

## Northeast Pennsylvania Income from Shale Gas Development

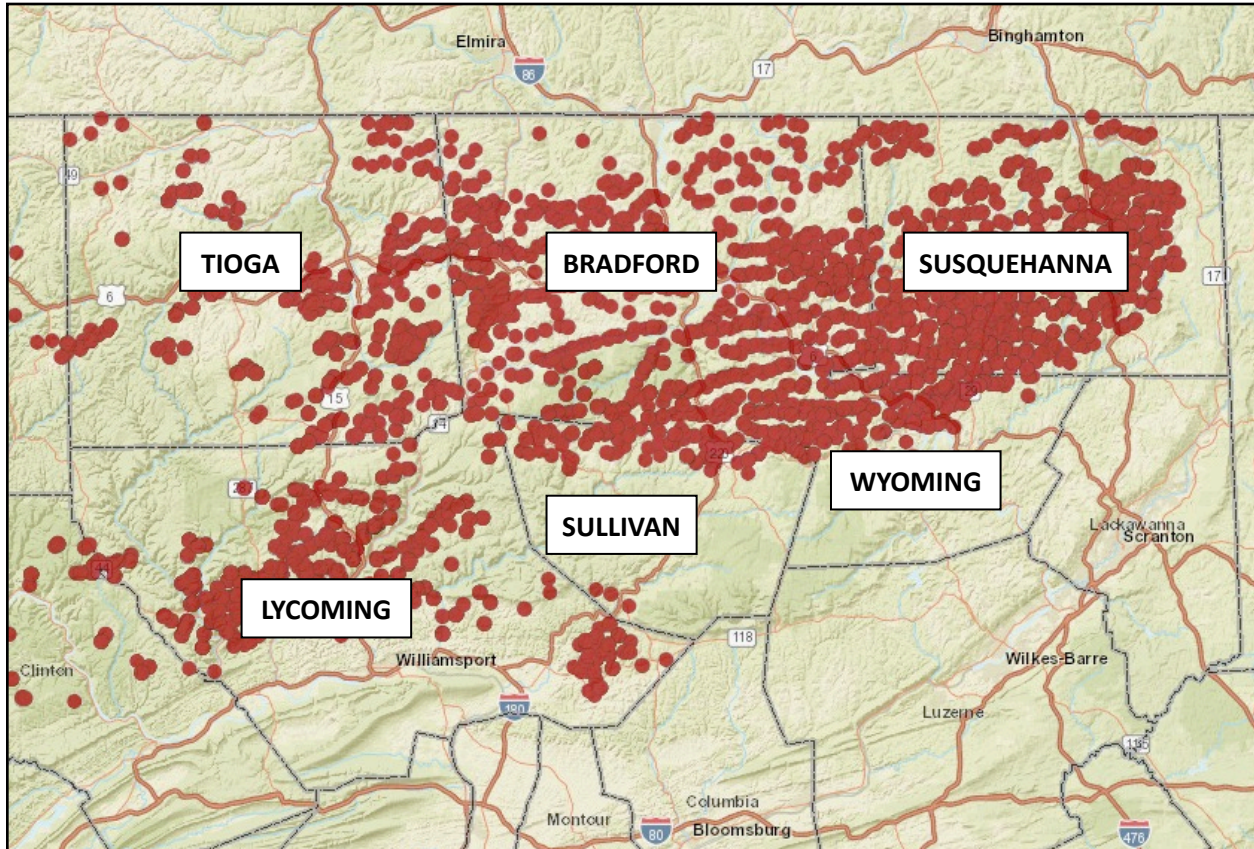
Shale gas development has had an enormously positive impact on the incomes of Northeastern Pennsylvania households. It has also contributed in a major way to the fiscal bottom line of Pennsylvania as a whole.

The Allegheny Institute for Public Policy just put out a [policy brief](#) that looked at “Pennsylvania’s unheralded benefit from shale gas production.” This report assembled Pennsylvania income tax revenue data from 2018, and some earlier years, to quantify the amount of income reported by Pennsylvanians on their tax returns as attributable to “rent, royalties, patents, and copyrights.”

This category is defined as “income received for the use of real or tangible property, the use of a patent or copyright, or **the extraction of coal, oil, gas or other minerals.**” Therefore, it captures lease bonus payments made and royalties paid by shale gas development companies operating in the Commonwealth.

The Allegheny Institute report gathered income tax data from 11 selected counties; eight from Southwestern Pennsylvania and three from the Northeastern part of the state. It then compared the data to that for the state as a whole, yielding a table demonstrating the income from “rent, royalties, patents, and copyrights” in these shale counties increased. Moreover, the gain was consistent with simultaneous growth in shale well development in these same counties. It amounted to \$499.1 million over 2011 to 2018, which was 29.6% of the total gain statewide.

A more in-depth examination of the data used by the Institute serves to illustrate just how much of this impact comes from six counties in Northeastern Pennsylvania (NEPA) with substantial amounts of shale gas development (depicted below on a Pennsylvania Department of Environmental Protection map of shale wells in the Commonwealth.)



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The following tables summarize the number of taxpayers with “rent, royalties, patents, and copyrights” income compared to the income recorded compared to the same figures for other Pennsylvania counties and the Commonwealth as a whole:

| <b>Taxpayers with Rent/Royalty/Patent/Copyright Income</b> |          |          |          |             |       |         |            |          |          |
|--|----------|----------|----------|-------------|-------|---------|------------|----------|----------|
| Year   | Bradford | Lycoming | Sullivan | Susquehanna | Tioga | Wyoming | Total NEPA | Other PA | Total PA |
| 2006   | 2,133    | 2,514    | 226      | 899         | 1,347 | 712     | 7,831      | 217,137  | 224,968  |
| 2007   | 2,261    | 2,596    | 197      | 1,514       | 1,354 | 910     | 8,832      | 226,086  | 234,918  |
| 2008   | 4,386    | 4,406    | 697      | 3,477       | 1,767 | 1,974   | 16,707     | 238,841  | 255,548  |
| 2009   | 3,734    | 2,940    | 311      | 2,594       | 2,315 | 1,585   | 13,479     | 239,931  | 253,410  |
| 2010   | 5,222    | 3,526    | 632      | 2,623       | 3,078 | 1,885   | 16,966     | 250,455  | 267,421  |
| 2011   | 4,269    | 3,633    | 469      | 2,201       | 2,413 | 1,299   | 14,284     | 257,550  | 271,834  |
| 2012   | 5,353    | 3,877    | 358      | 3,096       | 2,472 | 1,413   | 16,569     | 270,228  | 286,797  |
| 2013   | 6,654    | 4,228    | 493      | 4,268       | 2,552 | 2,045   | 20,240     | 277,140  | 297,380  |
| 2014   | 7,282    | 4,438    | 615      | 5,007       | 2,835 | 2,239   | 22,416     | 282,440  | 304,856  |
| 2015   | 6,998    | 4,568    | 652      | 5,406       | 3,148 | 2,080   | 22,852     | 280,779  | 303,631  |
| 2016   | 6,584    | 4,393    | 617      | 5,385       | 2,975 | 2,043   | 21,997     | 277,941  | 299,938  |
| 2017   | 6,595    | 4,604    | 642      | 5,627       | 2,831 | 2,070   | 22,369     | 279,823  | 302,192  |
| 2018   | 6,675    | 4,725    | 662      | 5,646       | 2,833 | 1,999   | 22,540     | 275,801  | 298,341  |

| <b>Rent/Royalty/Patent/Copyright Income (Thousands)</b> |            |            |           |             |           |            |            |              |              |
|---|------------|------------|-----------|-------------|-----------|------------|------------|--------------|--------------|
| Year  | Bradford   | Lycoming   | Sullivan  | Susquehanna | Tioga     | Wyoming    | Total NEPA | Other PA     | Total PA     |
| 2006  | \$ 15,715  | \$ 27,044  | \$ 2,265  | \$ 8,018    | \$ 8,477  | \$ 7,672   | \$ 69,191  | \$ 2,947,944 | \$ 3,017,135 |
| 2007  | \$ 14,457  | \$ 28,788  | \$ 1,315  | \$ 14,406   | \$ 9,340  | \$ 9,226   | \$ 77,532  | \$ 3,265,291 | \$ 3,342,823 |
| 2008  | \$ 144,891 | \$ 137,726 | \$ 29,518 | \$ 135,864  | \$ 40,820 | \$ 75,331  | \$ 564,150 | \$ 4,057,623 | \$ 4,621,773 |
| 2009  | \$ 103,385 | \$ 47,752  | \$ 8,299  | \$ 130,403  | \$ 47,401 | \$ 124,582 | \$ 461,822 | \$ 3,778,953 | \$ 4,240,775 |
| 2010  | \$ 166,214 | \$ 71,884  | \$ 28,336 | \$ 133,202  | \$ 96,983 | \$ 61,573  | \$ 558,192 | \$ 4,326,900 | \$ 4,885,092 |
| 2011  | \$ 167,362 | \$ 88,693  | \$ 9,964  | \$ 83,328   | \$ 74,672 | \$ 33,979  | \$ 457,998 | \$ 4,515,636 | \$ 4,973,634 |
| 2012  | \$ 276,550 | \$ 88,473  | \$ 4,677  | \$ 106,527  | \$ 53,962 | \$ 38,857  | \$ 569,046 | \$ 4,895,520 | \$ 5,464,566 |
| 2013  | \$ 188,060 | \$ 98,985  | \$ 12,269 | \$ 197,419  | \$ 56,659 | \$ 72,292  | \$ 625,684 | \$ 4,839,682 | \$ 5,465,366 |
| 2014  | \$ 233,591 | \$ 105,836 | \$ 19,892 | \$ 262,908  | \$ 64,284 | \$ 110,113 | \$ 796,624 | \$ 5,004,916 | \$ 5,801,540 |
| 2015  | \$ 119,219 | \$ 71,729  | \$ 12,251 | \$ 160,655  | \$ 80,470 | \$ 52,106  | \$ 496,430 | \$ 5,029,127 | \$ 5,525,557 |
| 2016  | \$ 79,312  | \$ 53,141  | \$ 8,218  | \$ 127,338  | \$ 39,619 | \$ 36,965  | \$ 344,593 | \$ 4,823,148 | \$ 5,167,741 |
| 2017  | \$ 146,554 | \$ 67,266  | \$ 17,264 | \$ 213,117  | \$ 56,148 | \$ 72,030  | \$ 572,379 | \$ 5,243,439 | \$ 5,815,818 |
| 2018  | \$ 125,544 | \$ 79,283  | \$ 21,747 | \$ 248,375  | \$ 62,228 | \$ 88,091  | \$ 625,268 | \$ 5,467,002 | \$ 6,092,270 |

As the data indicates, the amount of income to NEPA counties from “rent, royalties, patents, and copyrights” grew by \$486.6 million or 628% between 2007 and 2008, which was precisely when shale gas leasing and development began in the region. Over time, royalties were, experience indicates, substituted for lease bonus payments but both have continued to generate major income for Pennsylvanians and, especially, NEPA landowners.

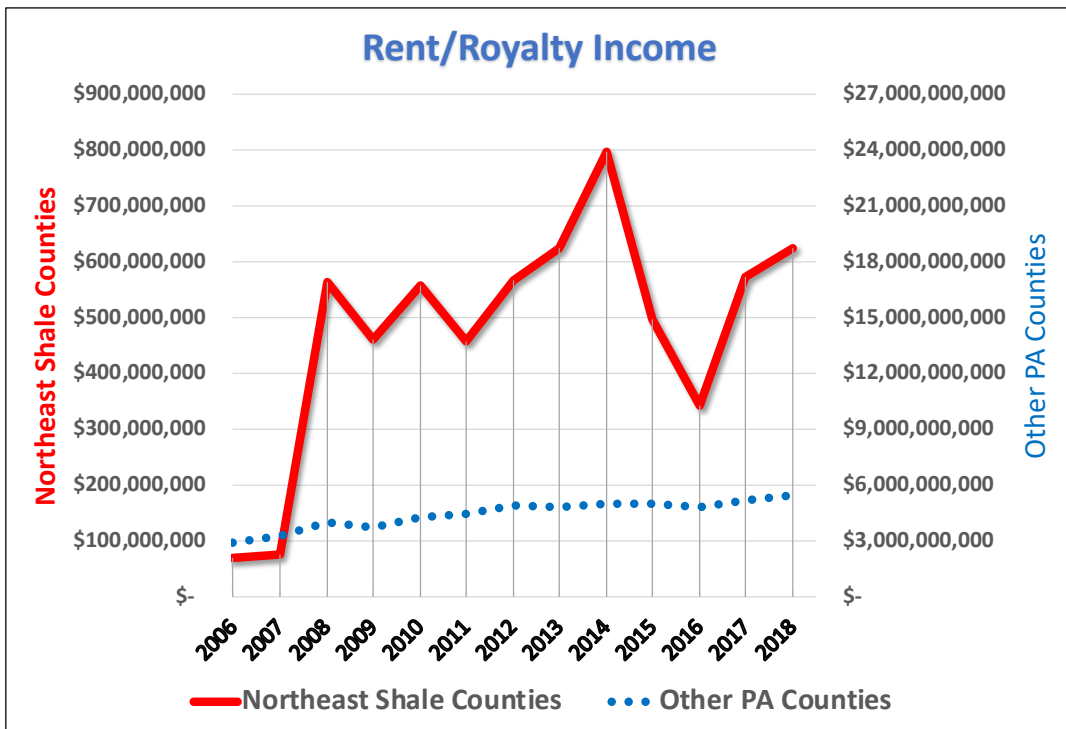
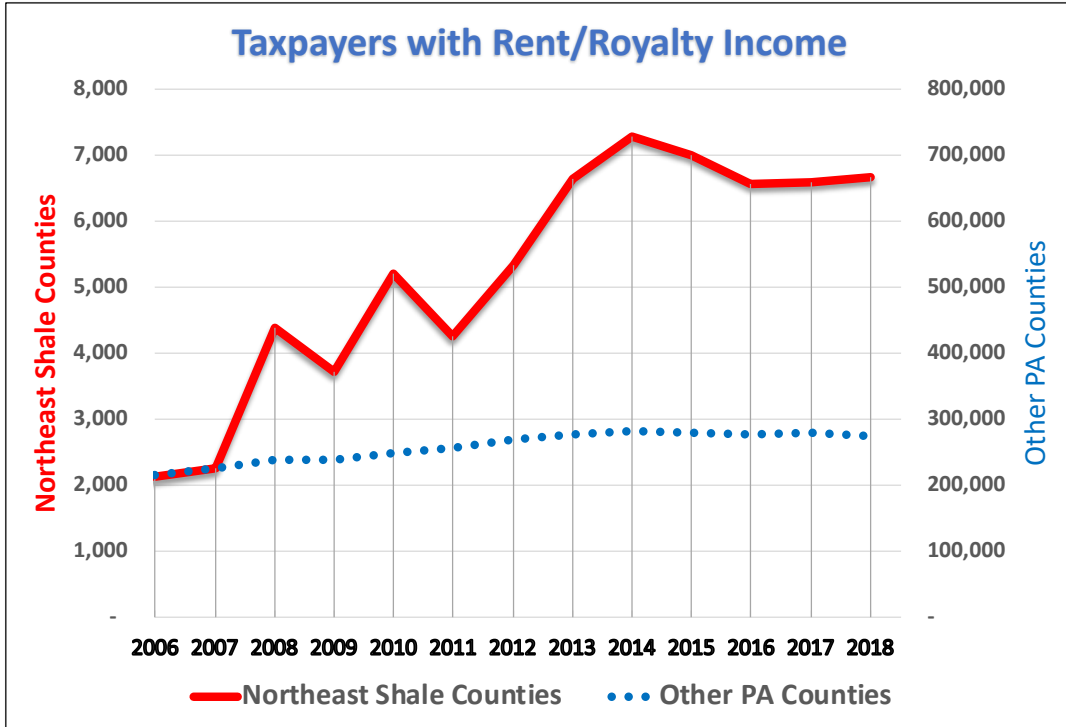
Looking at the entire period from 2006 through 2018, NEPA revenue from this source grew by 804%, compared to but 85% for other Pennsylvania counties and 102% for Pennsylvania statewide. This means NEPA experienced eight times the economic benefit of the entire state and more than nine times as much as other Pennsylvania counties.

Susquehanna County income relating to “rent, royalties, patents, and copyrights” grew by an astonishing factor of 31.8 between 2006 and 2014 and was still \$248.4 million in 2018, almost

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twice any other NEPA county and it alone generated \$1.8 billion of such income over the 11 years, **not including such income that may have gone to out-of-county landowners.**

Charts following illustrate how NEPA compares to other counties in “rent, royalties, patents, and copyrights” income:

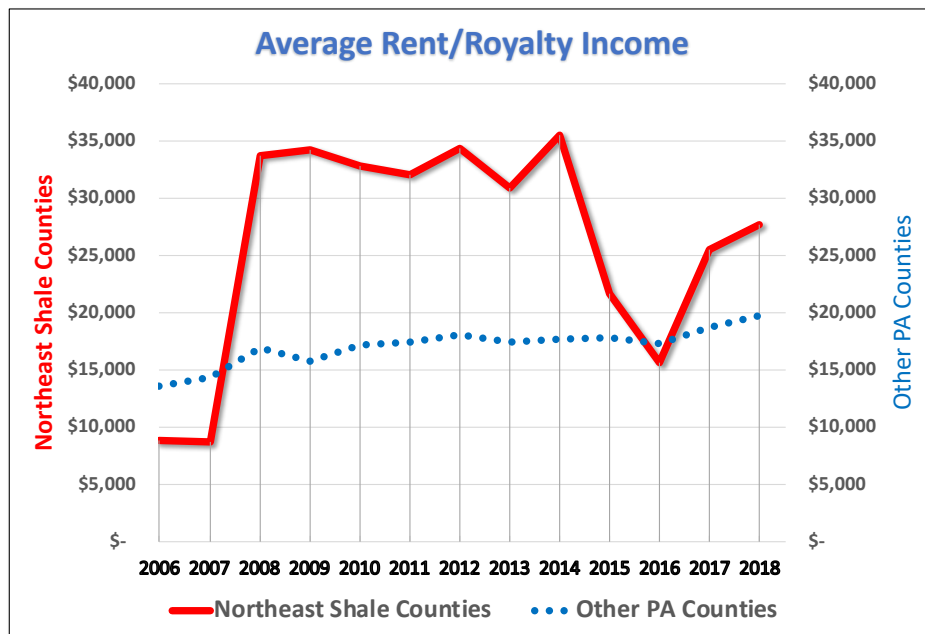


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The out-of-county landowner factor is only one of several that affect this income. Natural gas prices, levels of drilling activity, temporary well shut-ins, the amount of new leasing taking place at a given time and external costs of development vis-a-vis regulations and taxes all have obvious impacts on the amount of lease and royalty income. This is why a better measure of the full impact, in several respects is the average amount of such income reported per taxpayer. The following table provides the data:

| Average Rent/Royalty/Patent/Copyright Income |            |           |           |                        |                        |
|--|------------|-----------|-----------|------------------------|------------------------|
| Year   | Total NEPA | Other PA  | Total PA  | NEPA Ratio to Other PA | NEPA Ratio to Total PA |
| 2006   | \$ 8,836   | \$ 13,576 | \$ 13,411 | 65%                    | 66%                    |
| 2007   | \$ 8,779   | \$ 14,443 | \$ 14,230 | 61%                    | 62%                    |
| 2008   | \$ 33,767  | \$ 16,989 | \$ 18,086 | 199%                   | 187%                   |
| 2009   | \$ 34,262  | \$ 15,750 | \$ 16,735 | 218%                   | 205%                   |
| 2010   | \$ 32,901  | \$ 17,276 | \$ 18,267 | 190%                   | 180%                   |
| 2011   | \$ 32,064  | \$ 17,533 | \$ 18,297 | 183%                   | 175%                   |
| 2012   | \$ 34,344  | \$ 18,116 | \$ 19,054 | 190%                   | 180%                   |
| 2013   | \$ 30,913  | \$ 17,463 | \$ 18,378 | 177%                   | 168%                   |
| 2014   | \$ 35,538  | \$ 17,720 | \$ 19,030 | 201%                   | 187%                   |
| 2015   | \$ 21,724  | \$ 17,911 | \$ 18,198 | 121%                   | 119%                   |
| 2016   | \$ 15,665  | \$ 17,353 | \$ 17,229 | 90%                    | 91%                    |
| 2017   | \$ 25,588  | \$ 18,738 | \$ 19,245 | 137%                   | 133%                   |
| 2018   | \$ 27,740  | \$ 19,822 | \$ 20,420 | 140%                   | 136%                   |

NEPA income in this case grew by more than 214% over the period examined while other Pennsylvania counties only gained 46.0%. The NEPA region average was only at 65% of other counties in 2006 but is now at \$27,740 or 140% of other counties, indicating a huge impact of the economy of the region directly traceable to the beginning of shale gas development in places such as Bradford and Susquehanna Counties. The following depicts the infusion of wealth into what were very sub-par economies:



## Northeast Pennsylvania Income from Shale Gas Development

Overall, the data show Pennsylvania has received and continues to receive quantifiable economic benefits from shale gas development, but it is Northeastern Pennsylvania, from Lycoming County to Susquehanna, where those benefits have had their greatest impact; approaching \$6 billion added to the regional economy even when other rent and miscellaneous income in the category is deducted. A good deal of this revenue (a minimum of \$150 million, has also gone to taxes to the Commonwealth of Pennsylvania, aiding all taxpayers in the process with still additional taxes paid to counties and municipalities on increased property values created as a result.

*This report assembled by Shepstone Management Company, Inc., a Honesdale, Pennsylvania planning and research consulting firm with both private and public entity clients, including the natural gas industry.*