        - Wind Turbine Technology
        - Geothermal Technologies
    - Gas and Oil Exploration and Production Technologies
        - Polycrystalline Diamond Drill Bits
        - Mudpulse Telemetry for Measurement While Drilling
        - Carbon Dioxide Sand Fracture Production Technology
        - Hot Oiling Paraffin Treatment
        - Insulating Doughnut for Steam Flood of Deeper Oil Wells
        - Improved Oil Recovery Technology for the Green River Formation
        - Carbon Dioxide Miscible Flooding Technology for Oil Recovery
        - Computerized Oil Field Simulators
        - Foam Fracturing of Gas Reservoirs
        - Enhanced Oil Recovery Predictive Models
    - Coal Use Technologies
        - Integrated Gasification Combined Cycle
        - Super 9 Chrome Alloy
        - Atmospheric Fluidized Bed Coal Combustor
        - Low Nitrogen Oxide Burner
        - Pure Air Scrubber
        - Micro-Mag Sulfur Removal Process
        - Advanced Instrumentation Development
        - Ceramic Composite Filters for Hot Gas Cleanup
        - Slagging Advisor Software Model
    - Nuclear Fission Technologies
        - Light-Water Reactors
        - Extended Burnup of Light-Water Reactor Fuel
        - Greenhouse Gas Emissions Reduction
        - Advanced Light-Water Reactors
        - Reduced Enrichment Fuels for Research and Test Reactors
        - Isotopes
        - Radioisotope Thermoelectric Generators
    - Advanced Electricity Generation and Storage Technologies
        - Phosphoric Acid Fuel Cells
        - Advanced Gas Turbine Components
        - High Energy Batteries for Consumer Products

Energy Mission

The Department of Energy's mission and its civilian energy research and development (R&D) programs are motivated by a number of important and enduring public policy objectives. These objectives are rooted in national security, economic, environmental, and scientific leadership considerations. They reflect the pervasive role that energy plays in modern society. They are underpinned by a respectful understanding of history and of the unique vulnerabilities that our Nation faces with regard to certain aspects of long-term energy supply and end-use.

Role of Federal R&D

Accordingly, the Department's applied energy R&D programs fill an important gap in the United States' R&D continuum. This gap is where it is clearly in the *public interest* to pursue certain technological opportunities, especially those that are longterm or highrisk, but where for economic reasons it is not in the *market's interest* to do so.