

The Wilderness Society

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Estimates of Economically Recoverable Gas and Oil in Selected National Monuments Based on the USGS Low and High Price Scenarios.

Resource	Economically Recoverable Quantity	Economically Recoverable as % of technically Recoverable	Economically Recoverable in relation to total U.S. consumption
Conventional gas	241 -- 390 billion cubic feet	32% -- 51%	3.9 -- 6.3 days
Tight sands gas	29.2 -- 33.8 billion cubic feet	12% -- 14%	0.5 -- 0.5 days
Coal bed methane gas	0.0 -- 0.0 billion cubic feet	0% -- 0%	0.0 -- 0.0 days
Total Gas	270 -- 424 billion cubic feet	27% -- 42%	4.3 -- 6.8 days
Oil and natural gas liquids	189 -- 297 million barrels	39% -- 61%	9.6 -- 15.1 days

*analyzed monuments include: Agua Fria, California Coastal, Canyons of the Ancients, Carrizo Plain, Cascade Siskiyou, Craters of the Moon, Grand Canyon – Parashant, Grand Staircase – Escalante, Ironwood Forest, Kasha - Katuwe Tent Rocks, Pompey's Pillar, Santa Rose/San Jacinto Mountains, Sonoran Desert, Upper Missouri River Breaks, and Vermilion Cliffs

Summary for the National Monuments

USGS scientists classify natural gas as conventional or unconventional, based on the technology used during extraction. The two main unconventional gases are coal bed methane trapped within coal beds and tight sands gas trapped in low permeability sandstone. The Rocky Mountain states contain a high proportion of unconventional gas resources, meaning that recovery will be subject to higher production costs and substantial uncertainty.

The opportunity cost of protecting national monuments is the amount of gas-oil estimated to be economically recoverable – not the amount of gas-oil technically recoverable. This is consistent with economic theory. The above table shows estimates of the quantities of undiscovered gas and oil that can be extracted profitably from selected national monuments. Based on the USGS low and high price scenarios for gas, these national monument contain approximately 0.27 to 0.42 trillion cubic feet of economically recoverable gas, representing 21 to 42 percent of the technically recoverable gas in these national monuments. These national monuments contain approximately 189 to 297 million barrels of economically recoverable oil, representing 39 to 61 percent of the technically recoverable oil. The significant drop in recoverable gas-oil when economics are considered underscores the importance of using economically recoverable gas-oil when examining the opportunity costs of national monument protection.

Based on current energy consumption rates, economically recoverable gas in these national monuments could meet total U.S. gas consumption for 4 to 7 days. Economically recoverable oil in these national monuments could meet total U.S. oil consumption for 10 to 15 days. Obviously, this oil-gas could be produced over a much longer period of time, but this estimate provides an indication of the relatively small amount of economically recoverable oil-gas in these national monuments.

Economically recoverable gas and oil were estimated by The Wilderness Society using USGS data. The USGS low price scenario used prices of \$2.17 per thousand cubic feet (mcf) and \$19.50 per barrel (bbl). The USGS high price scenario used prices of \$3.62 mcf and \$32.50 bbl (prices in 2002 dollars). For more information see "Energy and Western Wildlands: A GIS Analysis of Economically Recoverable Oil and Gas" available on The Wilderness Society website (www.wilderness.org) or by calling 202-833-2300

