

# LNG

## Liquid natural gas

Bob Nirkind

1977

### 1. The LNG Terror

“The area between 55<sup>th</sup> and 62<sup>nd</sup> streets, St. Clair Avenue and the lake became an inferno. Gas flowed down the streets and into the sewers. The slightest spark exploded it. Manhole covers flew high into the air, then fell like bombs back on the fleeing crowds.

“Twenty-nine acres of homes and stores were completely gutted. At the center of the death zone temperatures reached nearly 3000 degrees. Birds were incinerated as they flew and fell back to the blazing streets. Gas in the streets ignited, making them rivers of flame...

“The gas started backing up in the basements of the houses, seeping toward pilot lights under hot-water tanks. Like a string of firecrackers, the houses exploded.”

—*The Cleveland Press*, October 20, 1944.

Picture a world in which oversized supertankers hauling liquid explosives are towed back and forth across the oceans of the globe, threatening at any moment to erupt into a lesser or possibly greater nightmare than the one described above. The prospect is not only terrifying, but unfortunately all too real with the advent of LNG (liquid natural gas) as the fuel of the future.

A relatively minor disaster compared to what could now occur at any time, the Cleveland holocaust of 1944 — brought on when the special steel with carbon and nickel content storage tanks turned brittle from LNG’s -255 degree temperature cracked and allowed the gas to escape, vaporize and ignite—resulted in 131 deaths, another 300 injuries, the destruction of 10 industrial plants, 80 houses, 200 automobiles and a total damage claim of \$6 million.

Basically, this deadly fluid is natural gas refrigerated to -255 degrees to allow shrinkage into a crystal-clear liquid. The liquid is cooled in order to render it more portable. With this compression, 600 cubic feet of gas can be condensed into one cubic foot of liquid, making it infinitely easier and cheaper to import by ship.

Transported in liquid form, LNG becomes flammable only when it vaporizes and mixes with the air in specific proportions. Too rich at first, once the gas is sufficiently diluted with oxygen, it comes alive and bursts brightly into flame.

As a consequence of these technological advances, natural gas can now be liquefied, pumped aboard super-tankers and shipped to continental American ports. Algeria has already exported LNG to Boston, with Providence and New York slated to begin receiving shipments later this year and Los Angeles, Savannah, Fall River, Massachusetts and Cove Point, Maryland amongst others penciled in for the future.

While the gas industry has been working overtime assuring environmentalists and other concerned parties that LNG presents little or no safety hazards thanks to their leak-proof storage containers, flawless supertankers and crackerjack crews, the facts don't come anywhere close to backing up their claims.

According to Dr. James Fay, professor of mechanical engineering at MIT and chairman of the Massachusetts Port Authority: "The burning of the full cargo of an LNG supertanker would be equivalent to the burning of 100 Hindenburgs (the famed Nazi Zeppelin which exploded and killed many of its passengers and crew in its maiden voyage to America)."

In an article published in the November 1972 issue of *Environment*, Dr. Fay emphasized that no fire department in the world could hold in check the flames from an LNG blaze. Fire hoses would only serve to increase the evaporation of the liquid and feed the fire.

"Once you light the LNG," Dr. Fay stressed, "I believe it would be impossible to control. It would simply burn until all the LNG was burned up."

Should one of these allegedly foolproof supertankers have a serious accident in or close to a port city, the effects would be devastating. In a risk analysis for Los Angeles done by Science Application, Inc., a consulting firm hired by the Western LNG Terminal Company, the maximum potential death toll for LA harbor was calculated at 42,000. In a "worst possible accident" scenario for Oxnard harbor, 84,000 was the computed number of fatalities.

Across the country, a Federal Power Commission impact statement for New York estimated that 242,950 persons now reside in what they termed the "corridor of concern"—the area downwind of an LNG spill. In the instance of a mishap, the ensuing carnage would totally engulf the New Jersey towns of Perth Amboy and Carteret as well as a goodly portion of Staten Island.

Although no one knows for sure just how far a natural gas vapor plume can travel, a recent article on the subject of LNG in Mother Jones produced some thought-provoking estimates: the Federal Power Commission final impact statement for Staten Island said three miles; the American Petroleum Institute said 14 miles; the U.S. Bureau of Mines guessed 75 miles; and the aforementioned Dr. Fay of MIT figured 127 miles.

As for the amount of damage done by such an occurrence, Dave Burgess of the Bureau of Mines testified at one Federal Power Commission: meeting that wood would catch fire six radii away and that human skin would blister from radiation eight radii away.

"When the city of Hamburg was bombed with incendiaries in World War II," Burgess continued, "the burning of the city was described as a 'firestorm' and winds induced by the fire were said to have approached hurricane velocity...I do not wish to put myself in the position of predicting a firestorm. My point is that the Metropolitan New York area is no location in which to find out."

The gas industry's contention that LNG poses little or no safety hazard borders on the absurd. The gas's explosive tendencies aside, there's simply no proof, and plenty of evidence to the contrary, to the claim that these great supertankers are adequate insurance against horrendous accidents.

As pointed out only too well in Noel Mostert's book *Supership*—a revealing expose of the dangers of oil supertankers—these mighty monsters are so overwhelmingly large and powerful that they can easily tear through smaller boats below without so much as feeling the impact. Furthermore, due to their great weight, they reportedly tend to veer to the side when reducing speed and attempting to stop.

At that, Mostert says that even average-sized tankers can decelerate at only about one knot per minute. Imagine the futility of trying to halt the forward progress of one of these supertankers should an emergency situation reveal itself.

In these last few months alone we've seen the daily papers virtually overflowing with stories about the sinkings or groundings of five oil tankers. Had the tanker that ran aground after striking a submerged rock near Staten Island been carrying LNG, the breeze which blew 250,000 gallons of oil ashore would just as easily have sent the gas vapors over Perth Amboy, where they undoubtedly would have been ignited by the burn-off flames at the huge petrochemical complex nearby.

The safety record of the oil tanker business speaks for itself. In the first six months of 1976 (the last half-year period for which there are available statistics), 419 tankers struck other vessels, got stranded or suffered fires and/or explosions. There were, during that period, 43 crewmen killed and 20 injured, not forgetting that 163,400 tons of oil were dumped into the sea as well.

The Coast Guard particularly is concerned about the hazards involved in these great tankers docking in American ports. Already stringent rules for the entry of these floating landmines have been set up: visibility must be clear for over two miles; shipping lanes must be vacated by all other vessels long in advance; fire departments must be warned; unloading is suspended during any electrical storm; welding, smoking or any other “similar activity” is forbidden anywhere near the tanker; boarding parties must inspect the ship hours before unloading can begin; and the ship must enter the harbor at a reduced speed only with a Coast Guard escort.

As the Coast Guard stated in its 1967 report on cryogenic liquids: “We believe that the chemical-carrying ship, which is actually a gigantic package of such dangerous cargo, presents a port and population hazard similar in nature to that of a nuclear vessel.”

Exceedingly dangerous, obviously, LNG nonetheless is currently the world’s major energy consideration for the years to come, now that the cheaper and more readily available fuels are running out...if indeed they are.

Should we be left with LNG, two important problems must be dealt with. First, liquid natural gas costs two-to-three times as much as domestic gas. Second, LNG terminals will have to be built, but where? On land LNG presents a grave danger to all life forms. In remote locations in the sea or over barren land, the environment will be threatened.

Although considerations such as these have entered little into the government’s assessment of the situation, it’s specifically these questions to which the answers will determine our future.

## **2. The LNG Connection**

The origin of the LNG connection between the Western World and the Middle East dates back to the early 1960s, when the leaders of newly independent Algeria took the natural gas deposits which the retreating French abandoned believing them to be valueless, liquefied the gas and shipped it off in small quantities to new markets in southern Europe. As the demand for gas rose, the Algerians gradually began to realize just how valuable their product was, as well as how influential a commodity it could become.

By the late ‘60s, with the oil companies having won their war against the Federal Power Commission on the question of who had the right to regulate the wellhead price of gas, the possibility of importing the even more expensive LNG became an enticingly lucrative proposition. Added to the OPEC oil embargo and the worldwide search for new sources of energy, the LNG business had limitless potential.

The result was that four countries became integrally involved in the growth of the LNG industry—Indonesia, whose state corporation, Pertamina, was to mine and sell the gas; Japan, whose Nippon Steel and Osaka Coal corporations had contracted for 7.5 million tons of LNG a year for twenty years; Britain, whose rescue of the Burmah Corporation tanker fleet put it in the forefront of the LNG shipping business; and the United States, whose Quincy, Mass. shipbuilding community depended on General Dynamics’ multi-million dollar tanker contract for survival.

When the bottom fell out of the market in 1974 and all four involved countries faced serious economic consequences, the wretched sordidness of their business dealings began to be uncovered. It was alleged, among other things, that Burmah had been involved in million-dollar bribes to Indonesia to secure its business. It was also alleged that the now-infamous Korean lobbyist Park Tong Sun had been the go-between in the shipping arrangements with Japan Lines.

Back in the States, government officials in New York and Washington questioned the legality of the Maritime Administration underwriting the construction of foreign-owned operations. General Dynamics then added further fuel to the furor by inexplicably jacking up the price of its tanker construction from \$92 million to \$150 million.

Ever faithful to the interests of big business, the Ford Administration, via outgoing Secretary of Commerce Elliot Richardson, in the last moments of its existence, ratified a \$730 million guarantee for the construction of LNG tankers by General Dynamics at its Quincy, Mass. shipyards. With this assurance—referred to in a Voice piece by Alexander Cockburn and James Ridgeway as “the largest federal handout to a single corporation in the history of the United States”—the future of the LNG industry was well secured.

Secured for whom though? Certainly it’s not been secured for our benefit, and The answer as to who’ll foot the bill for this extravagant new energy source isn’t hard. From the high cost of the Coast Guard cutters necessary to

guide the supertankers into port to the Army Corps of Engineers' maintenance of the harbors to the government's financing of a \$730 million shipbuilding operation in the private sector (now thought to run somewhere in the neighborhood of \$145 million per tanker), it'll all come out of our pockets.

Who actually stands to benefit from America's acceptance of LNG as the energy source of the future? According to Cockburn and Ridgeway, there are five benefactors: Elliot Richardson, who'll now be able to run for governorship of Massachusetts with the background of having preserved 6,000 jobs in Quincy; General Dynamics, which has strengthened the weakest link in its operations, shipbuilding; the British government, who'll finally be able to use the tankers it owns and consequently be in the position to pay Burmah's over \$5 million debt to American banks; the Bechtel Construction Company, a U.S. concern, which now stands to make around-\$1 billion by building natural gas storage facilities in Indonesia and, finally, Pertamina, the Indonesian state corporation that'll make a fortune selling LNG.

In every way, the use of LNG as our primary energy source makes no sense to the vast majority of us. Excessively expensive, the gas will certainly contribute greatly to inflation worldwide as well as further adding to the numerous threats to our lives and health which we must already face.

The coming of LNG poses more insidious threats, though. It serves to once again reinforce the dominance of the State over our lives. In this instance, it seeks to regulate our fuel consumption, chooses an alternative energy source for us after having sold us a bill of goods for so many years as to the infinite abundance of our fossil fuels and, finally, forces us to accept its choice.

Under the guise of strict fuel conservation, "a combination of voluntary and other conservation measures" in the words of President Carter, a modern day police state whose dictates are carried out by local authorities is in the works. The arrival of LNG as the heralded fuel of the future is yet another step in that direction.

—Bob "The Voice of Doom" Nirkind

# fifth Estate

Bob Nirkind  
LNG  
Liquid natural gas  
1977

<https://www.fifthestate.org/archive/281-march-1977/lng>  
Fifth Estate #281, March, 1977

**[fifthestate.anarchistlibraries.net](https://fifthestate.anarchistlibraries.net)**