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Paper



Gas Cavern Storage – a Critical Link in the LNG Import Chain

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THE ROLE OF INTEGRATED GAS CAVERN STORAGE AT LNG RECEIVING TERMINALS IN THE U.S.

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ABSTRACT

The integration of high deliverability salt cavern storage into LNG import facilities will provide greater flexibility to both suppliers of LNG and consumers of natural gas. Salt caverns have been in commercial operation in the U.S. for decades for salt mining as well as storage of chemicals and hydrocarbons. Caverns have been used to store compressed natural gas since 1961. Although salt caverns have played a critical role in balancing the U.S. supply/demand for natural gas for many years, a new emerging need for salt caverns to support LNG import facilities is developing.

Use of caverns at U.S. import facilities is becoming critical to LNG suppliers because: storage provides effective cover gas for global LNG arbitrage opportunities; hedge activities, supported by physical inventory, offer significant potential to enhance value; and, storage helps manage short-term surpluses and shortages. Use of caverns is critical to U.S. gas consumers because: gas withdrawals fill production shortage in winter peak demand periods; gas injections during summer months allow for seasonal arbitrage by withdrawal in higher demand winter period; and, storage backed supply reliability and flexibility are valued by U.S. gas customers.

Integrating salt caverns directly into an LNG import terminal adds significant value and operational flexibility for storage of pipeline ready gas, blending for Btu control and ability to receive any Btu LNG.

This paper will provide an overview of why integrated salt cavern storage enhances value of an LNG import facility.