FAILURE TO LAUNCH:
The Slow Growth of LNG after the 1970s

Joe Pratt
NEH-Cullen Professor of History & Business
University of Houston

LNG 17
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Oil & Gas Journal:
List of Obstacles to LNG’s Growth in the 1977

Regulatory Lag: approvals, EIS (especially in U.S.)
Financing: very high capital costs—creative financing
Siting Issues: complicated by “superficial” safety concerns
Supply Reliability: requires great care in planning projects
Technical Reliability: calls for greater care in training
Case Studies from 1970s

Early accidents

– Cleveland Disaster of 1944
– Staten Island Explosion in 1973

Two Giant Soviet Union to U.S. LNG Projects

– North Star from Siberia to U.S. East Coast
– Valdivostok to U.S. West Coast

Exxon’s Libyan LNG Facility

El Paso Natural Gas and Algeria
“The Cleveland Disaster of 1944”

Holding tanks failed at one of the first commercial LNG facilities in the U.S., and the tank’s contents spilled out into streets and sewers. A massive explosion then killed approximately 130 and destroyed many structures in the surrounding area.

NOTE: This was a peak shaving facility, not an import facility.
Staten Island: Texas Eastern Tank Repair Fire, 1973

Fire during the repair of a LNG Storage tank in Staten Island, New York

Forty dead and much lingering public concern about the safety of LNG
Exxon’s Early Libyan LNG

Libyan Oil Fields and LNG

Postcard: Marsa El Brega LNG
Two Large Projects Proposed by U.S. Pipeline Companies in the Soviet Union in 1970s

1. **NORTH STAR**: Texas Eastern - Giant Urangoiske Gas Field, 1,700 mile pipeline to Murmansk, 4,000 mile shipment to Philadelphia in U.S. in 20 LNG tankers. (estimated cost about $7 billion.)

2. **El Paso & Occidental**: 2,000 mile pipeline from Yakutsk to Vladivostok to West Coast of U.S.
Urengoy Gas Field: Northern West Siberia Basin

Ultimately Ukraine via pipeline, not Murmansk for LNG shipment to Philadelphia
Soviet Union to U.S. LNG: Failed Project # 2

2,000 Mile Pipeline, Yakutsk to Vladivostok

Yakutsk: The Coldest City in the World?
ADDITIONS TO
Oil & Gas Journal:
LIST OF OBSTACLES TO LNG’S GROWTH IN 1977

- **Regulatory Lag**: approvals, EIS (especially in U.S.)
- **Financing**: very high capital costs – creative financing
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- **Supply Reliability**: great care in planning projects
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- **ADDITIONAL OBSTACLES FROM CASES in 1970s**:
  - **Extreme price swings**: impossible to plan?
  - **Geopolitics of Cold War**: much uncertainty
  - **Broad changes in Middle East**: new era of producer power