

PROJECT facts

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



NATURAL GAS & OIL ENVIRONMENTAL RESEARCH PROGRAM

Description

The Department of Energy implements a Natural Gas & Oil Environmental Research Program. Its mission is to promote a clean, reliable, and affordable supply of domestic oil and natural gas by providing cost-effective compliance technologies, improving environmental protection, and supporting a scientific, risk-based environmental regulatory framework.

The program supports development of environmentally friendly, advanced oil and natural gas exploration and production (E&P) technologies and practices. It also promotes managing produced water in innovative ways, expanding access to resources on Federal lands, and streamlining regulations. The program's focus areas are:

- Produced Water Management.
 - Beneficial Use.
 - Treatment Technologies.
 - Disposal Methods.
- Federal Lands Access.
 - Surface Impacts.
 - Air Quality.
 - Drilling Waste/Associated Waste.
 - Arctic Development.
- Regulatory Streamlining.
 - Data Management.



An oil and gas production facility co-existing safely with local flora and fauna in a sensitive Gulf Coast marshland.

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Background

Today, oil and natural gas provide much of the energy and countless materials that we use in our daily lives. Oil and natural gas currently represent 63% of the energy Americans use to heat their homes, generate electricity, fuel vehicles, and provide feedstocks and energy to factories. By 2025, DOE estimates domestic consumption of oil and natural gas each will increase by more than 39%.

Dramatic advances in oil and gas E&P technology have yielded environmental benefits while producing domestic energy supplies to help meet U.S. demand. However, much of the lower-cost oil and gas has been recovered, and the Nation's remaining resources often lie in environmentally sensitive areas that require use of less-intrusive technologies.



ADDRESSES

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America's oil and gas producers face challenges such as environmental concerns, costly and time-consuming regulatory processes, and restricted access to domestic oil and gas resources on public lands. To address these issues and thus meet the Nation's demand for oil and natural gas, it will be crucial to develop new, efficient environmental technologies and cost-effective, science-based regulations.

Objective

The Natural Gas & Oil Environmental Research Program works to:

- Develop effective environmental technologies and improve environmental performance of E&P operations.
- Improve communications and technology transfer among industry, government, Native American Tribes, and the public toward balancing energy needs and environmental protection.
- Resolve critical environmental issues limiting the recovery of oil and gas resources.
- Provide sound environmental science for the development of cost-effective, risk-based regulatory decisions affecting oil and gas E&P.
- Promote streamlining of regulatory processes affecting oil and gas operations.
- Increase public understanding of oil and gas E&P environmental issues.

Benefits

Among the potential benefits of the Natural Gas & Oil Environmental Research Program are:

- Adequate and affordable energy supplies to meet the needs of the U.S. public and promote a viable, economically competitive energy industry.
- More-efficient, cost-effective, and environmentally responsible oil and gas production.
- Smaller ecological footprints, reduced emissions, and favorable social impacts on affected communities.
- Streamlined regulations and greater understanding of energy and environmental issues.
- Increased dialogue among affected parties to balance the Nation's need to develop energy resources with a need to sustain environmental standards.

By accomplishing its objectives, the Natural Gas & Oil Environmental Research Program will help to ensure environmental protection that makes technical, environmental, and economic sense. The program serves a supportive role—working collaboratively with regulators, industry, and the public—to encourage energy approaches and policies that reduce emissions, protect the environment, and meet the energy needs of American consumers.