Summary of the 1st meeting of the Working Group on the Regulation of LNG Terminals in France

THE WORLD LNG MARKET

14 December 2007

A. Opening Remarks by Colette Lewiner

Liquified Natural Gas (LNG) has a part to play in the diversification of sources of supply, which is essential if we are to react effectively to various geostrategic constraints and concerns about security of supply.

Given the liberalization of European markets and the energy policies introduced in each country, France has two major advantages: its geographical position and the length of its coastline. Nevertheless, European LNG terminals find themselves increasingly in competition with each other in their desire to attract LNG imports and to benefit from future arbitrage between destinations with regard to this market. In this context, the French regulator has sought to open up a debate on the conditions which will lead to greater investment in both regulated and exempt LNG terminals.

For this reason, this Working Group has been created and given a mandate to carry out its mission in complete independence. The final report will contain the contributions of its members, together with external contributions. It is thus important that, at the Group's meetings, participants pool their knowledge and skills and take an active role in the debate, without defending the interests of his or her affiliation.

I. Organization of the Group

The Group will be chaired by Colette Lewiner. CRE will provide staff for the Group's secretariat and for drafting the minutes, which are to be approved by the Group, together with technical assistance during the discussions.

Interested persons not participating in the Group's meetings will be able to contribute via the dedicated Internet site. These contributions will be summarized by CRE at each meeting.

The work of the Group is confidential. Minutes of each meeting will be produced and serve as a basis for the final summary report. A summary of the minutes may, with the Group's approval, be published on the Working Group's Internet site.

The Group will seek to achieve a consensus on the various topics to be discussed. If however there is no consensus on certain points, the different points of view will be registered, together with supporting arguments.

II. List of Topics for Discussion

The debate will take place in the context of an increasingly competitive European market, with the objective of allowing France to play a key role in future supply and thus to enhance the market share of its methane terminals.

It will also review the current regulation structures and the impact of exemption on third party access (TPA), which is authorized by the European Directive: how can regulated and exempted terminals operate side by side?

In particular, in the event of regulated TPA, it will be necessary to define the need for visibility over the long term, while ensuring that that visibility does not become a restraint on the benefits of competition for the end customer, and to reflect on the appropriate rules for utilisation of terminals (secondary market, principles of "Use it or lose it", levels of "ship or pay", etc.).

Where there are exemptions to the TPA rule, the document authorizing the exemption and establishing the limits to its application must include arguments justifying the decision.

B. The World Market in LNG (Presentation by Philippe Boisseau)

Philippe Boisseau decided to talk about the situation until 2015. In fact, decisions being taken today on new gas resources will not have an impact on gas production until after this date, when a number of contracts, engineering projects and construction programmes will come to completion.

I. Balancing Supply and Demand for Gas will be Difficult over the Long Term

In 2015, supply of LNG will not meet today's predictions for demand for LNG.

1. Reserves and the Evolution of Gas Production

By the end of 2006, there were 183 Tm^3 of proven gas reserves in the world, corresponding, given the current level of consumption, to 63 years of operation (figures from Cedigaz). Forty per cent of these reserves are located in the Middle East, 31% in Russia, 9% in Asia and Oceania, 8% in Africa, 4% in North America, 4% in South America and 4% in Europe.

But, these reserves will be increasingly difficult to exploit, for a number of reasons:

- exploration and production costs have risen sharply, due to higher prices for raw materials and engineering services;
- more than 40% of reserves (73 Tm^3) are acidic and will cost three times more to produce than the accepted cost of developing a classic field;
- a complex geopolitical situation which will have an impact on supply programmes.

At the same time, local production will stagnate, or even decrease, in North America, Europe and Asia.

2. Changes in Demand for Gas

Forecasts suggest that **demand for gas will increase substantially on all continents**.

In importing regions (North America, Europe and Asia), demand for gas will continue to rise, as it is increasingly used as a substitute for coal and fuel.

The large exporting areas (Africa and the Middle East) will also see an increase in local consumption of gas (domestic and industrial customers, use of gas in oil reservoirs to prolong production cycles in existing oil fields, etc.). This will accentuate pressure on supply and demand.

3. The LNG Market

In three geographical regions (North America, Europe and Asia), we will see a new phenomenon: **increased needs for imported gas simultaneously in all three regions.** This imbalance can only be compensated by more imports of LNG.

Forecasts show that world demand in LNG will increase each year by more than 8% for the period 2005-2020 (+10% for the period 2005-2015), despite a slow-down in the completion of current liquefaction projects, the last 18 months

having already seen delays of up to a year on launch dates on these projects. The "engineering and construction" chain is currently saturated.
Today, it would appear that **LNG supplies cannot meet current forecasts for demand** and a review of planned liquefaction projects highlights the prospect of strong pressure on LNG supplies from 2012 onwards.

This context seems to indicate that **arbitrage for LNG will play a strategic role**, and will be dominated mainly by gas-producing countries in the Middle East, where the geographical situation easily allows them to arbitrage between the "Atlantic" and the Asian markets, which were previously quite separate.
Arbitrage opportunities will be facilitated by the presence of more methane companies. They will lead to competition in transport costs and facilitate arbitrage, particularly on long distance transportation.

Arbitrage opportunities will create price interdependence in the three regions concerned and this in turn will lead to **the emergence of a world market in LNG with various regions competing for supplies.**

In order to benefit from arbitrage opportunities, gas producers will probably opt for mixed contracts (combinations of long-term and short-term contracts) which will also include shorter overall contract periods (e.g., the last contract signed in December 2007 between Gaz de France and Sonatrach was for only 5 years).

II. Increased Volatility and Greater Risks for Investors

The changes discussed above will lead to fluctuating periods of greater or lesser pressure on supply and demand in gas and therefore to **increased volatility in prices from one year to the next, or even from season to season**.
In addition, since gas will become a substitute for other forms of energy, this volatility will also have an impact on a market which is increasingly influenced by external factors such as natural disasters, pressure on other forms of energy, environmental policies, and technological innovation.

This volatility will also lead to a reduction in usage levels for methane terminals: terminals could see temporary reductions in usage in any given region if LNG prices are reduced because of the situation in another region.
Thus, in order to allow buyer countries to take advantage of these new possibilities for arbitrage, they must have at their disposal **surplus capacity** in terms of infrastructures such as LNG terminals. Greater flexibility in supply could thus be used to take advantage of periods when the price of LNG is low or to meet possible crises in supply.

The need for flexibility has always been covered by recourse to gas stocks. However, levels of European gas stocks have not increased in line with rising consumption. Using gas storage will probably not suffice in the event of a particularly cold winter or a cold snap. LNG terminals will naturally make it possible to improve the flexibility of traditional storage infrastructures.

Where there is surplus capacity, project leaders will see investment in infrastructure as a growing risk. In order to encourage investors to take on the risk required for the completion of various projects, they must have access to clear economic signals.

C. Conclusion

The group came to the following conclusions:

- the LNG market will play an increasingly important role in world supply and demand in gas;
- **by 2015, it will be a seller's market**, and suppliers will have difficulty responding to changes in demand. To a question on this topic, P. Boisseau indicated that the trend might be similar in 2020 and in 2030;
- the world LNG market is moving towards the strong development of arbitrage between destinations and towards the disappearance of current geographical segmentation: **LNG terminals, in particular in Europe, will be in competition with each other**;
- the average level of utilisation for terminals around the world will diminish;
- the changes observed in the gas and LNG sectors will lead to alternating periods of high and low pressure on supply and demand in gas resulting in **more volatile prices from one year to the next, or even from season to season**;
- LNG imports and LNG terminals allow a diversification of gas supply sources and contribute to the improvement of **security of supply** in importing countries;
- in this context, importing countries have an **interest in maintaining or developing surplus regasification capacity** and surplus LNG terminals **- this will allow them to take advantage of arbitrage opportunities and will increase their attractiveness vis-à-vis producing countries**;
- regulatory approaches applied to LNG terminals and tariffs for associated services are part of the criteria which producing countries take into account when assessing the attractiveness of a given market;
- **Investors must be encouraged to take the risks associated with investments by adapting current regulation**.