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Special Session: Energy Bridge LNG Projects: Gulf Gateway Energy Bridge—The First Year of Operations and the Commercial and Operational Advantages of the Energy Bridge Technology

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Abstract

Energy Bridge is an innovative application of proven technologies that allow for the importation of LNG by regasification onboard the LNG carrier, and delivery into natural gas pipeline networks. Gulf Gateway Energy Bridge LLC is the first offshore LNG receiving terminal to become operational. Operations began in March 2005. The Energy Bridge Regasification Vessels (EBRV) *EXCELSIOR* and *EXCELLENCE* were delivered in January and May of 2005 respectively. Each vessel has delivered cargoes to Gulf Gateway.

This paper will discuss the first year of operations including the commissioning of the deepwater port and the EBRVs, as well as the unique aspects of offshore terminal operations. This paper will also explore how Excelerate Energy addressed some of the concerns raised about the system's viability, including:

- Commercial aspects of the Energy Bridge technology
- Logistics of using Energy Bridge technology
- Comparisons with traditional receiving terminals

Introduction

Gulf Gateway Energy Bridge LLC is the first offshore receiving terminal to become operational since the Deepwater Port Act was amended in 2002. Gulf Gateway received its Record of Decision from MARAD on December 31, 2003 and its License granting permission to construct, own and operate the Deepwater Port in May 2004. Construction and installation activities were completed in January 2005 and the port was commissioned in March 2005.

The Deepwater Port consists of a Submerged Turret Loading ("STL") system that is comprised of a submerged turret buoy; chains, lines and anchors; a flexible riser; and a subsea

manifold. Other components of the Deepwater Port include approximately 1.93 miles of 20-inch pipeline; a small meter platform and risers; a 20-inch diameter pipeline approximately 3.96 miles in length that extends from the meter platform to an offshore natural gas pipeline operated by Sea Robin Pipeline Company ("Sea Robin"), and a separate 20-inch diameter pipeline approximately 1.38 miles in length that will extend from the meter platform to a lateral which interconnects to part of an offshore natural gas pipeline system commonly referred to as the Blue Water system. The Blue Water system is owned in part by Tennessee Gas Pipeline Company and in part by Columbia Gulf Transmission Company. The natural gas transported by Sea Robin and Blue Water comes ashore at the Louisiana coast, the adjacent coastal state under the DWPA.



Figure 1 EBRV *EXCELSIOR* connected to the STL Buoy on location at Gulf Gateway Energy Bridge

The Deepwater Port is used to deliver to onshore markets natural gas derived from the regasified LNG that is received from sources worldwide.

The gas is delivered to the Deepwater Port by LNG vessels which incorporate shipboard regasification capabilities. The first generation EBRVs that deliver natural gas to the Deepwater Port are 138,000 cubic meter capacity vessels that, unlike conventional LNG vessels, regasify the LNG on-board at the Deepwater Port so that imports consist of gas in its vaporous state rather than in a liquefied state. Each 138,000 cubic meter LNG vessel will deliver approximately 2.9 billion