

RAND NEW STUDY

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A NEW APPROACH TO ASSESSING GAS AND OIL RESOURCES

Historically, natural gas and oil resource assessments have focused on the “technically recoverable” resource—the amount of resource in the ground that could be extracted based on assumptions about available technologies. RAND has developed a new approach that builds on these traditional assessments by adding in economic and environmental considerations. This new assessment approach helps characterize potential resources in different areas and can help government officials and other stakeholders make more informed choices about land-use planning, the design of energy policies, and energy development and utilization planning.

Demand for natural gas in the United States is projected to grow substantially in the next 20 years. Meeting this growing demand will require an accompanying increase in supply. This supply is expected to come mostly from additional production in the United States and, in particular, from the intermountain areas of the Rocky Mountains, which contain abundant amounts of natural gas.

Sixty percent of the estimated technically recoverable natural gas in the Rockies underlies federal land, which means that significant energy-related land use decisions fall under the jurisdiction of federal land managers, such as the Bureau of Land Management and the Forest Service. These agencies are required by law to consider the economic value and environmental impact of their land-use decisions. This additional economic and environmental information is overlaid on maps of the technically recoverable resource providing a geographic representation of resource characteristics throughout a region.

When the approach was applied to the Greater Green River Basin in southwestern Wyoming, it was found that what is technically recoverable may not always be economically attractive under some market conditions and that the fraction of technically recoverable gas that is economically recoverable at a given price varies substantially from place to place. The report also distinguishes resources according to the environmental characteristics of the land they occupy.

While land managers can use this approach to help with regional land planning, it is not intended to substitute for detailed lease- or project-specific decisionmaking by government and industry. The approach can provide land managers with better information, thus giving them a credible basis on which to prioritize activities and a way to make their own planning and review processes more efficient and responsive to public objectives.