

Economic Impact of the Oil and Gas Industry

The direct economic impact represents people employed, wages paid, and output produced by the county's oil and gas firms. The indirect and induced economic impact represents the additional economic activity created in the county through the purchases of goods and services by oil and gas firms as well as the spending of oil and gas workers. Data limitations hinder full allocation of all statewide activity, hence the county impact estimates are conservative. Additionally, due to the way employment is recorded and the regional nature of the industry, the counties may have employment but no production.

| Economic Impact - 2015 | | | |
|------------------------|-------------|----------------------|------------------------|
| Effect | Employment | Labor Income | Output |
| Direct | 1680 | \$393,221,000 | \$5,344,713,000 |
| Indirect/Induced | 5337 | \$295,484,000 | \$791,401,000 |
| Total | 7016 | \$688,705,000 | \$6,136,115,000 |

Source: Estimated using employment-level data from EMSI, 2016 and IMPLAN Economic Modeling, 2016.

The oil and gas industry supports state and local government in Michigan by paying severance taxes on the value of oil and gas extracted and by paying income taxes, property taxes, and sales taxes. Oil and gas industry employees also pay state and local taxes.

| Tax Impact - 2015 | | | |
|-------------------|--------------|--------------------|--------------|
| Severance Tax | Sales Taxes | Local Property Tax | Income Tax |
| \$272,000 | \$39,329,000 | \$37,769,000 | \$16,254,000 |

Source: Tax estimates were produced using data from the Michigan Department of Treasury, IMPLAN, and the oil and gas industry. Severance tax estimates are for 2014.

Royalties on the sale and lease of state-owned oil and gas rights support recreation activities throughout the state by funding the purchase and development of land for resource protection and public recreation. Royalties are deposited into the Michigan Natural Resources Trust Fund (MNRTF) and the Michigan State Parks Endowment Fund (MSPEF). MNRTF supports specific recreation projects while the MSPEF supports the state's park system as a whole. The oil and gas industry makes royalty and lease payments to private individuals for the rights to access and extract oil and gas on privately owned lands.

| Private Royalty Payments - 2014 | |
|---------------------------------|-------------|
| Royalties | |
| | \$1,035,000 |

Source: Michigan Oil and Gas Association and PSC Calculations, 2016.

| All-Time MNRTF Contributions through 2014 | |
|---|------------------|
| MNRTF Appropriations | Number of Grants |
| \$76,445,000 | 90 |

Source: Michigan Oil and Gas News,

Oil and gas production varies by year and market conditions across the state, so it is not a good representation of total production. All-time production is the volume of oil and natural gas produced since drilling began in a county.

| Oil and Natural Gas Production | | |
|---------------------------------|------------------|---------------------|
| | 2014 Production* | All-Time Production |
| Crude Oil (in 42-gal. bbl.) | 58,161 | 2,325,192 |
| Natural Gas Production (in Mcf) | 17,652 | 15,289,421 |

Source: Michigan Department of Environmental Quality. Production by county summarized by *Michigan Oil and Gas News*.