Energy and Mineral Resources and Environmental Health: Conducts unbiased scientific research, completes energy and mineral resource assessments across the United States, and compiles information and statistics on the worldwide supply and flow of minerals and materials essential to our economy and national security.

The 2019 budget request continues funding for mineral assessments and supports implementation of Executive Order 13817 and Secretarial Order 3359, by initiating efforts on an assessment of the Nation’s critical mineral resources, the Three-Dimensional mapping Economic Empowerment Program (3DEEP), to reduce mineral import dependence, strengthen national security, create durable and well-paying private sector jobs, and generate other economic and social benefits through value-added products and services.

Energy Resources Program

The 2019 budget request supports:

- Release of additional USGS assessments of undiscovered, technically recoverable oil and gas resources in U.S. and non-U.S. basins, and continuing the underlying geological, geophysical and geochemical research that underpins the assessments.
- Continuing to lead an interagency effort (with BLM and BOEM) in support of Secretarial Order 3352, to update assessments of Alaska North Slope oil and gas resource potential.
- Research into geothermal resources aimed at improving the viability of Enhanced Geothermal Systems and studying environmental impacts of geothermal energy development on Federal lands.
- USGS gas hydrate studies with the USGS Coastal and Marine Hazards and Resources Program, and contribute to DOE- and industry-sponsored cooperative gas hydrate projects.
- Expanding unconventional oil and gas research efforts that began in 2016 on the geologic causes of variability in the recovery of petroleum and water, and studies of baseline water quality.
- Submitting for external peer review the USGS-reviewed assessment methodology of the potential environmental impacts associated with uranium resource development.
- Continuing assessments of domestic coal resources in the remaining unevaluated U.S. basins.
• Completing the implementation of a revised Quality Management System (QMS) to promote and enhance the quality of laboratory practices and analytical data.

**Mineral Resources Program**

The 2019 budget request supports:

• Collection, analysis, and dissemination of minerals information and materials flow studies.

• Work on new sources of critical minerals and on the lifecycles of critical minerals.

• Better understanding the genesis and distribution of critical mineral resources throughout the Nation by collecting, preserving and disseminating geological, geochemical, and geophysical data and initiating qualitative and quantitative mineral assessments.

• Work on environmental impacts of resource extraction and understanding how mineral resources interact with the environment to affect human and ecosystem health.

• Initiating the Three Dimensional mapping and Economic Empowerment Program (3DEEP), a prioritized nationwide program of topographic, geologic and geophysical mapping to enhance our understanding of the Nation’s mineral resource potential in order to better ensure a reliable supply of critical minerals. This will provide the advanced topographic, geologic, and geophysical data needed to locate and develop U.S. critical mineral resources to spur private-sector domestic development, reduce dependence on foreign sources, and support job creation and technological innovation.