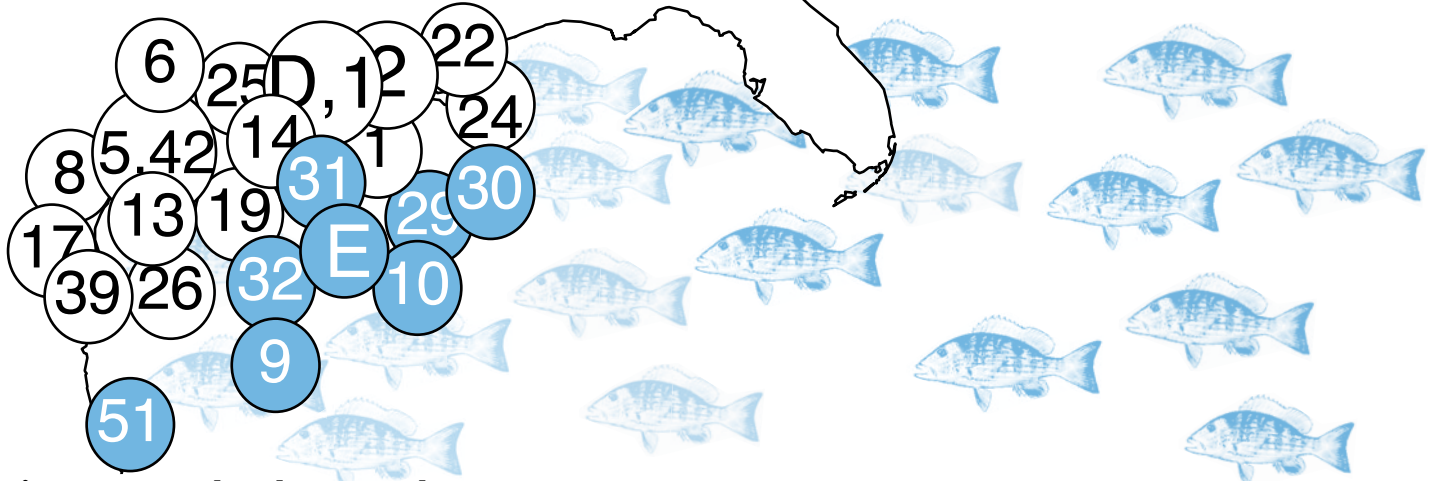




LNG Facilities Threaten Gulf Fisheries Help Stop the Shell Games



Existing, approved and proposed LNG terminals in the Gulf

Open-loop systems in **BOLD**

Existing:

D. Lake Charles, LA: Southern Union – Trunkline LNG
E. Gulf of Mexico, off shore: **ExcelerateEnergy**

Approved:

1. Lake Charles, LA: Southern Union – Trunkline LNG
2. Hackberry, LA: Semptra Energy
5. Freeport, TX: Cheniere/Freeport LNG
6. Sabine, LA: Cheniere LNG
8. Corpus Christi, TX: (Cheniere LNG)
9. Port Pelican, off shore: Chevron Texaco
10. Gulf Landing, off shore: Shell
51. Altamira, MX: Shell

Proposed:

13. Corpus Christi, TX: ExxonMobil
*Switched to non-open loop
14. Sabine, TX: ExxonMobil
*Switched to non-open loop
17. Corpus Christi, TX: Ingleside Energy /Occidental Energy
19. Port Arthur, TX: Semptra
22. Pascagoula, MS: Gulf LNG Energy
24. Pascagoula, MS: ChevronTexaco
25. Cameron, LA: Cheniere LNG
26. Port Lavaca, TX: Calhoun LNG
29. Main Pass, off shore: McMoRan
30. Compass Port, off shore: ConocoPhillips
31. Pearl Crossing, off shore: ExxonMobil
32. Beacon Port, off shore: ConocoPhillips
39. Galveston, TX: BP
*Switched to non-open loop
42. Freeport, TX: Cheniere/Freeport LNG – Expansion

Source: <http://www.ferc.gov>

Open-loop Liquefied natural gas (LNG) terminals pose a developing threat to commercial and recreational fishing in the Gulf. Imported natural gas, shipped to the U.S. in a liquefied form, needs to be warmed to be “regasified,” and then delivered to our gas pipeline infrastructure.

Eight of the 23 facilities proposed for the Gulf have been designed to use an open-rack vaporizer, or **open-loop system**, running Gulf seawater through radiator-like racks. **This process will run kill billions of fish eggs, larva and zooplankton** by exposing billions of gallons of Gulf seawater to -260°F LNG (cooling the water by as much as 20° F), chlorinating the water (to keep algae from growing in the LNG heat-exchanger), and running sea-life through the radiator-like heat-exchanger.

Open-loop LNG terminals are currently proposed in essential

habitat for **shrimp, redfish (red drum), Spanish and king mackerel, red snapper, cobia, dolphin, and blue fin tuna**, among others.

Oil and gas corporations have an alternative: Closed loop systems, though more expensive to the gas companies, would be significantly less destructive to our fisheries.

While the energy industry is important to the Gulf, our commercial and recreational fishing industries are critical, generating \$800 million in commercial landings and \$5.6 billion in recreational expenditures annually.



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Case study:

SHELL GAS AND POWER'S GULF LANDING TERMINAL

38 nautical miles off the coast of Louisiana, south of Lake Charles, *this facility could destroy the equivalent of 3.8 percent of Louisiana's annual redfish catch; have significant, unknown impacts on shrimp; and dump 136 million gallons of chilled, chlorinated, lifeless seawater into the Gulf, 365 days per year.* Shell cleared nearly \$2 million per hour in profits in 2004, yet claims the \$20-\$43 million in additional annual expense makes a closed-loop system unprofitable. It would cost Shell less than one day's profit to 'close the loop.'

1. One single natural gas terminal, ConocoPhillips facility South of Alabama, could destroy the equivalent of 35% of Mississippi's annual redfish catch, and have unknown but possibly severe impacts on commercially critical shrimp and crabs.
2. 8 off-shore terminals are currently proposed for the Western Gulf of Mexico, and all are being designed to use the destructive, open-loop process that threatens our fisheries.
3. Recreational fishing for redfish alone brings a national economic impact of \$164 million in direct expenditures. The total economic impact is estimated to be \$298 million.
4. Shell Oil Corporation made enough profit in one day to cover the cost of switching their terminal from open to closed-loop.
5. The Sierra Club is proud to be a leading member of the Gumbo Alliance for Safe LNG, working alongside commercial shrimpers, sportfishermen, charter boat captains and others on this effort.

To stay in the loop on the fight for safe LNG for the Gulf, visit our website:

<http://louisiana.sierraclub.org>