeals against EPA ruling

Chevron, operator of the beleaguered Gorgon LNG project offshore Western Australia, denied this week that the project had again been hit by further delays, this time because of the late submission of an environmental report. But it admitted that the fate of the project now depended on the outcome of the appeals process against the Environmental Protection Authority's ruling that it should be stopped (see *HLM* 9th June 2006).

Peter Glass, vice president of marketing for the 10 million tonne per annum Gorgon project, told *Heren Energy* that a crucial report the Western Australian appeals convenor was overdue to submit to the government was finally handed in on Tuesday this week. The process now depended on whether the minister was in a position to do anything with it, he said.

"The appeals process has resulted in a good discussion being had. New information has come to light and we're hopeful an accommodation can be reached," Glass said. He explained that the new information involved "advances in understanding around the environmental concerns" that have threatened to derail the project.

Gorgon is planned for Barrow Island, a Class A nature reserve where Chevron already runs an oil refinery, despite it also being egg-laying territory to a rare species of turtle. The costs of moving the project to an alternative location would push it out of contention economically due to the hundreds of millions of dollars that have already been invested, sources say, and Chevron has previously ruled out that possibility.

Glass said it was premature to even consider the prospect of the project collapsing under the burden of extra costs. "The process is running its course and we await the outcome", he

said, insisting the company was confident Gorgon would still go ahead.

However, it now seems unlikely that Western Australia's Environment Minister, Mark McGowan, will make his decision on the project before the end of 2006, which is when Chevron and its partners (ExxonMobil and Shell with 25% each) had hoped for a final decision. That would have given the project a glimmer of hope of meeting its delayed delivery target of 2011; a prospect that seems to be receding ever further.

In the meantime the project, on which some 400 people are employed, is reported locally to be costing the partners around A\$1 million {US\$0.76 million} a day. And the longer the delay the more costs on international contractor and supplier markets are rising to keep pace with the boom in LNG project construction, meaning the final spend is likely to be around 50% higher than the US\$10 billion originally envisaged.

Chevron has admitted that some cost escalation has occurred on the project but will not disclose how much. It hopes to sign binding sales agreements with its three Japanese customers - Osaka Gas, Tokyo Gas and Chubu Electric, by the end of this year. Shell also has Japanese customers lined up for its portion while ExxonMobil has yet to assign its share of the output.

The Western Australian State Premier, Alan Carpenter, has vigorously backed the project and said the state government will do everything possible to stop it being halted.

Most analysts reckon the state government will overrule the Environmental Protection Authority's conclusions against the development, as they did in 2003 with the introduction of the Barrow Island Act that granted in-principle approval to Gorgon.

News

GAIL hunts for LNG, says alternatives will be found if need be

India's state-run Gas Authority India Limited (GAIL) will source another seven spot LNG cargoes by March 2007, K.P. Roy, executive director of business development, told *Heren Energy* at the China Gas Summit in Beijing this week.

"We have already started sourcing spot cargoes and bought six already this year, and there will be another seven in the coming four to five months," he said. He admitted that GAIL was in competition for spot LNG with Shell's Hazira terminal, a factor that could make LNG purchases even harder than they already are in a tight market characterised by sellers holding out for higher Atlantic Basin gas prices before shifting surplus cargoes.

Qatar's RasGas is due to start supplying the five million tonne per annum (mtpa) capacity Ratnagiri LNG import terminal (formerly known as Dabhol) with 1.2 mtpa of LNG in March 2007. But the contract is only for two years and the price has not yet been finalised. The RasGas LNG will be received at Petronet LNG's Dahej terminal then piped to the 740 MW Ratnagiri power plant via pipeline because the Ratnagiri LNG terminal is unlikely to be completed until later next year. Apart from that, "we are trying to purchase gas immediately," Roy said, "but we are not getting it from the market".

GAIL has also held talks with Yemen, where 0.2 mtpa of anticipated output remains unsigned, and Algeria, which has

uncontracted supply of around 3.2 mtpa since the expiry of the Distrigas contract in September. But Roy would not be drawn on which was most likely to bear fruit.

Roy confirmed that Algeria was a potential long term supplier and said GAIL was likely to announce fairly soon that it had found a permanent source of supply from next year. "We are hungry at the moment for LNG. Our own sources are not enough to meet our small demand, and demand is growing while old fields are declining." He said that although there was exploration for gas going on at over 100 sites in India, even if those discoveries were successful LNG would still be a useful part of the supply mix because of the ongoing and steep increase in Indian energy demand.

But LNG supplies are not the be all and end all for India, Roy said. If reliable long term gas supplies could not be found, he said India would make up the energy deficit from other sources. "We are also investing in coal, nuclear and hydro" he said, "If we can get LNG then gas imports will be part of the mix. If not then they won't," he said.

But India's nuclear power ambitions may be curtailed if the US Senate votes down - or even does not vote - on a bill supporting US financial and technical input into India's nuclear program. The bill has taken 16 months to churn through a "friendly" Republican Congress, and the bill has just one week to get Democrat approval.

News

Tanker to be used for storage in race to fuel northern Chile

The first LNG into Chile will not be coming via the Quintero Bay terminal backed by power producers Enap and LNG major BG Group, but into the north of the country, through Mejillones Bay.

The demand for gas-fired electricity in the north has spurred Suez Energy International's Chilean subsidiary Suez Energy Andino and Chilean energy company GasAtacama to sign a Memorandum of Understanding to develop a \$300-350 million LNG regasification facility for Mejillones, Suez International announced this week.

The need for speed means a has led to a two-fold strategy with a "fast-track" first-phase of building only a offloading dock and onshore regasification facility but using a LNG carrier as an offshore floating storage tank, with LNG offloaded "as and when" it is required by gas-fired power stations, Suez said. This way LNG can be piped in by the end of 2008, according to Suez, albeit with the added costs of taking a seaworthy LNG tanker out of commission for up to two years . Spain's use of tankers as storage last winter was an expensive exercise obligated by the country's gas storage requirements and was not a commercial operation per se. Whether a particular tanker has been chosen yet for Mejillones was not disclosed but the tanker would come from the Suez fleet, the spokesperson told *Heren Energy*.

An onshore storage tank is part of the second phase, to

be operational by the end of 2010. Both phases will split the total costs, according to Suez, notwithstanding the opportunity cost presented by the tanker. A study team has selected a site adjacent to Puerto Angamos in the Mejillones Bay and Tractebel Engineering as the principal engineering company will conduct the environmental impact assessment

Suez told *Heren Energy* that a "flexible" supply from existing sources with the commercial operation date expected by the end-of 2008-early 2009 although the full machinations of LNG supply post the Suez-Gaz de France merger are not clear.

A spokesperson for Suez said the Mejillones project was not at all connected or precipitated by progress at the \$400 million, 2.5 mtpa terminal being built at Quintero Bay, supported by a group led by Enap and including Endesa Chile. In February 2006, BG Group signed a Letter of Agreement to supply the terminal and construction officially began in May. Chile's northern electricity grid is not connected to the central grid that Quintero will fuel.

Suez called Mejillones an "independent project", although one of the backers, Endesa, also has a stake in Quintero and is a shareholder in GasAtacama, as is CMS Energy. Endesa's CCGT at Taltal is at the far north of the Central Interconnected System and is supplied by a GasAtacama pipeline running from Mejillones.

Bunkers – spot delivered prices (\$/tonne)										
	IFO 380			IFO 180			MDO			
	Nov 10	Nov 03	%Change	Nov 10	Nov 03	%Change	Nov 10	Nov 03	%Change	
Singapore	279.50	↑ 277.00	0.90	287.50	↑ 287.00	0.17	518.00	↑ 505.00	2.57	
Rotterdam	271.00	↑ 260.00	4.23	291.00	↑ 279.00	4.30	481.00	↑ 465.50	3.33	
Fujairah	280.00	• 280.00	0.00	290.00	• 290.00	0.00	615.00	• 615.00	0.00	
Houston (ex-wharf)	273.50	↑ 260.50	4.99	285.00	↑ 275.50	3.45	574.50	• 574.50	0.00	

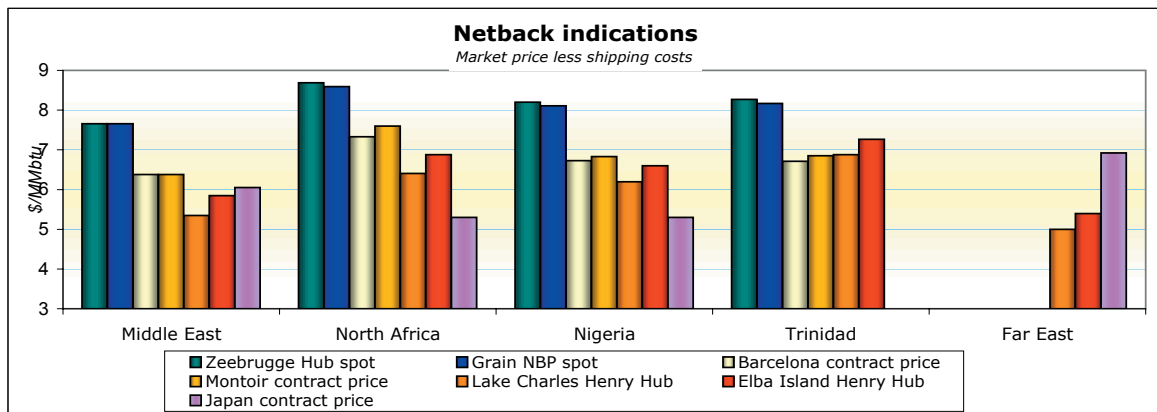
Netback indications

Shipping costs and market prices

Shipping cost at \$75,000 per day
 Middle East
 North Africa
 Nigeria
 Far East
 Trinidad
 \$/MMBtu

	Zeebrugge	Grain	Barcelona	Montoir	Lake Charles	Elba Island	Japan
Middle East	1.39	1.39	1.10	1.22	2.00	1.80	1.15
North Africa	0.36	0.36	0.15	0.30	0.94	0.77	1.90
Nigeria	0.85	0.84	0.75	0.77	1.15	1.05	1.90
Far East					2.35	2.25	0.28
Trinidad	0.78	0.78	0.77	0.75	0.47	0.38	

Market prices: Grain: Heren NBP: November Index 48.254p/th (\$9.047/MMBtu); Zeebrugge Heren November Index 47.539p/th (\$8.913/MMBtu); Henry Hub November settlement \$7.497/MMBtu; Heren border prices: Barcelona CIF 31st October \$7.64/MMBtu and Montoir CIF \$7.6/MMBtu. Japan Average August Import Price \$7.2/MMBtu



Market Comment

Atlantic Basin still a buyer's market, cold can't turn sentiment

Some slightly cooler weather led to another week of unseasonably early stock withdrawals in the US but there is no sign of a price rebound, either in the US or across the Atlantic in Europe. There have been lower prices in much of Europe, occasioning minor stock withdrawals, but not enough to change the bearish picture for the rest of November, or the rest of the winter come to that.

NBP prompt up on North Sea glitches

The NBP prompt market found some support from unplanned outages in the North Sea. Day-ahead rose from a close of 40.375 p/th (\$7.69/MMBtu) last Friday, to 42.55 p/th (\$8.1/MMBtu) this Friday. This was above the average Henry Hub spot price for the last week (Wednesday to Wednesday) of \$7.37/MMBtu.

None of the outages were thought to be long term however, and the rise in the prompt price only served to slow down the declining value of the rest of this winter, rather than turn sentiment around. December '06 closed at \$10.24/MMBtu last Friday and was down slightly to \$10.21/MMBtu on Thursday's close. Q1 '07 was also down week-on-week, but only shed half a percent in value, to close at \$10.87/MMBtu.

Prices on continental Europe's spot markets have not been far away from the NBP this week and there continue to be minimal flows through the Interconnector pipeline. When the UK entered a cold snap on 1st November the pipeline switched to UK imports, but only for four days. The pipeline has been in UK export mode (forwards flow), since 5th November, partly helped by consistently high arrivals in the UK of Norwegian gas through the Langeled pipeline.

The Interconnector remained in UK exports on Wednesday and Thursday, despite Zeebrugge actually being slightly higher priced than the NBP, resulting in suspicions that games were being played with nominations on the pipeline to support UK prices.

LNG cargoes continue to arrive on schedule at the UK's Isle of Grain terminal, hardly a surprise given they were arriving in the negative price scenario in October. The latest arrival was of an Egyptian cargo belonging to BP on 9th November, aboard the 145,700 m³ *Granosa*. The *Granosa* was chartered from Shell to BG with BP-approval. The next delivery is scheduled for the 15th November and is expected to be a Sonatrach cargo on board the *Berge Arzew*. The *Arctic Princess* has also loaded in Egypt and is destined for Isle of Grain, probably for BP's 22nd November slot. After its UK visit, the ship is expected to reload in Egypt and deliver Statoil's commissioning cargo into Snøhvit in December.

The UK is expected to have a second LNG terminal in operation by January 2007. Excelebrate said at the end of October that its Teesside terminal was on track to take a commissioning cargo in December and to be ready for commercial operations in January. The company currently has six cargoes on the water, one of which is for delivery into the Far East.

Spanish demand revised down

The Spanish situation is still long, with network operator Enagas revising its demand predictions for November down by 89.9 GWh since the start of the month. Suppliers are still

having difficulty managing their LNG deliveries given low offtake. At the Barcelona terminal the actual stock levels as of 7th November were 63 GWh than Enagas had predicted. Across all storage facilities they were only 4 GWh higher than predicted. Companies are still reporting cargoes waiting outside ports in order to avoid penalties for keeping stocks too long at the terminals.

Enagas said it would reject LNG shippers' monthly capacity requests if it estimated that stock levels would fall below three days of booked regasification capacity. This gives shippers a rather tight window of three to eight days of booked regasification capacity to move gas through the system. Tricky in a low demand scenario.

Hopes still resting on Far East demand but no scramble for cargoes yet

Traders said there had been no noticeable pick up in demand from the Far East in the last week for December delivery. Given the high stock situation in Europe at the moment, December looks like a buyers' market, with sellers unlikely to gain much profit margin over the NBP, particularly from Atlantic basin diversions giving the high cost of shipping. There have been reports of some spot deliveries into the East but no desperation yet, as stock levels are still said to be high.

Cargoes have been trickling steadily into India's Dahej terminal, carrying Qatari and Egyptian gas, but Hazira is quiet again, with only one delivery known to be scheduled for November.

America unattractive; Mexico provides spot home

Temperatures below seasonal normal across many US states led to higher heating load and the second week of stock withdrawals. The IEA reported an implied net withdrawal of 7 billion cubic feet (bcf) for the week, as opposed to the 5-year average net injection of 23 bcf and last year's net injection of 56 bcf for the same week.

But as one US source put it: "the only cargoes arriving are the ones that have to." Cove Point remains empty for the moment, with Statoil continuing to fulfil its Snøhvit contract obligations with pipeline gas.

There has been movement at Altamira, Mexico's new terminal however, with a complicated chain of deals leading to a spot cargo from Trinidad and Tobago being delivered on the weekend of 4th-5th November aboard the British Innovator. Total confirmed that it had bought the cargo from Spain's Union Fenosa, while Russia's Gazprom Marketing and Trading confirmed it had bought the same cargo from BP and sold it to Union Fenosa. Neither company would give pricing details. Shell owns 75% of the capacity rights at Altamira and Total owns 25%.

Gazprom has already been involved in two deliveries the US Cove Point terminal as part of swap deals and sold a cargo into the Japanese market to Chubu Electric this summer.

Focus on Caribbean LNG

Projects making little headway in face of rudderless leaders

Construction of Jamaica's first LNG terminal was supposed to have been completed this year, but the front-end engineering design work for the 1.15 million tonne per annum (mtpa) project has not even been completed. With none of the project's prospective financing or supply partners secured since plans to get into LNG into Jamaica were rolled out in 2002, the three-year construction period for the US\$300 million project makes commissioning more likely to be 2010 at the earliest.

Hence this week the country's foreign minister Anthony Hylton, who also has responsibility for the LNG project said a "medium-term" solution is being sought, with a tanker with onboard regasification to be leased and used as an offshore terminal and being pushed into operation sometime in 2009. "This is not a cancellation of the land-based plan land-based project," with the FEED study nearing completion, Hylton said.

There is progress of sorts on this makeshift plan. Stephen Wedderburn, LNG project manager of the state-owned Petroleum Corporation of Jamaica, told *Heren Energy* a "particular candidate", a 125,000 m³ LNG tanker, is under consideration for leasing, with the initial throughput set at 1.15 mtpa but with capacity to expand this to 2.7 mtpa. "There is potential demand in excess of that," Wedderburn said.

But the major sticking point in all this time has been the supply price of the LNG, which Jamaica has sought from Trinidad & Tobago. Jamaica has long argued that the LNG should be sold under the rules of the Caribbean Community and Common Market (Caricom), i.e. T&T's price should be based on gas prices in T&T plus liquefaction, transport and regas costs as would befit Caribbean countries. Jamaica's insistence on this led to relations being frayed enough that Jamaica threatened possible trade restrictions in mid-2005. T&T stood its ground and said Jamaica would not receive a "special price" for LNG.

A complication is T&T uses three main gas price measures: relatively cheap gas sold to power producers; lower-priced gas sold to methanol and ammonia producers, lower due to lower margins on methanol and ammonia output compared with LNG and because a sliding price scale adjusts gas prices in line with those commodities' market prices; and the Henry Hub-linked LNG netback price. T&T will not sell gas for anything less than the best return on its investment and risk outlay, and the best market price it can get.

As it is, Jamaica is "working on the finalization" of the contract price with T&T, Wedderburn told *Heren Energy* but added the talks are "still ongoing" – as they have been since 2003. As such PCJ has been talking with some of the private companies operating in T&T, Wedderburn said, but would not say which ones. Atlantic LNG would not comment on any talks with Petroleum Corp or the Jamaican government.

But the issue is now far more about getting any supply at all. "The majority of the LNG is held in the privately controlled, only a small proportion is under direct government control," Wedderburn said, with the output originally considered for Jamaica from Train 5 – a.k.a. Train X. "That's what they were targeting!" Wedderburn

said. It appears there is little scope for T&T to provide supply from 2009, and Wedderburn put the contract period to private suppliers being approached to fill the gap as "five years".

Qatar is the most-mentioned possible other source for LNG – Jamaica established diplomatic relations with Qatar in 2003 largely to pursue this possibility, although at the time it was more to add leverage to talks with T&T. "We've made approaches on a government-to-government basis and haven't pursued these recently, but may do in the next few months," Wedderburn said, hinting PCJ's success so far.

With no commercial hydrocarbon reserves, Jamaica imports over 90% of its energy, in 2004 importing 26.1 million barrels of crude oil and petroleum at a cost of \$943.3 million, with 48% being burned by the bauxite/alumina industries.

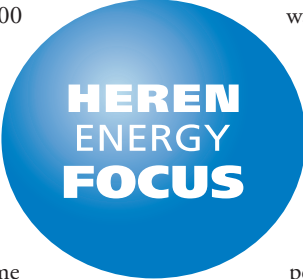
LNG is central to Jamaica's plan to convert the island's power generation from oil to gas by 2009, while also expanding power capacity and economic growth. In particular Jamaica is seeking to encourage US-based aluminium producer Alcoa to invest US\$1.2 billion to more than double its 1.3 million tonnes a year alumina refinery in Clarendon, a 50-50 joint-venture with the Jamaican Government. Without the securing of LNG supply, the rate of conversion, let alone the increase in power capacity, will grind to a halt, as will much foreign investment. The minister who set down this oil-to-gas conversion program in 2002 was Anthony Hylton – making him appropriate if not the best candidate to be in charge of getting LNG into Jamaica now.

A similar sense of inertia is dogging projects in the Bahamas. The Grand Bahama Port Authority remains fully supportive of a LNG project for Grand Bahama, according to Port Chairman Hannes Babak, with AES Corp's Ocean Cay project near Bimini closest to approval. Bama, over which the Bahamas has been negotiating a heads of agreement with AES and lay a pipeline to Florida. But the project has been on the table for over four years, as has the one proposed by Suez Energy International.

Suez' 5.84 mtpa project, originally destined for Freeport to pipe gas to Florida, was shelved back in February, after then-c.e.o. William Utt expressed great frustration in waiting for the Bahamas to decide, frustration that pushed Suez into gunning instead for a terminal offshore Florida.

But the Freeport plan is still on, Suez told *HLM*. Suez LNG has resumed talks with the government and talk of "movements" – albeit, predictably, nothing as tangible as firm commitments let alone action. Minister Leslie Miller, who has responsibility for LNG, said recently, "There are some ongoing discussions with [Suez], but [Suez] has not yet been approved by the BEST Commission. AES is the only company that has satisfied all of the requirements [set] by the Government." A nice sentiment if not particularly meaningful.

Already lost is El Paso Corp's 1 bcf Bahamas-to-Florida Seafarer natural gas pipeline, due to "unforeseen problems with the LNG facilities in the Bahamas", the Texas-based company said as it withdrew from the \$226 million project amid continuing uncertainty. It seems that getting liquefied natural gas out of the Caribbean is far easier than getting regasified LNG there.



HEREN
ENERGY
FOCUS

News: Iran

Total and CNOOC promise Iran Pars LNG decision next year

Ronan Huitric, v.p. of LNG Marketing at Total's Gas & Power division, insisted this week that Total would sign a final investment decision on the Pars LNG project in Iran by March 2007, despite the great scepticism of many in the LNG sector who can't imagine any LNG coming from the country much before 2025.

Perhaps giving a clue as to how Total could succeed in Iran, against the odds, Huitric told the audience at the China Gas Summit in Beijing that buyers and sellers of LNG needed to be more flexible. "If you wait for the buyer to be perfectly happy and the supplier to be perfectly happy you will never get a deal," he told delegates, raising the interesting question of just how much Total is spending in order to build its multi faceted, worldwide LNG position.

As was evident in Huitric's presentation to the conference, Total increasingly prides itself on the diversity of its liquefaction positions. It has not revealed how much it paid when it recently bought a 24% stake in the Australian Ichthys project owned by Japan's Inpex, and also paid an undisclosed sum to get into the QatarGas II project supplying Milford Haven in the UK, where it is partnered by Qatar Petroleum and ExxonMobil.

A contractor from a western company at the conference who recently spent two years working in Iran reckoned Total's confidence in the country was deeply misplaced. "You can't get anything done there at the moment, the bureaucracy is a

nightmare", he said, adding that the international oil companies currently working on LNG projects there were haemorrhaging money on them.

However, a source from Malaysia's state energy company Petronas told *Heren Energy* that Iran's capacity to develop LNG should not be underestimated, because the company has been working hard to build its own technical expertise in the LNG sector. "They will do it," he claimed. "They should not be underestimated."

China's state run China National Offshore Oil Corp (CNOOC) clearly agrees. Liu Liming, executive vice president at CNOOC Gas & Power, confirmed his company was holding talks with Iran with a view to joining the Pars LNG project. "CNOOC only sets realistic goals, because we are a pragmatic company," he told reporters.

Liu's comments at the China Gas Summit came a few days after Iran's oil Minister, Kazem Vaziri Hamaneh, said the National Iranian Oil Company (NIOC) was hoping to finalize a 25-year LNG supply deal with CNOOC by March 2007. Liu also said CNOOC had held preliminary talks with Qatar from LNG imports, despite Qatar's insistence that its projects are sold out. CNOOC was hoping to import 25 million tonnes per annum of LNG by 2010, Liu said, to meet increasing demand for gas fired power generation. The figure includes supply already signed up for from Australia, Indonesia and Malaysia.

LNGL's extraordinary objectives continue to gain traction

LNG International Qeshm Gas Limited (LNGIQ) and its partner Civil Pension Fund Investment Fund (CPFIC) of Iran have signed a Co-operation Agreement with the National Iranian Oil Company (NIOC) to supply up to 530 mmcf/d to its planned 3.45 million tonne per annum (mtpa) LNG plant on Qeshm Island, Iran. The agreement is pending approval from the NIOC Board, LNGIQ's parent company Liquefied Natural Gas Ltd (LNGL) said in a statement this week.

LNGL agreed in Q2 2006 to transfer 35% of its holding in LNGIQ to Civil Pension Fund.

The first phase of Qeshm LNG has a planned capacity of 1.15 mtpa with commissioning targeted for Q1 2010, should financing for the project be finalized by Q4 2007, LNGL m.d. Maurice Brand said in the statement.

NIOC has identified several gasfields close to the proposed Qeshm LNG Plant site and although a gas sale agreement has not been finalized, NIOC has granted LNGIQ permission to export LNG from Qeshm to destination(s) yet to be co-ordinated with the National Iranian Gas Export Company, although India and Mombassa, Kenya have already been cited as prospective markets.

LNGL said the Qeshm LNG Plant will benefit significantly from the work undertaken by LNGL over the past 18 months in relation to its proposed two-train, 1.8 mtpa Padang LNG Project, in Central Sulawesi, Indonesia, including front end engineering

design work, equipment, costing and development scheduling. The similarities in train sizes, construction techniques and project scheduling between the projects should allow for 24-month construction periods for both.

LNGL received final environmental approval for Padang in mid-October and expects a final decision regarding gas supply to the project this month from suppliers Pertamina and Medco, with feedstock hoped to come from the Senoro-Toili and Matindock gasfields which LNGL says can supply Padang for at least 19 years, serving Indonesia, the Philippines, Vietnam and Thailand.

Considering LNGL has yet to build a liquefaction project – indeed the LNG terminal discussed for Mangalore, India during Q2 is to be a "template" for LNGL's other Indian and Kenyan projects – the company's ambitions are as grand as its targeted markets are eclectic, and its vigour in recent months.

With backing from its 19.8% stakeholder Golar LNG, during Q2 2006 LNGL signed a strategic alliance agreement LNG Impel for the latter to identify suitable gas supplies LNG project opportunities in progress (LNG Impel recently signed a \$1 billion agreement with the Dubai Government to develop a major storage and loading terminal there). LNGL also signed a HoA to supply 1.8 mtpa for Canada's US\$500 million Kitimat LNG terminal in British Columbia, due on-stream in Q4 2009, with LNG to come from numerous gas prospects being sought – i.e. yet to be found – in the expanses of Australasia.

News

Planning application submitted for LNG terminal on Anglesey

Canatxx LNG has submitted a planning application and an Environmental Impact Assessment for a new LNG import terminal in the United Kingdom. The terminal, of unspecified size, would be located on the site of a former bromide plant at Almwich, Anglesey in Wales.

According to the company, a week long public consultation was held in July and was attended by over 300 visitors and officials. The planning application was filed on 5th October.

"We felt that it was important to gather information from the public to gauge support and understand what concerns people may have and this did change our planning application significantly," Bruce Gibson, Canatxx Site Manager, told *Heren Energy*. However, he declined to give any information about the scale of the proposal, what it would cost (sources say £800 million [\$1.52 billion]), where supply would come from or how the company might cope with a much-forecasted over supply scenario in the UK from 2008.

"LNG will be offloaded from a fixed platform located 3

km off shore," Gibson said. "The LNG will be piped onshore to the regasification facility. The LNG is warmed using sea water flowing over Open Rack Vaporisers. Other gasification plants burn gas to heat LNG. This has environmental and cost implications which do not arise with sea water warming."

Should the proposal win planning approvals and construction goes ahead, the gas would be piped through a 70-mile long new sub-sea pipeline to Knott End on Seain Lancashire and then connect into the National Gas Transmission System (NTS) near Nateby, north of Preston, Lancashire.

Anglesey Council has 16 weeks to consider the application, meaning a decision is due around the end of March 2007. A copy of the application will be available through Anglesey County Council Planning Department and at Amlwch Library. "We would like to keep everyone informed of the planning applications progress and the estimated project schedule," said Gibson.

News

Beacon Port is the latest Gulf Coast terminal to bite the dust

Energy major ConocoPhillips has withdrawn its application to build the 1.5 billion cubic feet/day (bcfd) Beacon Port Clean Energy LNG terminal project on the US Gulf Coast.

Only last month ConocoPhillips' spokesman Bill Tanner told *Heren Energy* that the permitting process for the Beacon Port terminal was still "active" (see *HLM* 20th October 2006). But this week the president of Beacon Port LLC, S.L. Cornelius, wrote to the Federal Energy Regulatory Commission to say that ConocoPhillips' regasification capacity at the 1.5 bcf Texas Gulf Coast Freeport terminal, also on the Coast, had nullified any "business need" for proceeding with Beacon Port. The news follows this week's release of the final environmental impact statement for Beacon Port.

ConocoPhillips has a 50% stake in the Freeport terminal, to start up in 2008, in which Cheniere also has a stake, but the terminal has no fixed supply yet. ConocoPhillips' decision on Beacon Port is the second terminal that the company has let by the wayside this year, with the fate of ConocoPhillips' 1 bcf Compass Port terminal off Alabama being still in doubt. ConocoPhillips withdrew the project designs in May in the face of a probable state governor veto over its use of open-loop regasification technology and the last *Heren Energy* was told was that the company is still "reassessing" the designs.

As it is the news fits perfectly the long-foreseen and recently heavily evidenced trend in US terminal development, encapsulated in a report out from the Center of Energy Economics at the University of Texas, which concludes: "The number of proposed terminals far exceeds forecasts of the number of necessary terminals that could meet LNG imports," predicting: "Some companies are exploring multiple sites to supply the same market and will likely, depending on progress in the licencing process and downstream considerations, drop, divest or abandon projects."

US-based LNG terminal operator and gas transporter Sempra Energy has put its plans to build the 3 bcf Port Arthur LNG terminal in Texas on hold and instead expand its \$750 million 1.5 bcf Cameron LNG terminal project 30 miles away in Louisiana (see *HLM* 8th September 2006). BP has shelved its 1.2 bcf Bay Crossing terminal project in Texas, ExxonMobil is selling its 1.1 bcf Vista del Sol site in Texas, and McMoRan Exploration having to resubmit its 1 bcf offshore Louisiana Main Pass Energy Hub designs (see *HLM* 25th August 2006).

Looking 24 years ahead ...

But in the longer-term North America will need LNG. By 2030, the continent will have gone from an approximate balance in indigenous supply and demand to importing 16% of its gas requirements, mostly as LNG, according to the IEA's *World Energy Outlook 2006* published this week.

Despite the building of a 40-50 billion cubic metre/year (Gm^3/yr) pipeline from Alaska's North Slope for 2015, indigenous gas production is expected to level off from that same year, leading to higher LNG imports. Currently there are five regas terminals being built, adding 65 Gm^3/yr in capacity to the 60 Gm^3/yr already in use, and 12 more have been approved (taking the import capacity to 200 Gm^3/yr).

Despite the number of wells drilled reaching 26,000 in 2006, 28% more than 2004 and two-thirds more than for 2000, 2005's gas output was the lowest since 1992, reflecting the maturity of conventional gas basins. LNG has made good most of the shortfall. Still, the ratio to gas to oil prices is at its lowest since early 2000. High prices in the 1990s choked off demand, especially from the chemical and power sectors, as has warmer weather in the 2005-2006 winter, while higher prices have also not spurred indigenous output as might have been expected.

US prices & imports

LNG imports into the US in September showed the fourth consecutive fall in LNG volumes since May, data from the US Department of Energy's Office of Fossil Energy showed this week.

Such a decline has been preceded only in 2004, from July to November inclusive. The rate of decline this time was not as steep as that for 2004, but is more marked by the starting month, May, having the second largest LNG volume intake in US history, before declining to September's 80000000 Sum of Volume (Mcf)

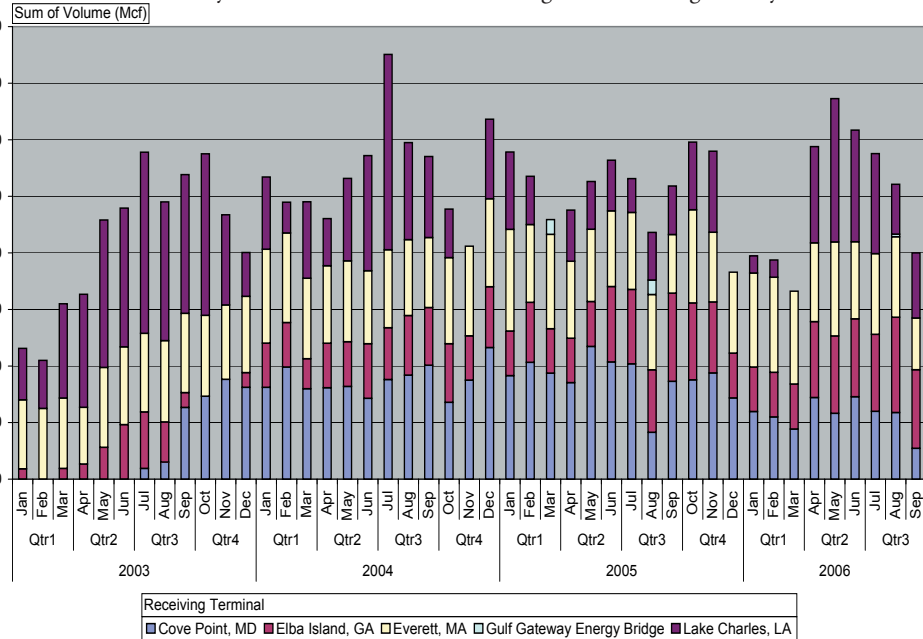
The monthly import volume total of 40.003 billion cubic feet (bcf) is a 22.8% fall on the 51.824 bcf imported in September 2005 and 29.86% down on the 57.038 bcf imported in September 2004. Cove Point has also seen its slackest month with just 5.449 bcf imported. The total US import volume of 149.677 bcf for Q3 2006 is 0.72% more than for Q3 2005 (148.595 bcf) but a 21.89% fall on Q3 2004's 191.632 bcf.

Under long-term contracts, 25.772 bcf came in on ten cargoes, six being imported by BG LNG and four by Distrigas Corp. Of the ten, eight were from T&T and two were sourced from Nigeria, all into Everett, Elba Island and Lake Charles, in a landed price range of \$5.49-6.50/MMBtu.

The total volume is a 41.89% increase on the 18.127 bcf of LNG brought in the previous September (constituting nine cargoes from T&T), and priced within a cheaper, narrower range than the \$5.71-10.65/MMBtu range seen then. This year's September

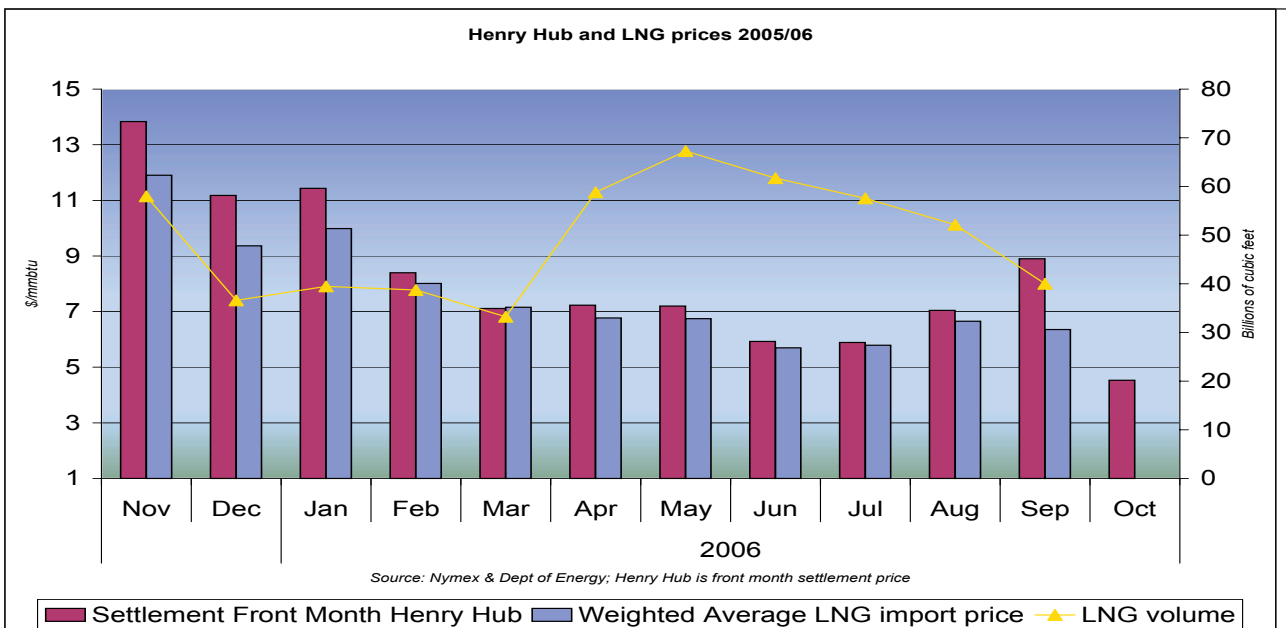
mirrors that of September 2004, when 23.868 bcf came in on 11 cargoes from T&T, within a \$4.08-5.84/MMBtu range.

The real drop off was in short-term imports which totalled 14.231 bcf in volume from five cargoes, three being BG LNG cargoes from Egypt. The total volume is a 57.76% fall on the 33.696 bcf brought in on 16 cargoes in September 2005 and 57.61% down on the 33.575 bcf brought in on 12 cargoes the year before.



There was one spot cargo in September 2006 – a Shell-imported cargo of 3.003 bcf from T&T, bought from Gazprom and imported into Cove Point on 18th September with a landed price of \$6.76/MMBtu, which was also the most expensively priced cargo of the month. The cheapest was a 2.871 bcf BG cargo into Lake Charles, with a landed price of \$6.25/MMBtu.

The month's landed price range was from \$5.23/MMBtu (for a split authorisation cargo) to \$13.59/MMBtu. Most of the cargoes for September 2005 had landed prices little over \$10/MMBtu. In 2004 the range was \$4.26-5.17/MMBtu.



NEWS in brief

More gas for Total in Indonesia

Total posted a 0.5% year-on-year fall in its Q3 2005 net income of EUR 3.1 billion (\$3.98 billion), citing falling oil prices on falling demand, lower refining margins and increased petroleum taxes in the UK.

However Total's adjusted net income rose by 4% compared with Q2 2006 and overall sales were up 19% to EUR 117.37 million during the first nine months in 2006 compared with 2005.

Total's average gas price from January-September 2006 was up 31% year-on-year to \$5.84/MMBtu, benefiting from the lag effect on long-term contracts, essentially in Europe, Total said. But the average gas price during Q3 of \$5.59/MMBtu was down on the Q2 average of \$5.75/MMBtu as spot prices fell. Q3 gas production fell by 2% year-on-year to 4,411 million cubic feet per day following production shut-downs in Nigeria due to security issues.

As announced in August, the group confirmed its entry in two LNG projects in Brass LNG in Nigeria as well as in Ichthys LNG in Australia. Total also expects to boost significantly its production in 2007, with the start-up of the giant Dalia field in Angola this month and will make up 4% of the company's global production.

The company also announced a new gas discovery between the Tunu and Peciko fields in the offshore Mahakam block in Indonesia. Pending more drilling and a production test to confirm the potential of the find, the fields could come on-stream by 2009.

Over 2.6 billion cubic feet/day was produced from the Mahakam block, which Total operates on behalf of the 50-50 joint-venture with Japan's Inpex, in first-half 2006 and this level of output is expected to be maintained through the early years of the next decade. The block supplies 80% of the feed-stock for the Bontang liquefaction plants. (HLM)

Livorno on course

Norwegian shippers Golar LNG announced this week that its subsidiary, Golar Offshore Toscana Limited had

bought a 20% stake from OLT Energy Toscana SpA in OLT Offshore LNG Toscana Spa (OLTO), leaving the stakeholdings in OLTO as follows: Endesa Europa - 25.5%; IRIDE Mercato - 22.73%; Azienda Servizi Ambientali - 2.77%; OLT Energy Toscana - 29% and Golar Offshore Toscana Limited - 20%.

The stake cements Golar's participation in the project for which Golar was brought in for its expertise in floating terminals and to ship the LNG coming into the terminal, with a view to selling the *Golar Frost* tanker to OLTO, a Golar spokesman told *Heren Energy*. The equity stake has also secured some capacity at the terminal, which has a nameplate capacity of 3.75 billion cubic metres/year, but the spokesman would not disclose either the size of the capacity nor the value of the equity purchase.

A statement from OLT Energy said construction works should start by the end of 2006, however the Golar spokesman told *Heren Energy* the final investment decision should be due before the end of 2006 but was probably to come in Q1 2007. Nonetheless all the permits are in place to proceed, he said. Talks with suppliers are ongoing, but the terminal is scheduled to begin operations "some time" in 2008. (HLM)

India scours for LNG

India's state-owned power company NTPC Ltd has received a draft memorandum of understanding from Nigeria's government concerning the supply of 3 million tonnes per annum of LNG for its domestic gas-based power projects.

The proposed allocation of onshore gas blocks to NTPC however requires the company to build a liquefaction plant, as well as a 500 MW coal-fired power plant and a 700 MW CCGT, and restore the Egbin power station, closed since a boiler explosion. In return Nigeria has also agreed in theory for NTPC to participate in the privatisation and commercialisation of Nigeria's power stations, fed in part by whatever gas NTPC gets out of the ground.

NTPC may partner with ONGC to develop these blocks and build a LNG plant, as ONGC already owns along with Mittal oil and gas properties in Nigeria and were recently awarded two more exploration blocks, NTPC said.

Meanwhile, PSU Oil and Natural Gas (ONGC) has signed a memorandum of understanding (MoU) with Hinduja group's Ashok Leyland Projects Services (ALPS) to scout for LNG opportunities and E&P activities through joint ventures, in Iran, Qatar, Kuwait, Libya, Oman, Saudi Arabia and UAE. Both ONGC and ALPS would hold less than 50% stakes in the venture with the balance to be held by banks and financial institutions.

ONGC may be able to leverage the influence of Hinduja in Gulf region, particularly Iran and Qatar, to source LNG. It has also roped in Mittal Steel to use its influence in African and Central Asian countries. (NTPC, HLM)

Qatar orders another LNG ship

Nakilat, also known as the Qatar Gas Transport Company Ltd, has executed a shipbuilding contract for another QMax LNG Carrier. The deal brings to 17 the number of LNG Carriers that Nakilat has ordered so far this year. The QMax vessels, up to 265,000 m³ in size and costing around \$300 million, are the largest LNG carriers ever. In addition to these 17 LNG carriers of which QGTC will own 100%, the company owns 30-60% in another 28 LNG carriers delivered or on order to service Qatar LNG projects. (HLM)

Endesa to get Qatari LNG

Spanish power major Endesa is set to bring Qatari LNG into the new terminal in northern Spain, the group said on Friday. Endesa has signed a long-term supply contract with RasGas for 1.0 Gm³/year to be fed into the new terminal Reganosa, Ferrol, north Spain. Endesa and power producer Union Fenosa are the main shareholders in the terminal, set to start commercial operations in March this year. The first shipment is expected in February 2007. (HLM)

LNGenius

"Whether it build ten terminals or three, and needs all or none, China's going to do something to this market," anon.

robin.tudge@heren.com

Worldwide tanker movements in the last week

Vessel	Exporter	Destination	Latest	Previous
Europe				
LNG Finima		Bonny	Santa Cruz de Te	02/11 Santa Cruz de Te
Descartes	Gaz de France	Arzew	Fos	02/11 Arzew
Tellier	Gaz de France	Fos	Fos	06/11 Arzew
Arctic Princess		Isle of Grain	Gibraltar	02/11 Port Said
Castillo de Villalbi	Gas Natural	Lake Charles	Gibraltar	02/11 Port Said
Seri Amanah		Bilbao	Gibraltar	03/11 Gibraltar
Granosa		Isle of Grain	Gibraltar	03/11 Gibraltar
Seri Alam	Total	Egypt	Gibraltar	04/11 Casablanca
Berge Arzew		Arzew	Gibraltar	06/11 Cape Finisterre
Methania	Tractebel/Distrigas	Arzew	Gibraltar	06/11 Cape Finisterre
Larbi Ben M'Hidi	BOTAS	Arzew	Gibraltar	06/11 Cape Finisterre
Maran Gas Ascle	Ras Gas II	Egypt	Gibraltar	06/11 Cape Finisterre
LNG Lenoi	ENI	La Spezia	La Spezia	05/11 Fos
Satelah LNG		Qalhat Term.	Barcelona	02/11 Port Said
LNG River Orashi		Ferrol	Bilbao	03/11 Cape Finisterre
Ramdane Abane	Gaz de France	Montoir	Cape Finisterre	02/11 Gibraltar
Eduard LD		Montoir	Cape Finisterre	04/11 Gibraltar
Mostefa Ben Bou	BOTAS	Arzew	Dardanelles	05/11 Eregli(Sea of Mar
LNG Oyo		Bonny	Dardanelles	06/11 Dardanelles
Africa				
Maersk Ras Laffan			Port Said	03/11 Ras Laffan
LNG Aries			Suez	03/11 Spain
Simaisma		Ras Laffan	Suez	05/11 Tarifa
Gracilis			Suez	05/11 Maita
Japan				
Puteri Nilam		Bintulu	Chiba	02/11 Yokohama
Northwest Snipe	IGTC	Dampier	Chiba	04/11 Dampier
Bubuk	Brunei Gas Carriers	Lumut(Brunei)	Chiba	04/11 Lumut(Brunei)
Belais	Brunei Gas Carriers	Chiba	Chiba	06/11 Kisarazu
Umm Al Ashtan	National Gas shipping	Das Is.	Kawasaki	04/11 Das Is.
Semmata LNG		Nagoya	Nagoya	06/11 Fujairah Anch.
LNG Dream		Dampier	Sakai	04/11 Dampier
Senshu Maru		Sakai	Sakai	06/11 Bontang
LNG Capricorn		Bontang	I obata	05/11 Bontang
Al Wajbah	Qatargas	Ras Laffan	Yokkaichi	04/11 Fujairah Anch.
Bebatik	Osaka Gas	Lumut(Brunei)	Yokohama	02/11 Lumut(Brunei)
LNG Flora		Bontang	Yokohama	03/11 Bontang
Polar Eagle	ConocoPhillips/Marathon	Nikiski	Yokohama	04/11 Yokohama
Americas				
Berge Boston	Tractebel/Distrigas		Boston(USA)	05/11 Point Fortin
Australia				
Northwest Storm	IGTC	Dampier	Dampier	03/11 Nagoya
Northwest Seaea	IGTC	Dampier	Dampier	05/11 Chiba
Northwest Shear	IGTC	Dampier	Dampier	06/11 Dampier

Tanker movements Atlantic Basin more than a week ago

Vessel	Exporter	Destination	Latest	Previous
Europe				
LNG River Niger		Bonny	Santa Cruz de Te	11/10 Cape Finisterre
LNG Delta	BGT	Bonny	Santa Cruz de Te	14/10 Huelva
LNG Bayelsa	BGT	Bonny	Santa Cruz de Te	26/10 Sines
LNG Bonny	BGT	Bonny	Santa Cruz de Te	30/10 Brest
Methane Arctic	Gas Natural	Arzew	Fos	29/10 Arzew
Sohar LNG		Point Fortin	Gibraltar	02/11 Gibraltar
LNG Abuja	BGT	Bonny	Gibraltar	14/10 Gibraltar
Madrid Spirit	Repsol/YPF	Point Fortin	Gibraltar	15/10 Escombreras
Tenaga Empat	Cheniere LNG	Idku	Gibraltar	21/10 Algeciras
Cadiz Knutsen	Union Fenosa	Suez	Gibraltar	26/10 Algeciras
Gallina		Gibraltar	Gibraltar	26/10 Gibraltar
LNG Adamawa		Bonny	Gibraltar	30/10 Sagunto
Methane Lydon Volney		Algeciras	Gibraltar	30/10 Kalamata
Methane Princess	BG	Damietta	Gibraltar	22/10 Dardanelles
LNG Elba	Gaz de France	Skikda	La Spezia	22/10 La Spezia
LNG Portovenere	ENI	Idku	La Spezia	28/10 La Spezia
Bluesky		Malta	Malta	27/10 Malta
Pioneer Knutsen	Norway	Farsund	Sundalsora	21/10 Sundalsora
Hoegh Galleon	Tractebel	Setubal	Setubal	13/10 Setubal
LNG Cross River		Algeciras	Gibraltar	19/09 Gibraltar
Laiela	Gas Natural	Barcelona	Barcelona	21/10 Marsa el Brega
Hispania Spirit	Repsol/YPF	Point Fortin	Bilbao	05/10 Point Fortin
Bilbao Knutsen	Repsol/YPF	Bilbao	Bilbao	24/10 Point Fortin
Mourad Didouche	Tractebel/Distrigas	Montoir	Cape Finisterre	14/10 Gibraltar
Golar Winter		Cape Town	Cape Finisterre	16/10 Dover Strait
LNG Sokoto	Gaz de France	Bonny	Huelva	20/09 Bonny
LNG Enugu	Various	Bonny	Huelva	22/10 Bonny
Excalibur		Tarifa	Algeciras	20/10 Algeciras
LNG Edo	BGT	Bonny	Tarifa	22/10 Dardanelles
Methane Kari Elin	BG	Lake Charles	Tarifa	24/10 Algeciras
Galeomma	Iberdrola	Lake Charles	Tarifa	26/10 Ceuta
Lalla Fatma N'Soumer		Arzew	Dardanelles	28/10 Eregli(Sea of Mar
Bachir Chihani	BOTAS	Arzew	Dardanelles	01/11 Dardanelles
British Innovator	BP	Dover Strait	Dover Strait	02/10 Isle of Grain
Africa				
Hassi R'Mel		Arzew	Arzew	01/10 Arzew
Galicia Spirit	Union Fenosa	Damietta	Damietta	31/10 Damietta
Tenaga Satu	Gaz de France	Seville	Port Said	27/10 Dahej
Al Deebel	Rasgas II		Port Said	29/10 Dubai
Methane Rita Andrea		Idku	Port Said	30/10 Sakai
Methane Polar	Gas Natural	Port Said	Port Said	31/10 Suez
Dewa Maru		Suez	Port Said	29/10 Port Said
Ibra LNG		Suez	Qalhat Term.	18/10 Port Said
Al Thakhira	Rasgas II	Suez	Gibraltar	01/11 Gibraltar
Tenaga Tiga	MLNG	Suez	Suez	01/11 Arzew
LNG Benue		Bonny	Bonny	31/10 St. Eustatius
Middle East				
Disha	Petronet	Dahej	Dahej	31/10 Ras Laffan
Al Khor	Qatargas	Doha(QAT)	Doha(QAT)	05/10 Mesaieed
Hanjin Sur	KOGAS	Pyeongtaek	Qalhat Term.	23/09 Incheon
Hyundai Oceanpia	KOGAS	Pyeongtaek	Qalhat Term.	30/09 Incheon
Hyundai Aquapia	KOGAS	Korea	Qalhat Term.	04/10 Korea
Al Khaznah	National Gas shipping	Japan	Fujairah Anch.	21/10 Fujairah Anch.
Mraweh	National Gas shipping	Japan	Das Is.	28/10 Kawasaki
Mubaraz	National Gas Shipping	Japan	Das Is.	01/11 Kisarazu
Al Zubarah		Dubai	Dubai	28/09 Nagoya
SK Supreme	KOGAS	Fujairah Anch.	Fujairah Anch.	24/07 Singapore
Umm Bab	Ras Gas II	Ras Laffan	Fujairah Anch.	25/10 Nagoya
Al Wakrah	Qatargas	Ras Laffan	Fujairah Anch.	28/10 Ras Laffan
Lusail	Rasgas II	Ras Laffan	Fujairah Anch.	28/10 Pyeongtaek
Maersk Qatar		Fujairah Anch.	Fujairah Anch.	30/10 Ras Laffan
Fuwairit		Fujairah Anch.	Fujairah Anch.	31/10 Suez
Al Rayyan	Qatargas	Fujairah Anch.	Fujairah Anch.	11/10 Singapore
Raahi	Petronet	Fujairah Anch.	Fujairah Anch.	01/11 Ras Laffan
Ghasha	National Gas shipping	Ruwais	Mina Saqr	27/10 Das Is.
Americas				
LNG Akwa Ibom	BGT	Yucatan Channel	Yucatan Channel	27/10 Altamira
Excelsior	Excelsior Energy	Point Fortin	Point Fortin	14/07 Gibraltar
Berge Everrett	Tractebel	Point Fortin	Port of Spain	29/06 Gibraltar
Arctic Lady		Port of Spain	Gibraltar	15/08 Gibraltar
Arctic Voyager		Port of Spain	Gibraltar	13/09 Point Fortin
British Trader	BP	Baltimore	Baltimore	30/08 Point Fortin
Catalunya Spirit	Gas Natural	Boston(USA)	Boston(USA)	25/10 Boston(USA)
Matthew	Tractebel	Boston(USA)	Boston(USA)	30/10 Boston(USA)
British Merchant	Gas Natural	Point Fortin	Cove Point	08/10 Baltimore
LNG Rivers	BGT	Bonny	Lake Charles	25/10 Nantux
Khannur	BG	Savannah	Savannah	12/10 Point Fortin
				24/10 Santa Cruz de Te
				29/06 Gibraltar
				19/10 Zeebrugge
				27/08 Gibraltar
				15/08 Bilbao
				23/07 Kobe
				25/07 Point Fortin
				13/09 Boston(USA)
				08/08 Ferrol
				25/08 Point Fortin
				08/09 Montoir
				31/07 Point Fortin
				07/09 Montoir
				13/08 Savannah



Tanker movements Pacific Basin more than a week ago

Vessel	Exporter	Destination	Latest	Previous	Latest	Previous	Latest	Previous
Malaysia								
Aman Sendai	MLNG II		Bintulu	28/07	Bintulu	09/07	Bintulu	08/04
Tenaga Lima	MLNG	Taiwan	Bintulu	07/10	Niigata	27/09	Kawasaki	13/09
Puteri Intan		Japan	Bintulu	22/10	Kaohsiung	17/10	Incheon	04/10
Bishu Maru		Singapore	Singapore	22/08	Nagoya	14/08	Bontang	07/08
Golar Frost		Singapore	Zeebrugge	13/09	Mega	31/08	Point Fortin	30/07
Muscat LNG	Shell	Oman	Singapore	01/10	Singapore	20/09	Singapore	03/09
Excel		Port Sultan Qabon	Singapore	09/10	Qalhat Term.	14/09	Singapore	02/09
Dwiputra		Singapore	Bontang	10/10	Singapore	16/09	Sakai	08/09
LNG Jamal	Osaka Gas	Oman	Singapore	17/10	Sakai	10/10	Qalhat Term.	25/09
Ibri LNG		Oman	Singapore	21/10	Pyeongtaek	11/10	Qalhat Term.	09/09
Iberica Knutsen		Suez	Singapore	25/10	Suez	28/09	Gibraltar	20/09
Excellence	Excelerate Energy	Singapore	Singapore	30/07	Las Palmas	20/07	Las Palmas	02/07
Excelerate		Singapore	Singapore	31/10	Pyeongtaek	13/09	Okpo	06/09
Puteri Zamrud Satu	MLNG III	Malaysia	Kaohsiung	28/10	Kaohsiung	20/10	Incheon	01/10
Methane Jane Elizabeth			Kaohsiung	29/10	Suez	11/10	Sagunto	04/10
Golar Mazo	CPC	Indonesia	Kaohsiung	30/10	Bontang	19/10	Kaohsiung	12/10
Japan								
Puteri Firus		Bintulu	Chiba	08/10	Niigata	22/09	Chiba	05/09
Bekulan	Cheniere LNG	Lumut(Brunei)	Chiba	24/10	Lumut(Brunei)	17/10	Yokohama	10/10
Arctic Sun	ConocoPhillips/Marathon	Nikiski	Chiba	25/10	Nikiski	07/10	Yokohama	27/09
Bekalang	Brunei Gas Carriers	Lumut(Brunei)	Chiba	26/10	Lumut(Brunei)	19/10	Chiba	11/10
Abadi	Brunei Gas Carriers	Lumut(Brunei)	Chiba	29/10	Lumut(Brunei)	22/10	Chiba	15/10
Belanak	Japanese buyers	Lumut(Brunei)	Chiba	01/11	Lumut(Brunei)	25/10	Mega	18/10
Aman Hakata	MLNG II	Bintulu	Hakata	24/10	Nagasaki	10/10	Hakata	26/09
Aman Bintulu	MLNG	Bintulu	Hakata	28/10	Hakata	13/10	Hakata	29/09
Shahamah	National Gas shipping	Das Is.	Kawasaki	20/10	Das Is.	02/10	Kisarazu	16/09
Puteri Zamrud		Bintulu	Kawasaki	24/10	Dampier	13/10	Yokohama	02/10
Northwest Swallow	IGTC	Dampier	Kawasaki	29/10	Dampier	18/10	Mega	22/09
Pacific Eurus		Darwin	Kisarazu	18/10	Darwin	07/10	Kawasaki	24/09
Puteri Delima		Bintulu	Kisarazu	21/10	Kisarazu	05/10	Bintulu	24/09
Al Hamra	National Gas shipping	Das Is.	Kisarazu	25/10	Das Is.	06/10	Kawasaki	20/09
Kotowaka Maru		Bintulu	Kisarazu	26/10	Bintulu	18/10	Kisarazu	20/10
Puteri Muftara Satu		Bintulu	Kisarazu	27/10	Chiba	14/10	Yokohama	19/09
Ish	National Gas shipping	Das Is.	Kisarazu	30/10	Das Is.	13/10	Kisarazu	28/09
Tenaga Dua	MLNG	Bintulu	Kisarazu	01/11	Bintulu	19/10	Kaohsiung	15/10
Puteri Nilam Satu	MLNG III	Bintulu	Mega	12/10	Chiba	23/09	Kaohsiung	12/09
LNG Virgo		Bontang	Mega	23/10	Bontang	05/10	Tobata	04/10
Arctic Discoverer		Trinidad	Mega	26/10	Singapore	18/10	Bab el Mandeb St	09/10
Al Jasra	Qatargas	Ras Laffan	Mega	01/11	Ras Laffan	09/10	Fujairah Anch.	08/10
Grandis		Singapore	Nagoya	01/10	Algeria	23/09	Singapore	22/09
Puteri Firus Satu		Bintulu	Nagoya	17/10	Niigata	03/10	Chiba	13/09
Al Bidda		Ras Laffan	Nagoya	19/10	Ras Laffan	19/10	Fujairah Anch.	20/09
LNG Vesta	Tokyo Gas	Bontang	Nagoya	21/10	Bontang	04/10	Mega	03/10
LNG Pioneer	BP	Das Is.	Nagoya	25/10	Das Is.	09/10	Fujairah Anch.	07/10
Energy Frontier	Tokyo Gas	Australia	Nagoya	26/10	Dampier	16/10	Shimizu	22/09
LNG Libra		Bontang	Nagoya	01/11	Bontang	12/10	Nagoya	11/10
Surya Aki		Bontang	Sakai	27/10	Bontang	19/10	Hiroshima	09/10
Nizwa LNG		Qalhat Term.	Sakai	29/10	Qalhat Term.	29/09	Sakai	28/09
Banshu Maru		Bontang	Sakai	30/10	Bontang	23/10	Yokkaichi	16/10
Northwest Sanderling	IGTC	Australia	Sakai	31/10	Dampier	20/10	Dampier	25/09
LNG Leo		Sakaide	Sakaide	31/10	Sakai	25/10	Bontang	11/10
Puteri Delima Satu	MLNG III	Bintulu	Shimizu	26/10	Chiba	09/10	Nagoya	22/09
LNG Taurus		Bontang	Tobata	18/10	Bontang	04/10	Nagoya	03/10
LNG Aquarius	KOGAS	Bontang	Yokkaichi	13/10	Yokkaichi	08/10	Bontang	16/09
Zekreet	Qatargas	Ras Laffan	Yokkaichi	15/10	Ras Laffan	27/09	Fujairah Anch.	27/09
Broog	Qatargas	Ras Laffan	Yokkaichi	23/10	Ras Laffan	15/09	Mega	14/09
Doha		Ras Laffan	Yokkaichi	26/10	Ras Laffan	06/10	Fujairah Anch.	05/10
LNG Gemini		Bontang	Yokkaichi	28/10	Bontang	10/10	Nagoya	08/10
Energy Advance	Tokyo gas	Darwin	Yokohama	24/10	Darwin	14/10	Chiba	29/09
Granatina		Singapore	Yokohama	25/10	Bab el Mandeb St	09/10	Suez	06/10
Bilis	Brunei Gas Carriers	Lumut(Brunei)	Yokohama	27/10	Lumut(Brunei)	20/10	Kisarazu	13/10
Puteri Intan Satu	MLNG III	Bintulu	Yokohama	30/10	Chiba	22/09	Lumut(Brunei)	14/09
Australia								
Northwest Sandpiper	IGTC	Dampier	Dampier	16/09	Singapore	04/09	Oita	19/08
Wakaba Maru		Dampier	Dampier	11/10	Sakai	07/08	Dampier	27/07
Northwest Swan	IGTC	Dampier	Dampier	25/10	Nagoya	14/10	Yokohama	25/09
Galea		Dampier	Dampier	28/10	Dampier	19/09	Sakai	20/08
Northwest Swift	IGTC	Dampier	Dampier	30/10	Chiba	18/10	Mega	26/09
Pacific Notus	Tokyo Electric	Kawasaki	Darwin	21/10	Kisarazu	08/10	Darwin	27/09
Indonesia								
Echigo Maru		Niigata	Blang Lancang	02/10	Niigata	08/08	Blang Lancang	07/08
Surya Satsuma		Hiroshima	Bontang	22/10	Bontang	04/10	Hiroshima	19/09
Ekaputra	CPC	Kaohsiung	Bontang	28/10	Kaohsiung	23/10	Bontang	16/10
Korea								
Hyundai Technopia	KOGAS	Doha(QAT)	Incheon	28/08	Singapore	07/06	Incheon	21/05
K.Acacia		Port Sultan Qabon	Incheon	02/10	Incheon	31/07	Pyeongtaek	28/06
Hyundai Greenpia	KOGAS	Bintulu	Incheon	09/10	Qalhat Term.	03/09	Singapore	18/08
SK Splendor	KOGAS	Port Sultan Qabon	Incheon	14/10	Qalhat Term.	28/08	Pyeongtaek	12/08
SK Summit	KOGAS	Doha(QAT)	Incheon	17/10	Incheon	08/09	Singapore	15/08
Hyundai Cosmopia	KOGAS	Doha(QAT)	Incheon	21/10	Pyeongtaek	17/09	Bontang	02/09
Hanjin Pyeong Taek	KOGAS	Bontang	Incheon	23/10	Blang Lancang	01/10	Pyeongtaek	22/09
Hyundai Utopia	KOGAS	Bontang	Incheon	28/10	Bontang	10/09	Bontang	25/08
Y.K.Sovereign		Okpo	Pyeongtaek	28/08	Incheon	11/07	Bintulu	20/06
Al Marrouna		Okpo	Pyeongtaek	29/09	Okpo	27/09	Pyeongtaek	25/09
Hanjin Ras Laffan	KOGAS	Doha(QAT)	Pyeongtaek	30/09	Incheon	24/08	Fujairah Anch.	06/07
SK Stellar	KOGAS	Doha(QAT)	Pyeongtaek	09/10	Incheon	05/09	Pyeongtaek	05/08
Hanjin Muscat	KOGAS	Port Sultan Qabon	Pyeongtaek	18/10	Qalhat Term.	01/10	Singapore	29/08
SK Sunrise	KOGAS	Doha(QAT)	Pyeongtaek	25/10	Incheon	23/09	Singapore	31/07

Key to shipping movement tables

- Arzew: Loading terminals
- Green: Unloading terminals
- Gibraltar: Anchorages/ other



Ships are grouped geographically by latest port

The vessel's name is followed in column two by its last reported destination, if available, and in columns four and five by its most recent port and the arrival date. Under the

'Previous' heading the six columns give the three previous ports and arrival dates.

The Back Page

Key gas prices in LNG destination markets

All prices in \$/MMBtu

Forward gas markets	9 Nov 2006	2 Nov 2006	Change on week	9 Nov 2005	Change on year
---------------------	------------	------------	----------------	------------	----------------

UK NBP (Heren Report)

Dec-06	10.22	10.47	-0.25	12.12	-1.90
Jan-07	11.45	11.69	-0.24	13.61	-2.17
Feb-07	11.39	11.68	-0.29	13.30	-1.91
Mar-07	9.83	9.83	0.01	11.94	-2.11
Apr-07	7.86	7.90	-0.05	8.54	-0.68
May-07	7.60	7.69	-0.08	7.38	0.22
Jun-07	7.25	7.29	-0.05	6.72	0.53
Jul-07	7.22	7.21	0.01	6.69	0.53

USA Henry Hub (Nymex)

Dec-06	7.96	7.81	0.14	6.86	1.10
Jan-07	8.44	8.31	0.13	6.90	1.53
Feb-07	8.49	8.36	0.12	6.87	1.62
Mar-07	8.34	8.23	0.10	6.48	1.86
Apr-07	7.86	7.73	0.13	6.45	1.41
May-07	7.83	7.70	0.13	6.48	1.34
Jun-07	7.91	7.78	0.13	6.53	1.38
Jul-07	8.00	7.88	0.12	6.55	1.45

Contract gas markets (Heren forecasts)

	NW Europe Oil - Indexed	Spanish Import	Japan Import
Dec-06	6.90	6.67	7.20
Jan-07	7.07	6.83	7.37
Feb-07	7.20	6.96	7.51
Mar-07	7.30	7.06	7.62
Apr-07	7.37	7.13	7.69
May-07	7.44	7.19	7.76
Jun-07	7.49	7.24	7.82

Conversion factors further conversions available on request

	1 kWh	1 GJ	1 Therm	1 MMBTU	1 Thermie	1 cuft	1 St cm
1 kWh	1	0.0036	0.034121	0.0034121	0.85986	3.2958	0.092571
1 GJ	277.7924	1	9.4787	0.94787	238.8626	915.545	25.71564
1 Therm	29.3071	0.10537	1	0.1	25.2	96.59	2.713
1 MMBTU	293.071	1.0537	10	1	252	965.9	27.13
1 Thermie	1.16298	0.004187	0.039683	0.0039683	1	3.832937	0.107659
1 cuft	0.303418	0.001092	0.010353	0.0010353	0.260897	1	0.028088
1 St cm	10.80247	0.03887	0.368596	0.0368596	9.28861	35.60265	1

Publisher: Patrick Heren

Editor: Robin Tudge

Contributors: Helena Wisden, Jorinde Chang, Fatima Sadouki, Isabel Save, Louise Boddy, Jay Eden, Ben Farey, Daniela Latini, Glenn Rickson, Anusha de Silva, Katie Tucker, Zoe Double, James Allpress. **Sales:** Douglas Strien (sales@heren.com)

Tel: +44 (20) 8469 4704

Published weekly by Heren Energy Ltd. Pepys House,

10 Greenwich Quay, Clarence Road, London SE8 3EY.

Tel: +44 (20) 8469 4700

Fax: +44 (20) 8469 4293

Web: www.heren.com

Email: info@heren.com

Unauthorised reproduction is illegal. ISSN 1747-8499

© Heren Energy Ltd, 2006

HLM comments

A UK businessman visiting Beijing for a gas conference this week also dropped in at the British Chamber of Commerce to ask their opinion on the opportunities for his energy services company in China. He had three questions. "Will I be welcome?" he asked. "Yes," the chamber replied. "Will they pay the going rate?" – the answer was a resounding "No." And finally: "Will they steal my technology?" "Absolutely," said the chamber, and with that the businessman decided his time and energy would be better spent elsewhere.

An apocryphal story, perhaps, but one that illustrates the Chinese approach to business – get it cheap – and the LNG sector is little different. Despite paying market prices for the oil its export businesses need, China still shows little political will to do the same for LNG. Individual representatives of the big three companies will acknowledge, off the record, that liberalisation is needed and development of the gas sector will stagnate until there is some. But the official line remains: "Refer to the 11th Five-year plan."

And China remains a singularly closed market – the three LNG import terminals that are progressing are all state owned and the ones that aren't, such as ExxonMobil-sponsored China Light & Power's Hong Kong proposal, have gone quiet. Closed markets have thus far shown limited ability to attract LNG imports, particularly when the more lucrative and flexible Atlantic Basin markets are taken into account by sellers. There is no reason why China should be any different, despite the enthusiasm of Sinophiles to see it as a special case on grounds of size. Even large economies can recede from time to time and some China-watchers think they are witnessing the beginnings of a bubble. Should it pop, LNG imports would go down with it.

The looming possibility of two or three huge gas pipelines from Russia each importing around 15 billion cubic metres/year; one sponsored by Gazprom cutting through the Altai between Kazakhstan and Mongolia; another from BP's Kovykta field in eastern Siberia to Chinese demand centres on the east coast; and another from ExxonMobil's Sakhalin 1 to CNPC's pipeline network, further raise the likelihood that China's LNG demand won't come anywhere close to needing the ten terminals that were proposed, or even the five that many now predict. Perhaps three will be plenty.

Any reduction in Chinese demand will be a relief to East Asia's traditional buyers, especially as some projects that were to meet demand from around 2010 start to look less likely. But only time will tell whether withdrawal from the scramble for China turns out to be a wise strategy.

- HW