

PROGRAM facts

U.S. DEPARTMENT OF ENERGY
OFFICE OF FOSSIL ENERGY
NATIONAL ENERGY TECHNOLOGY LABORATORY

Gas Exploration,
Production, and Storage

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STRATEGIC CENTER FOR NATURAL GAS WEBSITE

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GAS STORAGE

This technology area focuses on a spectrum of activities identified by industry as high priority to enhance the efficiency and reliability of the natural gas storage system. Emphasis is on development of advanced technologies and methods for improving gas deliverability and capacity, increasing efficiency in reservoir management, and reducing the cost of operation and maintenance.

Current technology development efforts include:

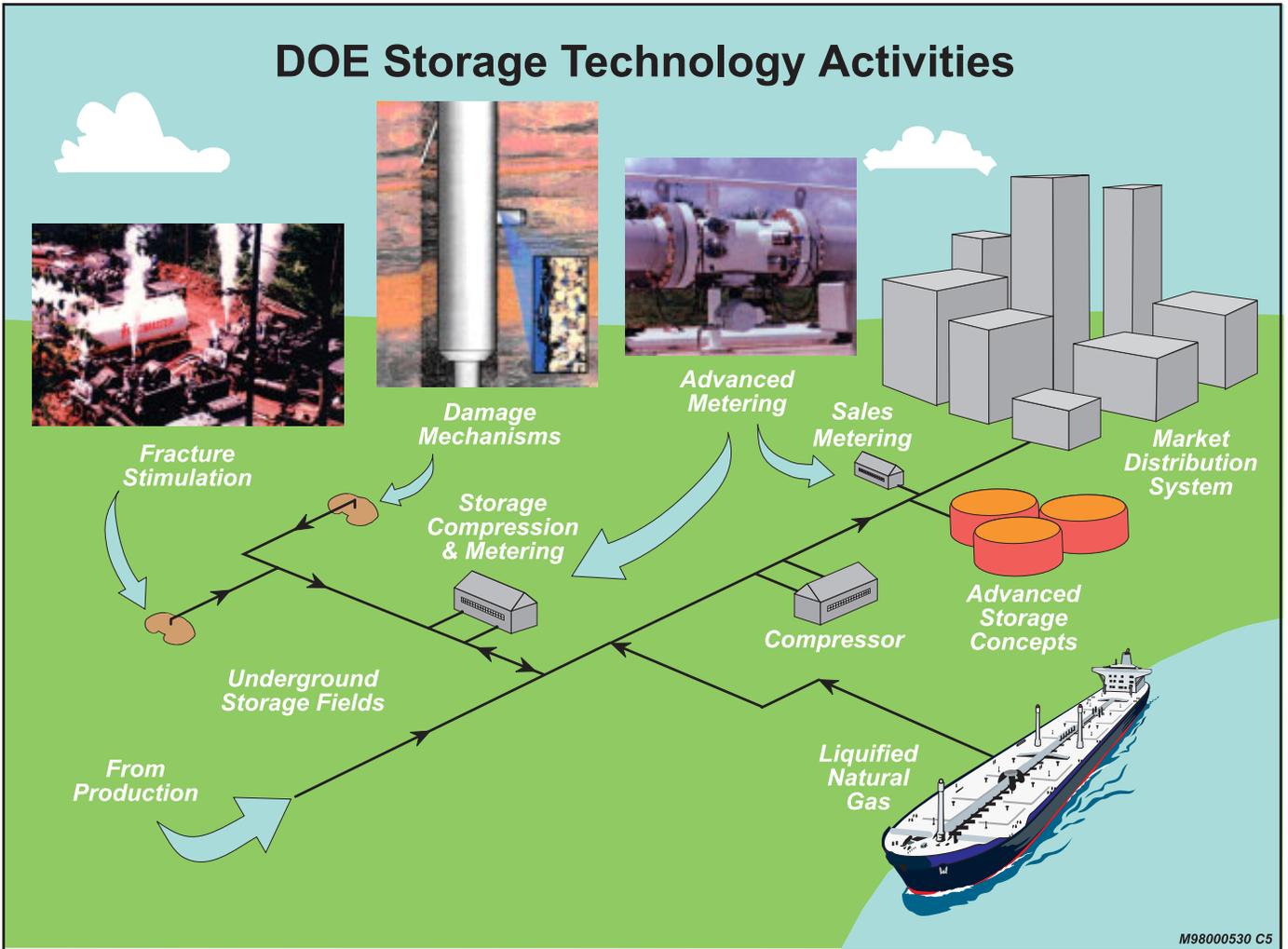
- Improved injection/withdrawal well remediation treatments that will increase storage deliverability and help offset the reported 5 percent annual decline.
- Development of improved gas metering technologies to provide increased accuracy and operational efficiency, and to enable existing flow meters to determine energy flow rate.
- Advanced storage technologies that will provide flexible high deliverability storage service to meet the needs of new and growing industrial and power generation markets in areas without conventional storage geology.

Current Activities

- Improved Remediation Technologies for Injection/Withdrawal Well Damage
 - Sonic Tool for scale removal
 - Tailored treatments for iron precipitates
 - Carbon dioxide based treatments for cleanup of hydrocarbons and organics
- Deliverability Enhancement
 - Hydrate control during rapid reservoir withdrawal
- Energy Meter Development
 - Low-cost retrofit inferential natural gas energy meter
- Advanced Storage Concepts
 - Gas Storage as hydrates proof-of-concept demonstration
 - Technical innovations initiative for brine disposal
 - Bedded-salt cavern design criteria
 - Fracture dissolution of carbonate rocks
 - Novel LNG receiving and salt cavern storage

GAS STORAGE

DOE Storage Technology Activities



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