

# USA- THE FUTURE OF LNG



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Monthly Report - Preview

## **USA- THE FUTURE OF LNG PREVIEW**

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In the past 15-20 years the natural gas industry in the USA has been transformed from severe scarcity and forecasts for LNG imports to massive surpluses because of the shale gas revolution which has added 480-869 Trillion Cubic Feet (TCF) of economically recoverable shale gas reserves as compared to conventional proved gas reserves of 272 TCF in 2010 and annual consumption of 24.1 TCF in the same year.

Massive investments in LNG import and regasification facilities on the East and Gulf Coasts of the USA have led to severe financial losses. Before the shale gas revolution such investments appeared to be reasonable because of growing domestic demand, especially for electricity generation and a serious decline in the productivity of wells for conventional natural gas.

Global gas consumption in 2010 grew by 7.4%, the strongest growth rate since 1984 and various projections indicate growth rates of 2-3% per year to 2030. Natural gas growth is expected to continue at a higher rate than both oil and coal.

The world situation with regard to proved reserves of conventional natural gas, however, is being changed dramatically through the technological developments in the exploration and production of non conventional natural gas resources, especially shale gas (also tight gas and coal-bed methane) through hydraulic fracturing and horizontal drilling. Fracturing is simply a process involving pumping large quantities of water and a mixture of chemicals and sand to stimulate the permeability of the reservoir rock so as to allow more natural gas and liquids to flow into the well. Such developments have been particularly rapid in the USA and are expected to expand in all the continents and a great number of countries.

The shale gas revolution in the USA has resulted in very low costs of production and independent corporations rather than the major oil companies have been the main actors. Major oil corporations from the USA, Europe and Asia invested more than \$100 billion in takeover and participation deals with independent shale gas corporations in the USA and more of such deals are expected.

Despite growth in gas consumption expected in the USA, surplus production capacities have already led shale gas companies to cut back in drilling and have moved their operations to areas which geologically are more promising for more liquids productions, especially shale oil.

The above developments have led to plans by various USA corporations for the construction of LNG plants for exports to Europe and Asia and Mr. Constantinou's report concentrates on the risks involved in this new venture of the American gas industry.

**The report includes: Executive**

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Mr. Constantinou is a graduate of the London School of Economics and Political Science. After 34 years (1961-1995) of service with the United Nations, he retired as Chief of Energy Program at UN Headquarters in New York where he authored numerous reports for the UN Economic and Social Council, the General Assembly and various Energy Committees as well as publications such as the annual World Economic Survey (Energy Chapter). He organized several international seminars and symposia especially on world oil, gas, and coal, new and renewable sources of energy as well as development policies and relations between oil consuming and producing countries. Since his retirement he has been active as consultant to the United Nations, the Government of Cyprus and private interests in both Cyprus and the USA. He prepared a report on World Oil Prospects and organized a seminar on Natural Gas in China for the United Nations, prepared several national reports on natural gas for a Gas-to-Liquids (GTL) corporation, published an extensive report on Oil Security or War, participated in negotiations for oil and gas exploration and development agreements in Kazakhstan and most recently conducted extensive research in shale gas for a hedge fund.