

# LNG in the Gulf of Mexico Update

Jeff Rester

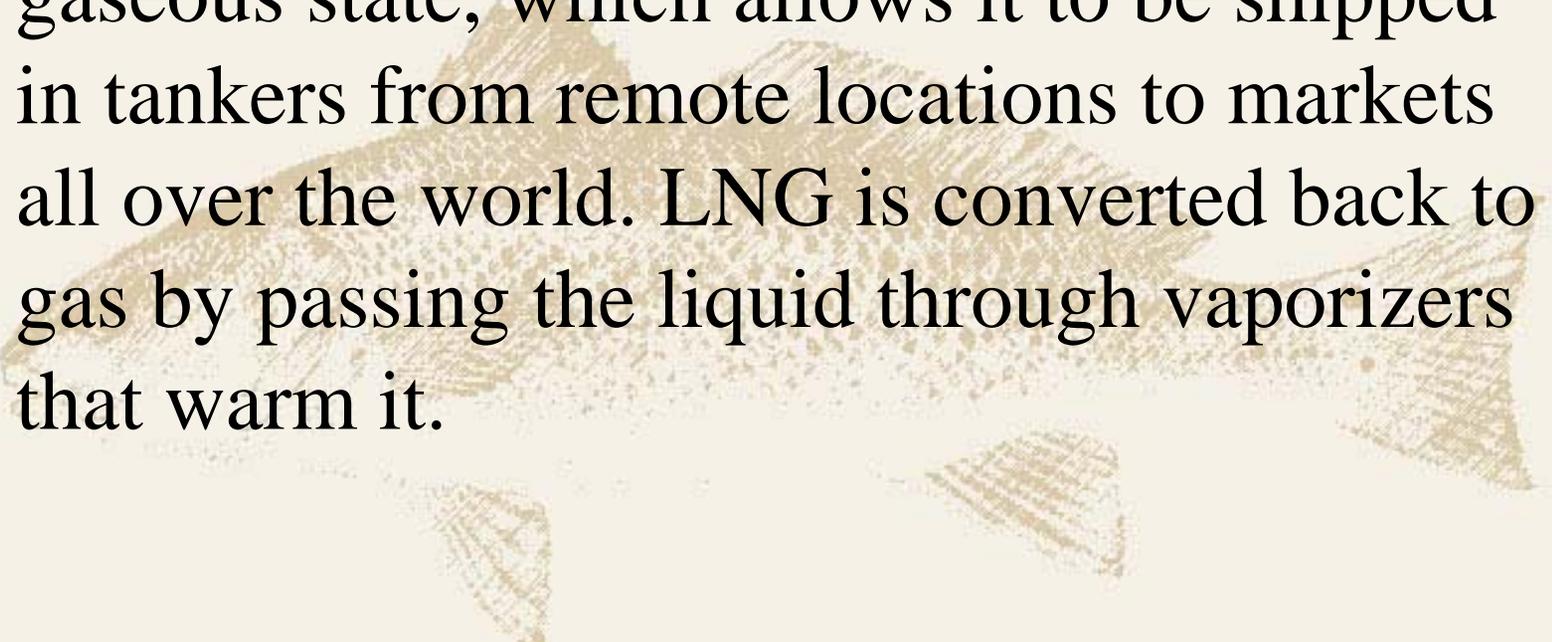
Gulf States Marine Fisheries Commission



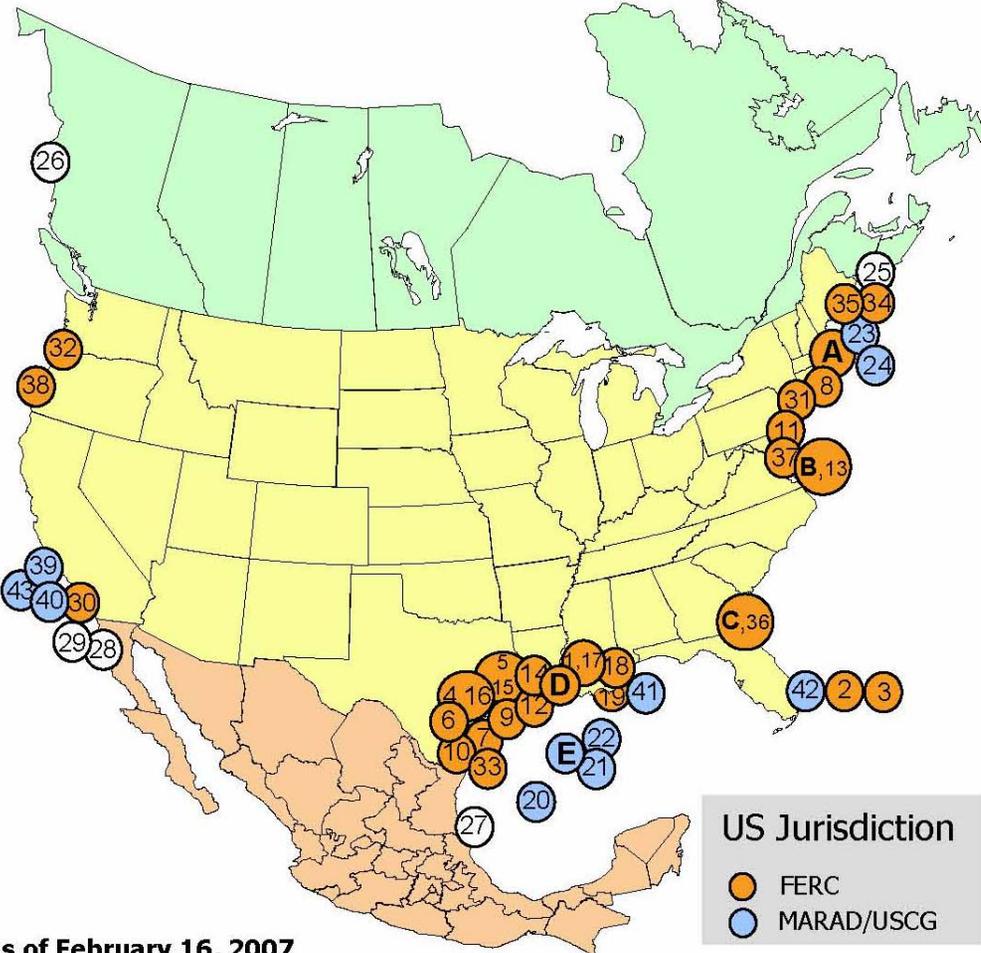
# Liquefied Natural Gas

---

LNG is natural gas that has been cooled below minus 260 degrees Fahrenheit and condensed into a liquid. LNG occupies 600 times less space than natural gas in its gaseous state, which allows it to be shipped in tankers from remote locations to markets all over the world. LNG is converted back to gas by passing the liquid through vaporizers that warm it.



# Existing and Proposed North American LNG Terminals



As of February 16, 2007

\* US pipeline approved; LNG terminal pending in Bahamas  
 \*\* Construction suspended

**CONSTRUCTED**

- A. Everett, MA : 1.035 Bcfd (DOMAC - SUEZ LNG)
- B. Cove Point, MD : 1.0 Bcfd (Dominion - Cove Point LNG)
- C. Elba Island, GA : 1.2 Bcfd (El Paso - Southern LNG)
- D. Lake Charles, LA : 2.1 Bcfd (Southern Union - Trunkline LNG)
- E. Gulf of Mexico: 0.5 Bcfd (Gulf Gateway Energy Bridge - Excelerate Energy)

**APPROVED BY FERC**

- 1. Hackberry, LA : 1.5 Bcfd (Cameron LNG - Sempra Energy)
- 2. Bahamas : 0.84 Bcfd (AES Ocean Express)\*
- 3. Bahamas : 0.83 Bcfd (Calypso Tractebel)\*
- 4. Freeport, TX : 1.5 Bcfd (Cheniere/Freeport LNG Dev.)
- 5. Sabine, LA : 2.6 Bcfd (Sabine Pass Cheniere LNG)
- 6. Corpus Christi, TX: 2.6 Bcfd (Cheniere LNG)
- 7. Corpus Christi, TX : 1.1 Bcfd (Vista Del Sol - ExxonMobil)
- 8. Fall River, MA : 0.8 Bcfd (Weaver's Cove Energy/Hess LNG)
- 9. Sabine, TX : 2.0 Bcfd (Golden Pass - ExxonMobil)
- 10. Corpus Christi, TX: 1.0 Bcfd (Ingleside Energy - Occidental Energy Ventures)\*\*
- 11. Logan Township, NJ : 1.2 Bcfd (Crown Landing LNG - BP)
- 12. Port Arthur, TX: 3.0 Bcfd (Sempra Energy)
- 13. Cove Point, MD : 0.8 Bcfd (Dominion)
- 14. Cameron, LA: 3.3 Bcfd (Creole Trail LNG - Cheniere LNG)
- 15. Sabine, LA: 1.4 Bcfd (Sabine Pass Cheniere LNG - Expansion)
- 16. Freeport, TX: 2.5 Bcfd (Cheniere/Freeport LNG Dev. - Expansion)
- 17. Hackberry, LA : 1.15 Bcfd (Cameron LNG - Sempra Energy - Expansion)
- 18. Pascagoula, MS: 1.5 Bcfd (Gulf LNG Energy LLC)
- 19. Pascagoula, MS: 1.3 Bcfd (Bayou Casotte Energy LLC - ChevronTexaco)

**APPROVED BY MARAD/COAST GUARD**

- 20. Port Pelican: 1.6 Bcfd (Chevron Texaco)
- 21. Louisiana Offshore : 1.0 Bcfd (Gulf Landing - Shell)
- 22. Offshore Louisiana : 1.0 Bcfd (Main Pass McMoran Exp.)
- 23. Offshore Boston: 0.4 Bcfd (Neptune LNG - SUEZ LNG)
- 24. Offshore Boston: 0.8 Bcfd (Northeast Gateway - Excelerate Energy)

**CANADIAN APPROVED TERMINALS**

- 25. St. John, NB : 1.0 Bcfd (Canaport - Irving Oil/Repsol)
- 26. Kitimat, BC: 1.0 Bcfd (Kitimat LNG - Galveston LNG)

**MEXICAN APPROVED TERMINALS**

- 27. Altamira, Tamulipas : 0.7 Bcfd (Shell/Total/Mitsui)
- 28. Baja California, MX : 1.0 Bcfd (Energia Costa Azul - Sempra Energy)
- 29. Baja California - Offshore : 1.4 Bcfd (Chevron Texaco)

**PROPOSED TO FERC**

- 30. Long Beach, CA : 0.7 Bcfd, (Mitsubishi/ConocoPhillips - Sound Energy Solutions)
- 31. LI Sound, NY: 1.0 Bcfd (Broadwater Energy - TransCanada/Shell)
- 32. Bradwood, OR: 1.0 Bcfd (Northern Star LNG - Northern Star Natural Gas LLC)
- 33. Port Lavaca, TX: 1.0 Bcfd (Calhoun LNG - Gulf Coast LNG Partners)
- 34. Pleasant Point, ME : 2.0 Bcfd (Quoddy Bay, LLC)
- 35. Robbinston, ME: 0.5 Bcfd (Downeast LNG - Kestrel Energy)
- 36. Elba Island, GA: 0.9 Bcfd (El Paso - Southern LNG)
- 37. Baltimore, MD: 1.5 Bcfd (AES Sparrows Point - AES Corp.)
- 38. Coos Bay, OR: 1.0 Bcfd (Jordan Cove Energy Project)

**PROPOSED TO MARAD/COAST GUARD**

- 39. Offshore California : 1.5 Bcfd (Cabrillo Port - BHP Billiton)
- 40. Offshore California : 0.5 Bcfd, (Clearwater Port LLC - NorthernStar NG LLC)
- 41. Gulf of Mexico: 1.4 Bcfd (Bienville Offshore Energy Terminal - TORP)
- 42. Offshore Florida: 1.9 Bcfd (SUEZ Calypso - SUEZ LNG)
- 43. Offshore California: 1.2 Bcfd (OceanWay - Woodside Natural Gas)

# Location of Offshore LNG Facilities in the Gulf of Mexico



## Status

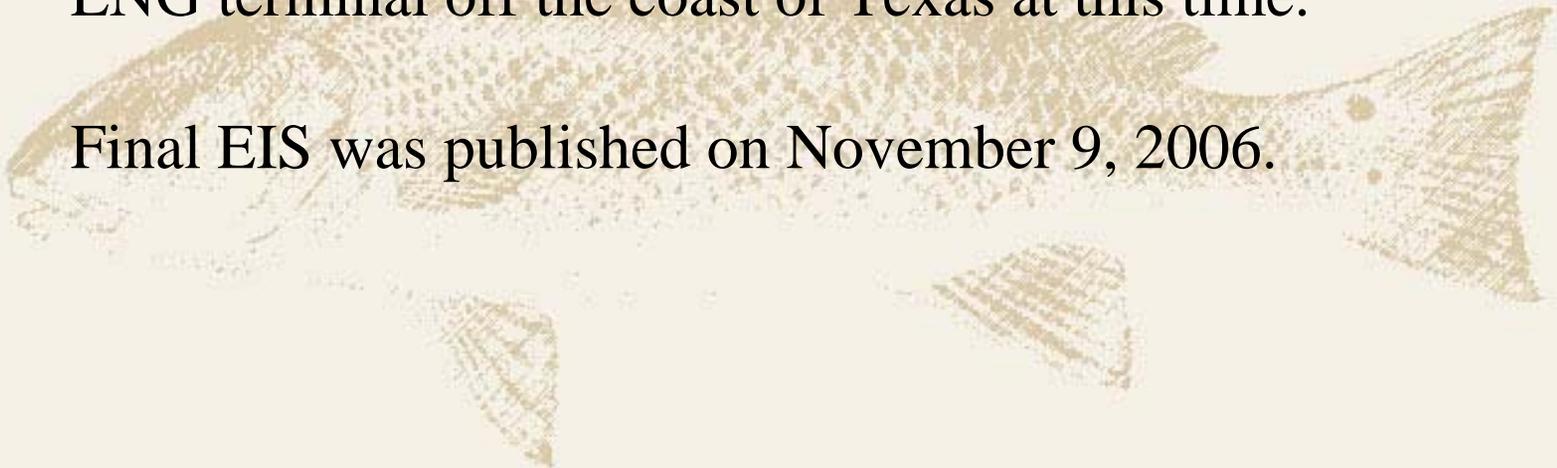
- Application Withdrawn
- Approved - Open Loop
- Approved - SCV
- Online - Open Loop
- Pending

# Beacon Port

---

On November 3, 2006, ConocoPhillips sent a letter to the USCG stating “Since filing our application for the Beacon Port Deepwater Port project in January 2005, regulatory authorities have approved a number of new LNG import projects and expansions of existing or proposed facilities in the western Gulf of Mexico. With our capacity at Freeport and nearby Golden Pass, ConocoPhillips no longer has a business need for an LNG terminal off the coast of Texas at this time.”

Final EIS was published on November 9, 2006.



# Gulf Landing

---

Status – Deepwater Port License Application to operate an open rack vaporizer was approved on February 16, 2005.

Gulf Landing has not received their National Pollution Discharge Elimination System (NPDES) permit from EPA yet. Currently, there is no timeline for when they will be proceeding with applying for the permit. Gulf Landing cannot operate without a NPDES permit.

Gulf Landing is currently developing a monitoring, mitigation, and prevention plan. This plan will become the de facto standard for all other LNG facilities. The draft plan should be out for review soon.

# Pearl Crossing

---

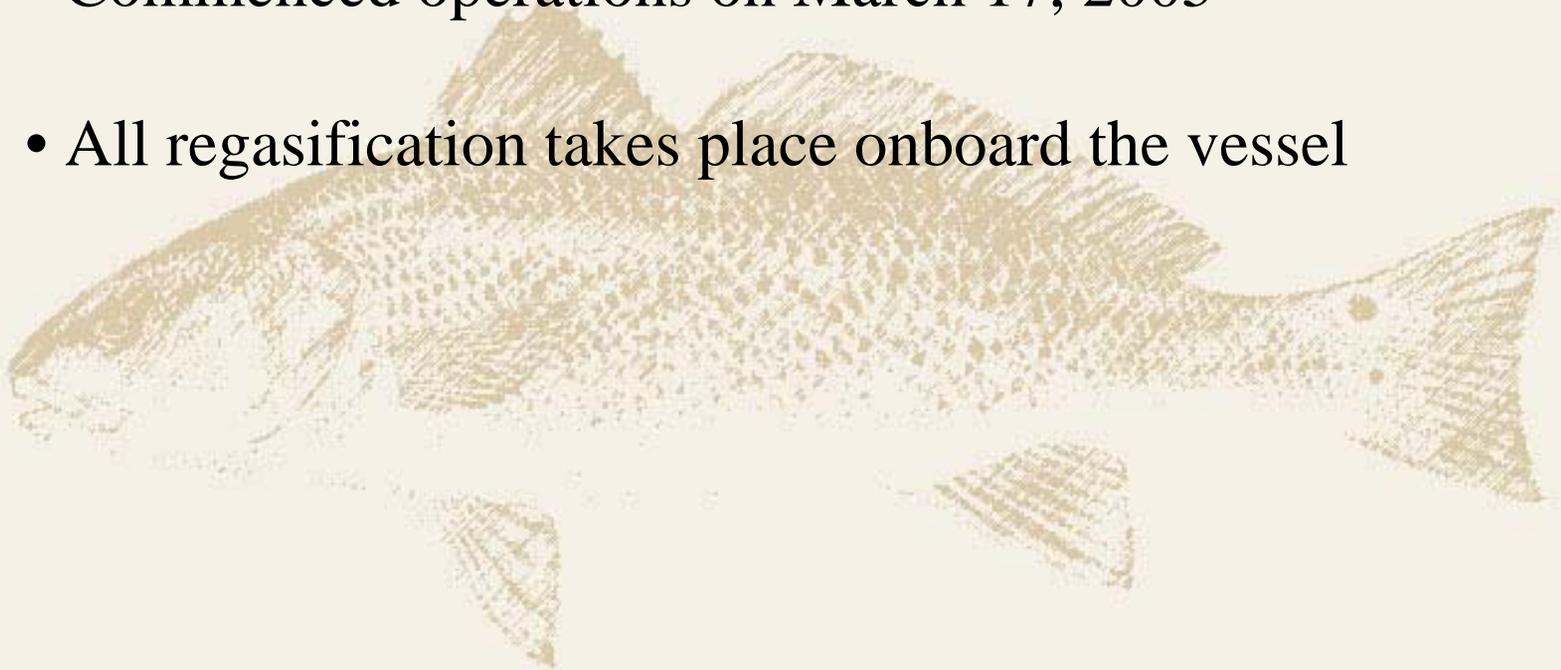
Status – On October 19, 2005, ExxonMobil stated that they “no longer have a current business need for an offshore terminal in the Gulf of Mexico,” and withdrew their deepwater port license application.



# Energy Bridge

---

- Open loop system using 76 million gallons of water per day
- Received their license in May 2004
- Commenced operations on March 17, 2005
- All regasification takes place onboard the vessel



# Port Pelican

---

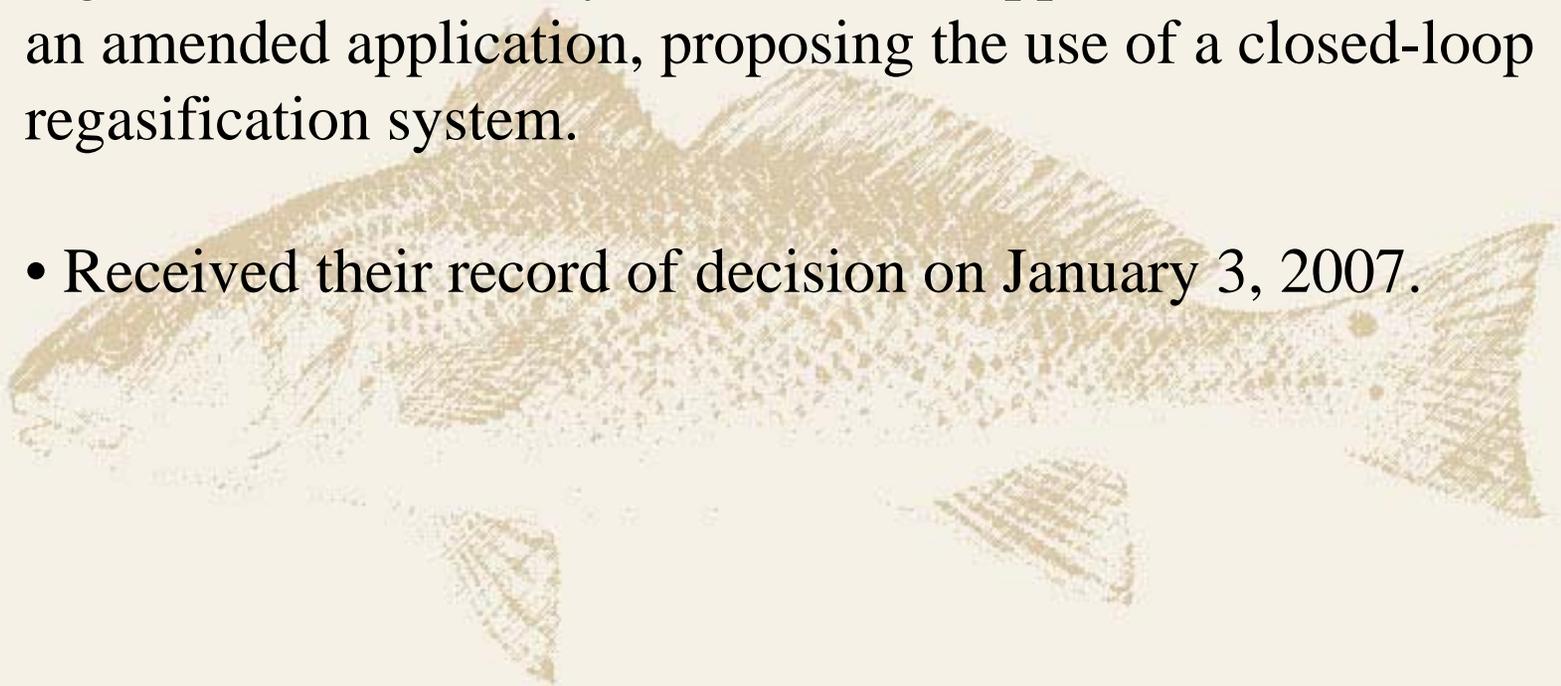
- Deepwater Port license was granted in January 2004
- On July 12 2005, Port Pelican announced its decision to put the project on hold indefinitely



# Main Pass

---

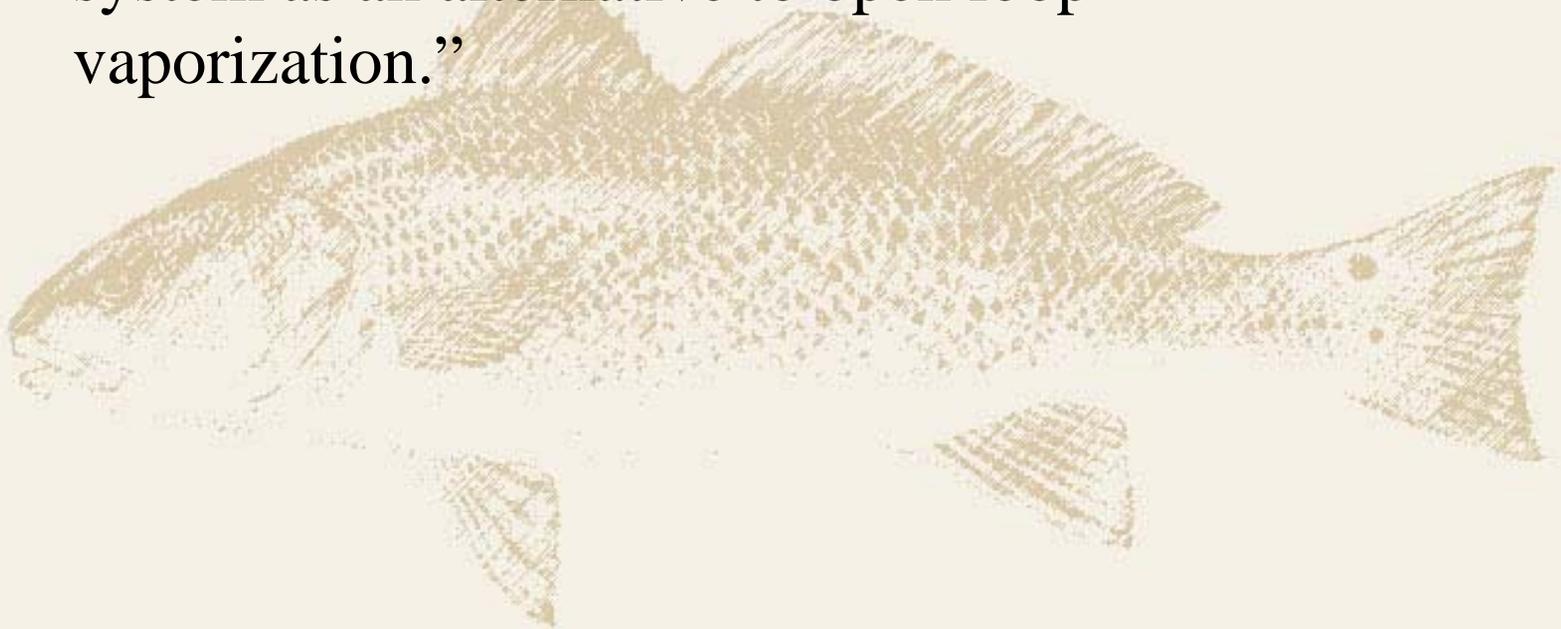
- Originally proposed to use an open rack vaporizer.
- On May 5, 2006, the Governor of Louisiana used the adjacent coastal state authority to veto the project based on the proposed use of an open rack vaporizer for LNG regasification. On May 31, 2006, the applicant resubmitted an amended application, proposing the use of a closed-loop regasification system.
- Received their record of decision on January 3, 2007.



# Compass Port

---

Status – On June 8, 2006, ConocoPhillips advised MARAD of the withdrawal of its Compass Port Deepwater Port application. ConocoPhillips has stated they were currently “evaluating the economics of utilizing a closed loop warming system as an alternative to open loop vaporization.”



# TORP Technology

---

USCG published a notice of intent to prepare an EIS on June 1, 2006 and requested scoping comments for the facility. The facility is approximately 63 miles south of Mobile Point, Alabama in water depths of 425 feet. Since it is so far offshore, the Commission commented that the four species of concern (red drum, red snapper, menhaden, anchovy) would not be adequate to fully represent fishery impacts. Draft EIS should be released soon.

