

GAO Report Highlights Incomplete Research by Government on the Risk from Attacks on LNG Tankers

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NEWS RELEASE

Committee on Energy and Commerce

Rep. John D. Dingell, Chairman

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Dingell and Barton Announce Hearings on LNG Tanker Security Safety and Licensing

A Government Accountability Office (GAO) report, *Public Safety Consequences of a Terrorist Attack on a Tanker Carrying Liquefied Natural Gas*, released today by top members of the Committee on Energy and Commerce highlights incomplete research by the Government on the effects of a terrorist attack on Liquefied Natural Gas (LNG) tankers. GAO urges the Department of Energy (DOE) to conduct new studies on public impacts from a major fire or vapor cloud release from an attack on an LNG tanker. This GAO report coincides with a projected 400 percent increase in LNG imports over the next 10 years at a time when energy companies have submitted 32 applications to build new terminals in 10 states and five off shore areas.

"In a post-9/11 era, we need answers about the safest way to handle LNG in light of the fact that it is slated to fill 17 percent of U.S. natural gas requirements over the next decade," said Rep. John D. Dingell (D-MI), Chairman of the House Committee on Energy and Commerce. "Although LNG tankers have not been subject to a catastrophic accident or attack, we need to ensure regulators are making decisions with a large enough margin of safety to account for the threats in a post 9/11 environment. Our hearings will review DOE's plans to ensure they are conducting the research needed to make sound siting decisions, and to examine the upsides and downsides of siting onshore vs. off-shore LNG terminals."

"LNG shipments do have an excellent safety record, evidenced by the fact that more than 40,000 tankers have delivered LNG over 47 years without a major spill," said the committee's ranking member, U.S. Rep. Joe Barton, R-Texas. "In the unlikely event of an LNG tanker fire, most experts surveyed by GAO agree that the protection zones already required for LNG tankers will do the job of protecting the public. That's good news, but given the long history of safety, it's also what we expected. GAO's recommendation for continued research on the theoretical impact of a major spill is only prudent, however, and I'm confident that FERC will continue to apply the latest science to support its licensing decisions."

Rep. Edward J. Markey (D-MA), a Member of the Committee whose district includes the nation's only urban LNG importation terminal, the Distrigas facility in Everett, said, "GAO found that there are widely conflicting estimates regarding the worst-case consequences of a terrorist attack on LNG tankers. Given the fact that LNG is being transported into Boston harbor every several days on the way to the Everett LNG terminal, it's very troubling that our knowledge about the potential public safety consequences of a terrorist attack on these vessels is not better."

Rep. Markey noted that, "The GAO also reports that a study the Energy Department recently commissioned to address large-scale LNG fires only looks at 3 of the top 10 issues that the experts believe need to be addressed, and that this DOE study won't include any examination of one of the most serious accident scenarios that experts believe could cause the most damage -- a cascading failure of the LNG tanks on these vessels. I believe the Energy Department needs to expand its current LNG study immediately so that it examines all of the top LNG safety issues that GAO has identified."

Specifically, GAO's report urged DOE to study the heat effects from large pool fires, rather than relying on hypothetical estimates based on much smaller fires that may not be representative. Sandia National Laboratory plans to carry out such research later this year. This research is important because new tankers are being deployed which are nearly twice as large as current day tankers and could fuel even larger fires than have been considered by the regulators.

GAO also recommended that DOE study cascading failures of multiple LNG cargo tanks, in the event of a terrorist attack. A typical LNG tanker has five LNG storage tanks and holds 125,000 cubic feet of LNG chilled to -260 Fahrenheit. A single tank failure could trigger additional tanks to fail and leak LNG. For example, LNG flooding the inside of a ship's hull at -260 F could embrittle the ship's structure and cause it to fracture; this would cause additional LNG tanks to break open and feed the fire. A single tank fire could also lead to other tanks leaking if a major fire damaged the ship or other storage tanks. In addition, multiple attacks on a ship could lead to multiple tank spills. However, most experts surveyed by GAO agree that cascading events are not expected to increase overall fire size or hazard ranges (more than 20-30 percent).

"Given the economy's increasing reliance on liquefied natural gas, the concerns raised in the GAO report on the dangers of LNG are important for the Energy and Commerce Committee to consider," said Rep. Bart Stupak (D-MI), Chairman of the Committee on Oversight and Investigations. "Our Subcommittee is concerned about how our government can best ensure the safe and efficient delivery of LNG into our country and plans to examine the national security implications of the energy supply system."

The GAO surveyed 19 LNG experts who agreed that 1) the most likely public safety impact of an LNG spill is heat impact of a fire, 2) explosions are not likely to occur in the wake of an LNG spill, and 3) some hazards, such as freeze burns and asphyxiation, do not pose a hazard to the public. Eleven of these 19 experts agreed that the one mile protection zone to protect public health from heat impact of a fire and used by federal agencies in assessing waterways and permitting LNG terminals is "about right" or "should be smaller", and four experts believed the protection zone was not large enough. In the event of a leak, an LNG vapor cloud could ignite and the resulting fire would burn back towards to site of spill. These fires would burn over the pool of LNG floating on the water, and tend to be much hotter than an oil fire. These experts recommended further studies over what size boundary is correct, as did GAO.

A 2004 study conducted by Sandia National Labs, which is used today as a guideline by the Federal Energy Regulatory Commission (FERC) and the Coast Guard, is the basis for setting the one mile exclusion zones around LNG facilities and tankers in the event that there is a major spill and fire. However, the Sandia report notes there are numerous inconsistencies between studies used to estimate consequences from an attack on an LNG tanker. Given this sea of uncertainty, the House Committee on Energy and Commerce, the Committee on Homeland Security and U.S. Representative Edward Markey asked the GAO to assess what is a credible worst case scenario and whether the Coast Guard and FERC are taking sufficient protective measures to protect the public.

Copy of the GAO report

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Prepared by the Committee on Energy and Commerce

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