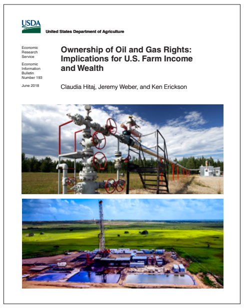
A report summary from the Economic Research Service June 2018



Ownership of Oil and Gas Rights: Implications for U.S. Farm Income and Wealth

Claudia Hitaj, Jeremy Weber, and Ken Erickson

What Is the Issue?

From 2005 to 2014, high energy prices and innovation in extraction methods spurred annual U.S. production of oil and gas to grow by 69 percent, with almost 67 percent of the production occurring on farmland in 2014. The growth generated tens of billions of dollars in additional revenue for owners of oil and gas rights and increased the value of the rights. Ownership of oil and gas rights affects the ability of farm operators and landlords to benefit financially from development and to shape development terms. Yet oil and gas development's effect on farm-sector finances as a whole is poorly understood. In this report, we quantify the farm sector's oil and gas wealth and income, including the extent that farm operators and landlords own the rights to the oil and gas beneath their land, the value of the rights, and the timing and prevalence of leasing with energy firms. Since oil and gas production is expected to grow by 23 percent from 2016 to 2025, the effect of such income could be significant.

What Did the Study Find?

Most farm operators and non-operator landlords do not own the oil and gas rights associated with their land and are thus unable to receive payments. In the 1,080 counties with oil and gas production in 2014, only 13 percent of non-operator landlords and 10 percent of farm operators (including both owner-operators and renters) reported receiving oil or gas payments.

In 2014, farm operators and non-operator landlords owned $32.9 billion in oil and gas rights that generated $7.4 billion in payments through leases with energy firms, which represented almost 17 percent of total net cash farm income for farm operators and non-operator landlords in oil- and gas-producing counties.

Because the benefits and challenges regarding oil and gas production differ substantially for farm operators and non-operator landlords, the findings that follow are grouped by these ownership categories.

Farm Operators:

- Farm operators owned $19.1 billion in oil and gas rights in 2014. In counties with oil and gas production, farm operators' oil and gas rights amounted to 3 percent of the value of land owned, and in the high-production States of Oklahoma and Pennsylvania, those shares were 7 percent and 9 percent of the value of land owned, respectively.

- Nationally, oil and gas rights generated $3.8 billion in payments in 2014, equal to about 4 percent of net cash farm income. In oil and gas counties, payments represented 11 percent of those counties' net cash farm income, and in Oklahoma, Pennsylvania, and Texas, payments represented almost 30 percent of those States' net cash farm income.

- In the oil and gas counties, 11 percent of farm operators reported owning oil and gas rights with positive value, and in Oklahoma and Pennsylvania, the share reached 14 percent.

- Much of the leasing of oil and gas rights to energy firms by farm operators has occurred with the recent growth in drilling in shale formations. Of the operators who leased out their oil and gas rights in 2014, more than 27 percent signed leases after 2011, and 44 percent signed after 2008.

- Consistent with the timing of leasing, drilling, and production, operators who leased their rights between 2006 and 2008 reported the highest mean and median energy payments in 2014, at nearly $90,000 and $30,000 for the year.

Non-Operator Landlords:

- Non-operator landlords reported holding $13.8 billion in oil and gas rights in 2014. Nationally, about 5 percent of non-operator landlords owned these rights, and for those with land in oil and gas counties, that share was 13 percent.

- Oil and gas payments generated $3.6 billion for these landlords in 2014 and represented large shares of net cash farm income: 17 percent nationally, 37 percent in oil and gas counties, and 60/70 percent in Texas and Oklahoma, respectively. For landlords, "net cash farm income" comprises rent and other payments, including (for those who possess oil and gas rights) oil and gas payments.

- Although non-operator landlords owned only 31 percent of total farmland in 2014, they received about 49 percent of total oil and gas payments going to farmland owners. One possible explanation is that non-operator landlords are more likely than farm operators to lease out their oil and gas rights or to negotiate lease terms that provide greater compensation.

How Was the Study Conducted?

Farm and landlord-level information from USDA, Economic Research Service (ERS) and USDA, National Agricultural Statistics Service (NASS), 2014 Tenure, Ownership, and Transition of Agricultural Land (TOTAL) survey was used to quantify the role of ownership of oil and gas rights in the income and wealth of farm operators and landlords. The 2014 TOTAL survey was the first time that a USDA survey collected information on the ownership and leasing of oil and gas rights. This study also uses information on oil and gas production from an ERS data product on county-level oil and gas production and from Drillinginfo, accessed by author Jeremy Weber, and information on land in farms from the USDA, NASS 2012 Census of Agriculture.