

# METHANE HYDRATES



# NETL

NATIONAL ENERGY TECHNOLOGY LABORATORY

## OVERVIEW

Since 2000, NETL has been leading a coordinated Methane Hydrate R&D Program, through collaboration with industry, universities, government agencies, national laboratories, and international partners. Major program successes include establishing and implementing hydrate prospecting, drilling, and sampling approaches; organizing international code comparison studies that have led to improved hydrate simulation capabilities; and establishing a stratigraphic test well on the North Slope of Alaska.

The primary mission of NETL's Gas Hydrates Program is to collaborate with industry, academia, international research organizations, and other United States government agencies to advance scientific understanding of gas hydrates such that their resource potential may be better known and production strategies better established. In pursuit of its primary mission, the Methane Hydrates Program is proceeding along the following pathways:

- Evaluating and demonstrating the gas hydrate resource in the Gulf of Mexico and Alaska North Slope
- Establishing a stratigraphic test well on the North Slope
- Collaborating with international partners on hydrate modeling and field projects around the world
- Ongoing outreach to R&D community through the Methane Hydrate Fellowship Program and Fire in the Ice Newsletter

Within these research areas, NETL's Methane Hydrate R&D Program is committed to supporting a range of investigations including field sampling, tool development, calibration and optimization of numerical models, and continued collaboration with domestic and international partners.

NETL's gas hydrates research is conducted in a setting of interagency cooperation with the U.S. Geological Survey, Bureau of Ocean Energy Management, and others. International partnerships have provided a framework for gaining additional experience and opportunities for testing specialized field sampling and analysis tools.

## NETL'S PROGRAM IS AIMED AT PURSUING EACH OF THESE RESEARCH PATHWAYS:

### RESOURCE CHARACTERIZATION

Developing techniques for identifying and characterizing methane hydrate resources in onshore and offshore regions of the U.S.

### PRODUCTION TESTING

Developing tools and techniques to economically produce natural gas from methane hydrate reservoirs; and testing tools and methods at appropriate field sites.

### INTERNATIONAL COLLABORATION

Through international field programs, U.S. and international scientists and engineers have achieved a more complete understanding of hydrate deposits as they occur in a wide variety of geologic settings.

### OUTREACH

In 2001, NETL created "Fire in the Ice," the methane hydrate newsletter that serves the greater international hydrate R&D community. In 2007, NETL and the National Academies of Science, Engineering, and Medicine, launched a research fellowship program to support researchers in methane hydrate science.

## RELEVANT LINKS

**NETL Methane Hydrate R&D Program Web Site:**  
<https://netl.doe.gov/oil-gas/gas-hydrates>

**NETL's Fire in the Ice Methane Hydrate Newsletter:**  
<https://www.netl.doe.gov/advsearch?tid=113>

**NETL Methane Hydrate R&D Program Highlights 2000-2020:**  
<https://netl.doe.gov/sites/default/files/2020-02/NETL-Methane-Hydrate-Program-2000-2020.pdf>

**U.S. DOE Office of Fossil Energy Methane Hydrate Web Page:**  
<https://www.energy.gov/fe/science-innovation/oil-gas-research/methane-hydrate>

## Contacts

**Joseph Stoffa**  
*Technology Manager*  
NETL  
[Joseph.Stoffa@netl.doe.gov](mailto:Joseph.Stoffa@netl.doe.gov)

**Gabby Intihar**  
*Program Manager*  
DOE Headquarters  
[Gabby.Intihar@hq.doe.gov](mailto:Gabby.Intihar@hq.doe.gov)