

# Ohio's Oil and Gas Industry

## Where are We?



# Who Are We?



- Ohio Oil and Gas Association
- Founded in 1947
- Members represent all aspects of oil and gas development
- Upstream, Midstream, Downstream
- OOGEEP Firefighter training
- Over 2,000 members
- 7 staff members

# New Executive Vice President



# Who We Were...



Ohio Oil and Gas Association

# Who We Are...



# First Discovery of Crude Oil



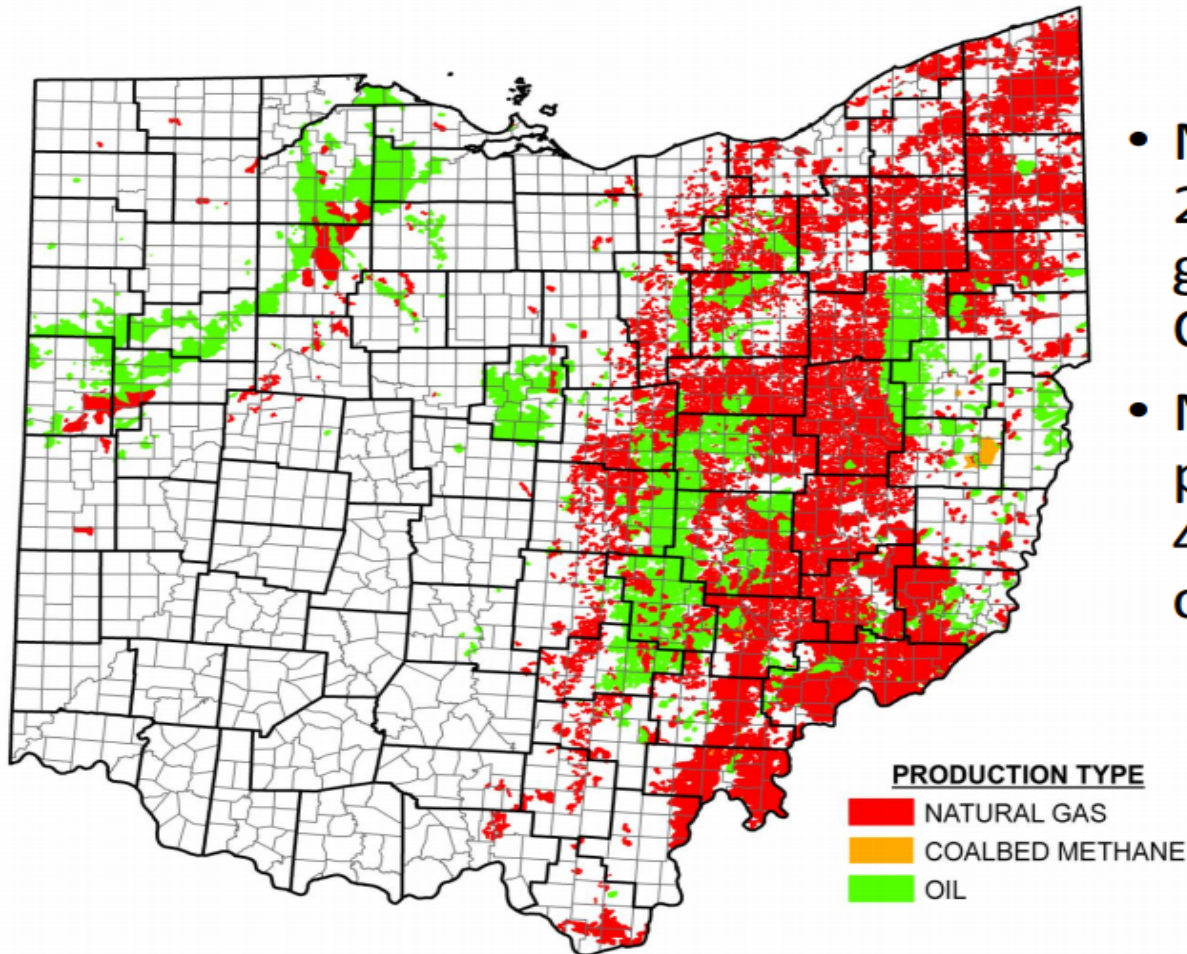
Silas Thorla and Robert McKee

1814

Caldwell, Noble County

# A Long History

## Oil & Gas Production in Ohio

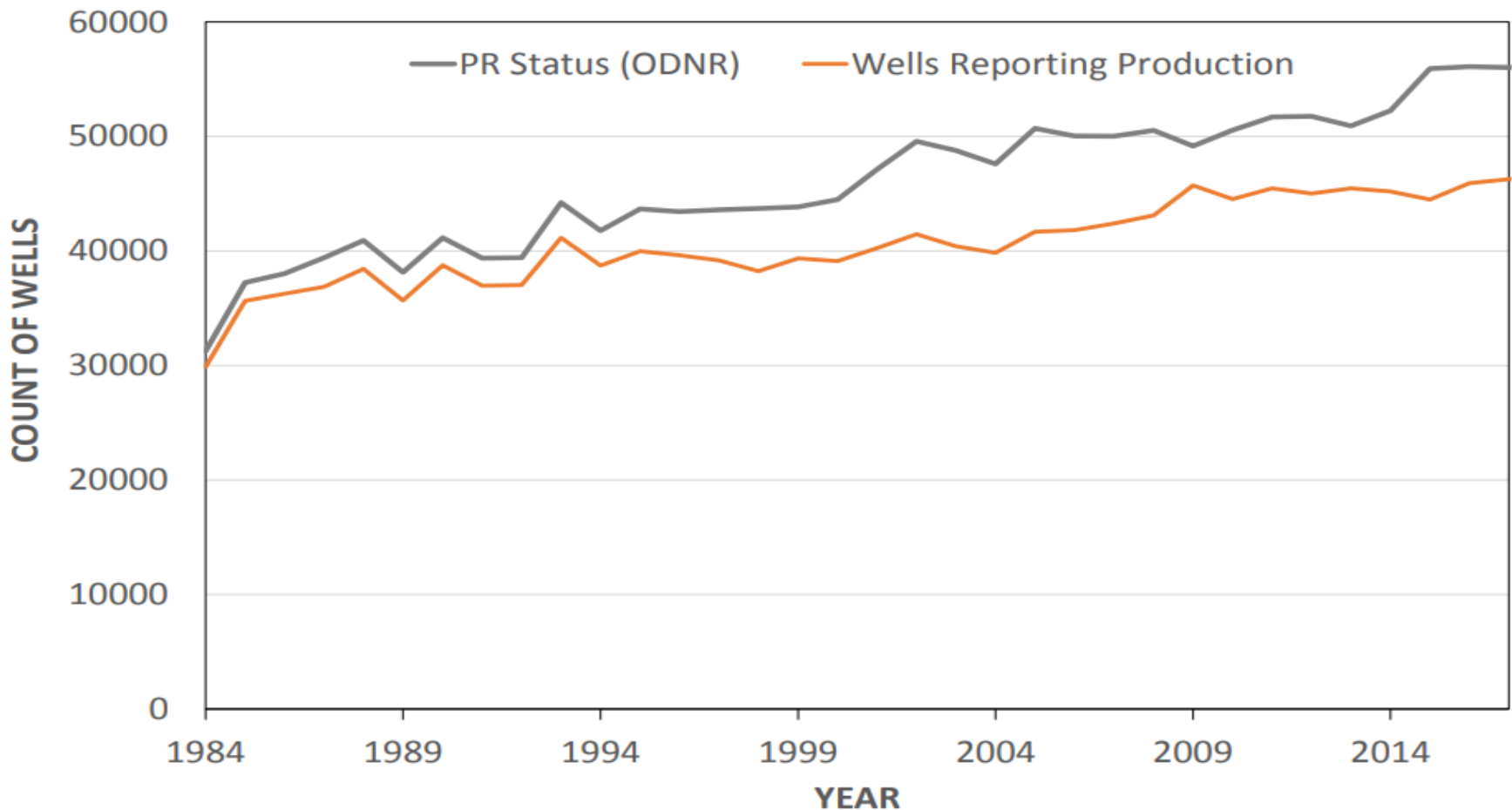


- More than 275,000 oil and gas wells drilled in Ohio since 1860
- More than 50,000 producing wells in 49 of 88 Ohio counties

# Trending Up



## Producing Wells – By Year



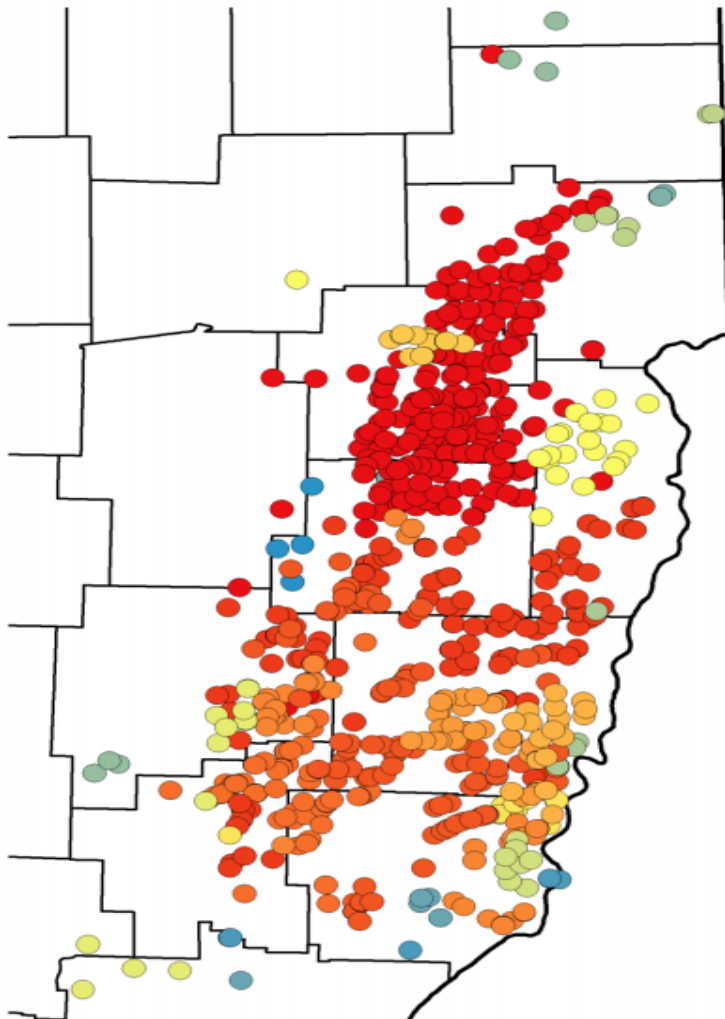


# Utica Activity as of 3/21/18



| <u>Rank</u> | <u>County</u>     | <u>Permits</u> | <u>Company</u>                 | <u>Permits</u> |                             |
|-------------|-------------------|----------------|--------------------------------|----------------|-----------------------------|
| 1           | <b>Belmont</b>    | <b>587</b>     | <b>Encino/<br/>Chesapeake</b>  | <b>891</b>     | 3,094<br>Wells<br>Permitted |
| 2           | <b>Carroll</b>    | <b>525</b>     | <b>Ascent/<br/>Hess</b>        | <b>489</b>     |                             |
| 3           | <b>Harrison</b>   | <b>433</b>     | <b>Gulfport</b>                | <b>406</b>     | 2,586<br>Wells<br>Drilled   |
| 4           | <b>Monroe</b>     | <b>418</b>     | <b>Antero</b>                  | <b>261</b>     |                             |
| 5           | <b>Guernsey</b>   | <b>242</b>     | <b>Eclipse/<br/>Blue Ridge</b> | <b>197</b>     | 2,163<br>Wells<br>Producing |
| 6           | <b>Noble</b>      | <b>223</b>     | <b>EQT/<br/>Rice</b>           | <b>129</b>     |                             |
| 7           | <b>Jefferson</b>  | <b>205</b>     | XTO                            | 75             | 15<br>Rigs<br>Operating     |
| 8           | <b>Columbiana</b> | <b>159</b>     | Hilcorp                        | 59             |                             |
| 9           | Mahoning          | 30             | CNX                            | 52             |                             |
| 10          | Washington        | 22             | PennEnergy<br>REX              | 40             |                             |

# Pins On The Map



## UTICA

### PRODUCING WELLS BY OPERATOR (More than 8 Wells)

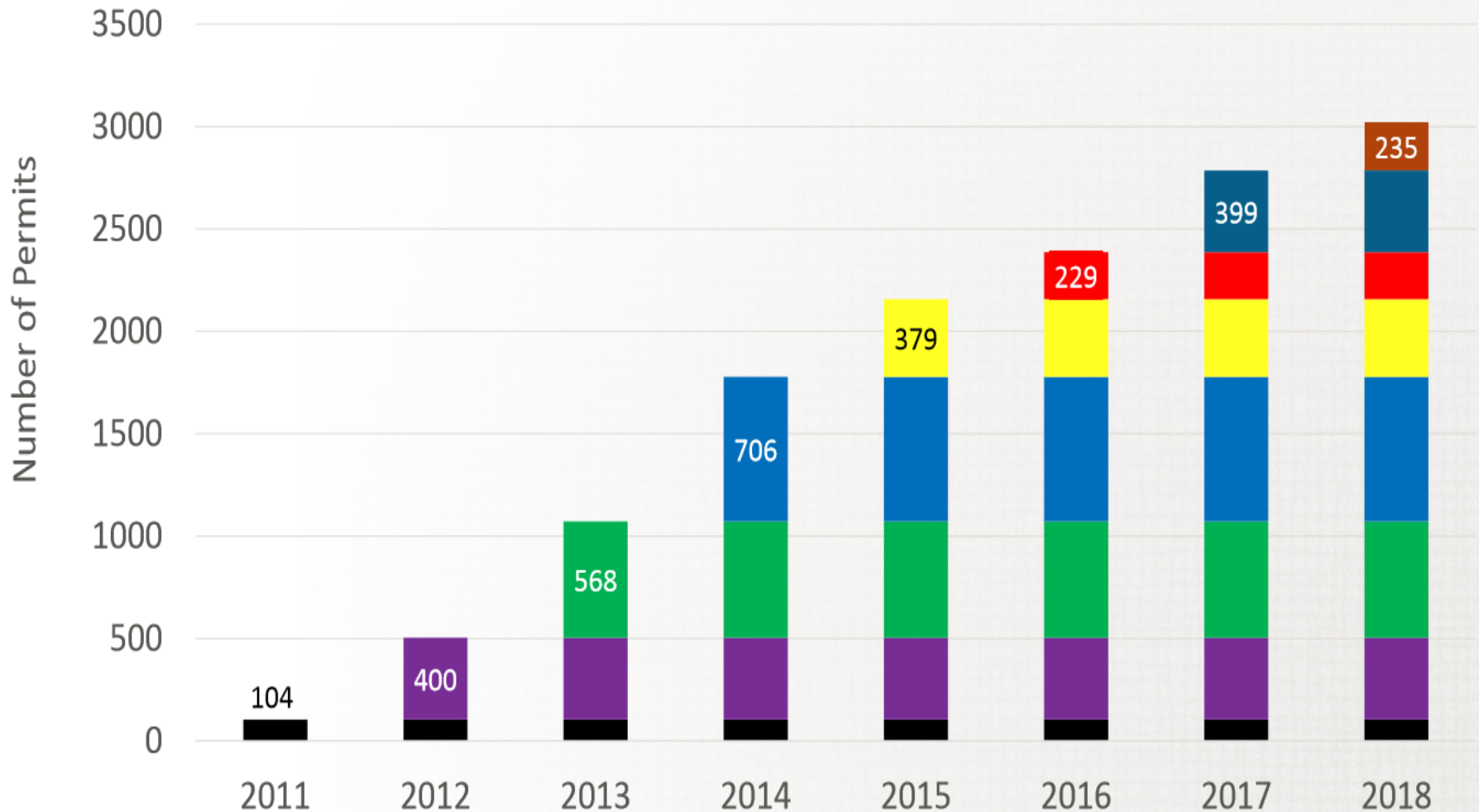
Through 12/31/2018

- CHESAPEAKE EXPLORATION LLC (688)
- ASCENT RESOURCES UTICA LLC (378)
- GULFPORT ENERGY CORPORATION (304)
- ANTERO RESOURCES CORPORATION (215)
- ECLIPSE RESOURCES I LP (127)
- RICE DRILLING D LLC (103)
- XTO ENERGY INC. (47)
- PENNENERGY RESOURCES LLC (40)
- CNX GAS COMPANY LLC (38)
- EAP OHIO LLC (38)
- UTICA RESOURCE OPERATING LLC (28)
- EQUINOR USA ONSHORE PROPERTIES INC. (19)
- HILCORP ENERGY COMPANY (15)
- GULFPORT APPALACHIA LLC (13)
- PIN OAK ENERGY PARTNERS LLC (8)
- ATLAS NOBLE LLC (12)
- EM ENERGY OHIO LLC (10)
- TRIAD HUNTER LLC (9)
- CHEVRON APPALACHIA LLC (8)

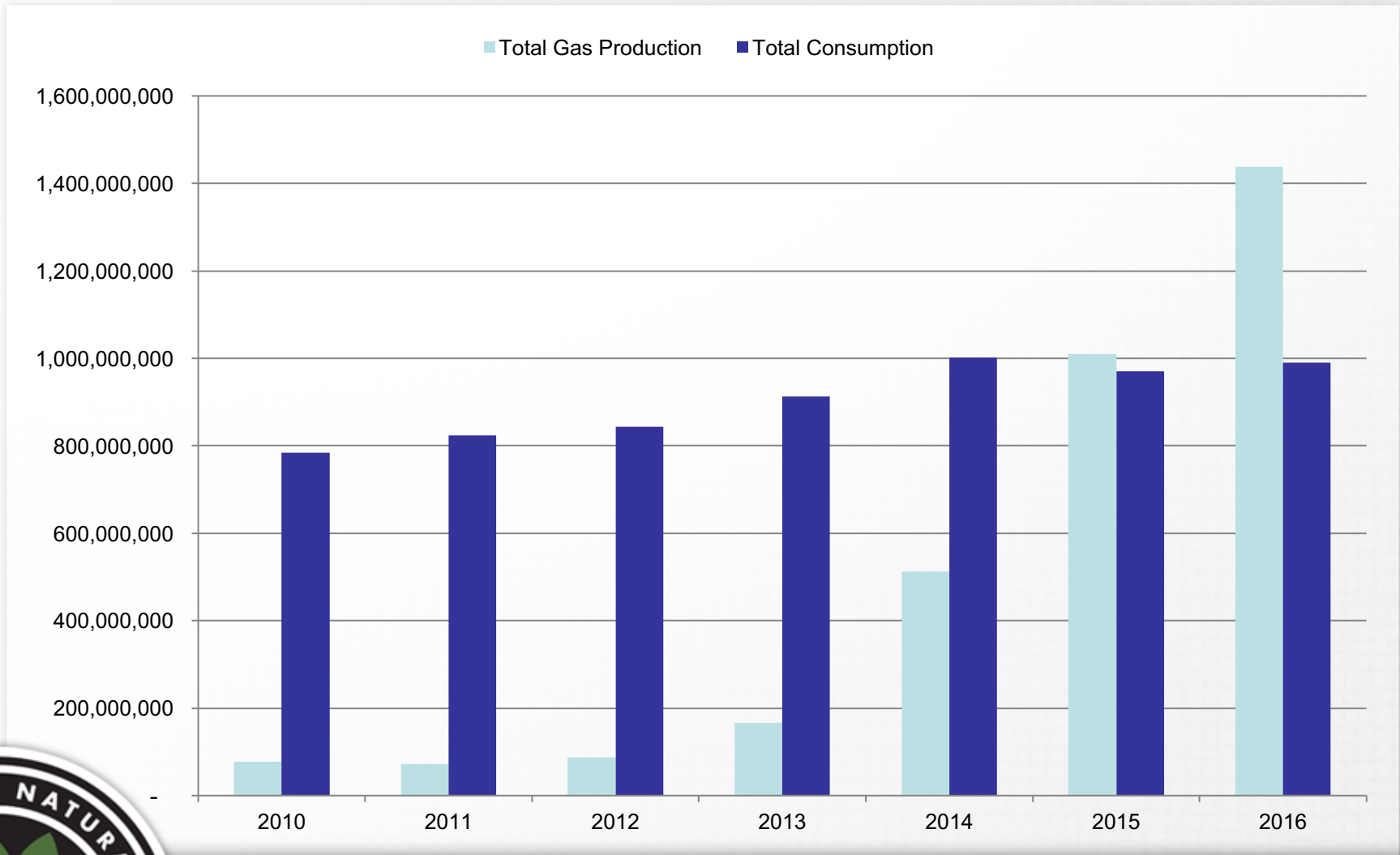
# Still on the Rise



## Horizontal Well Permits Issued by Year



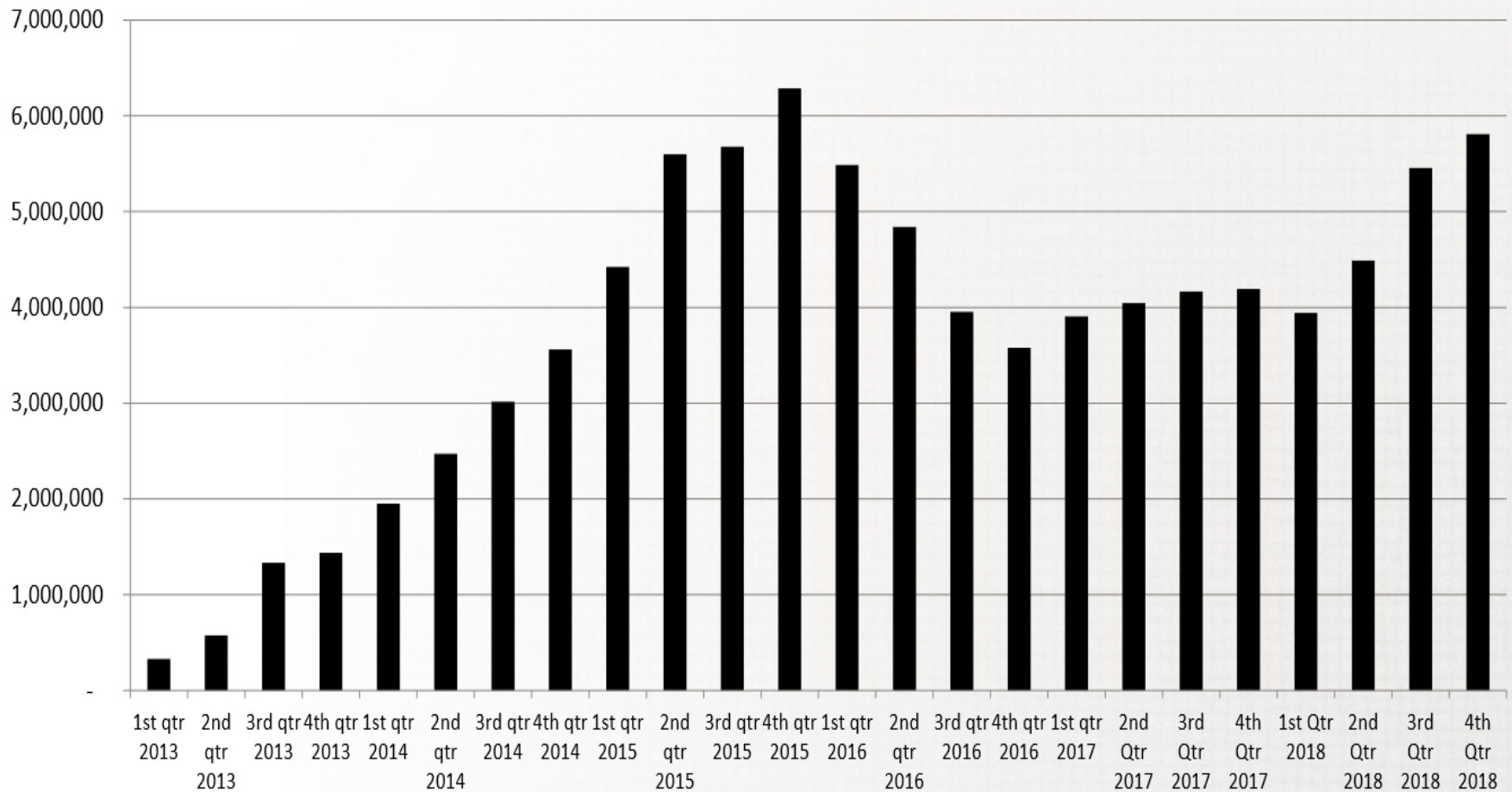
# Total Natural Gas Production v. Consumption



# Shale Oil



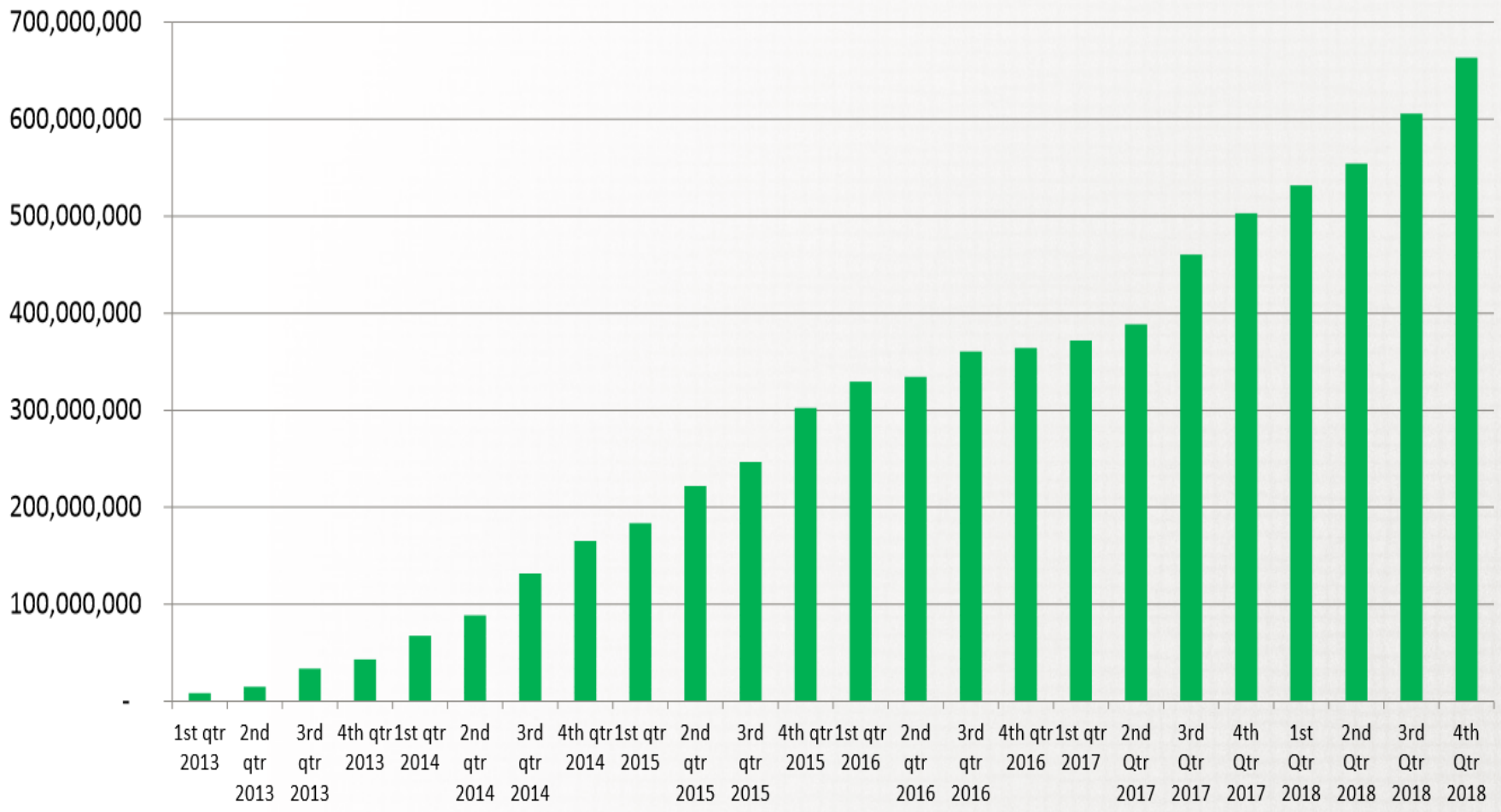
## Shale Oil Production by Quarter



# Shale Gas



## Shale Natural Gas Production by Quarter

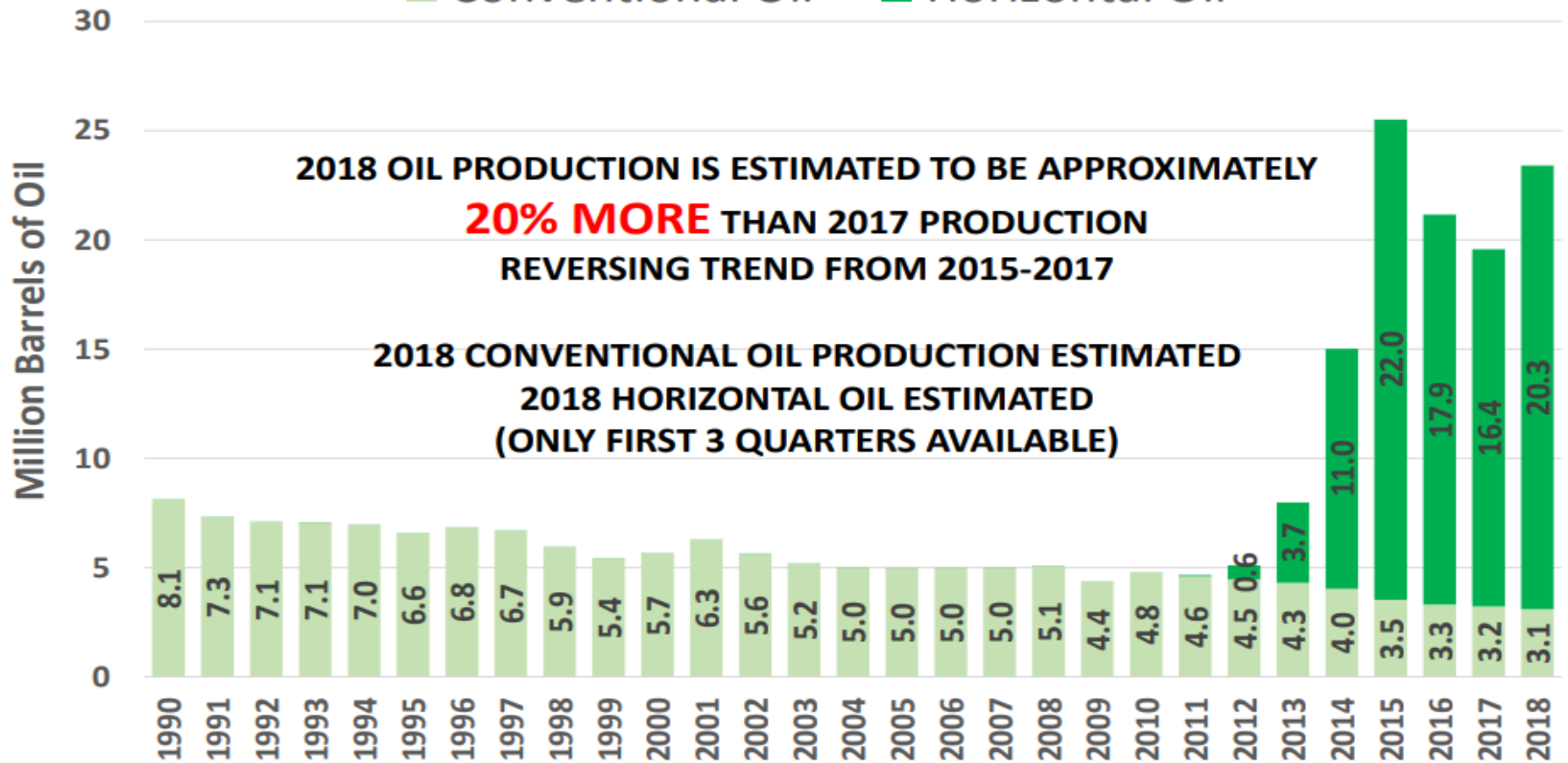


# Conventional and Shale - Oil



## Production Summary – Oil By Year

■ Conventional Oil ■ Horizontal Oil

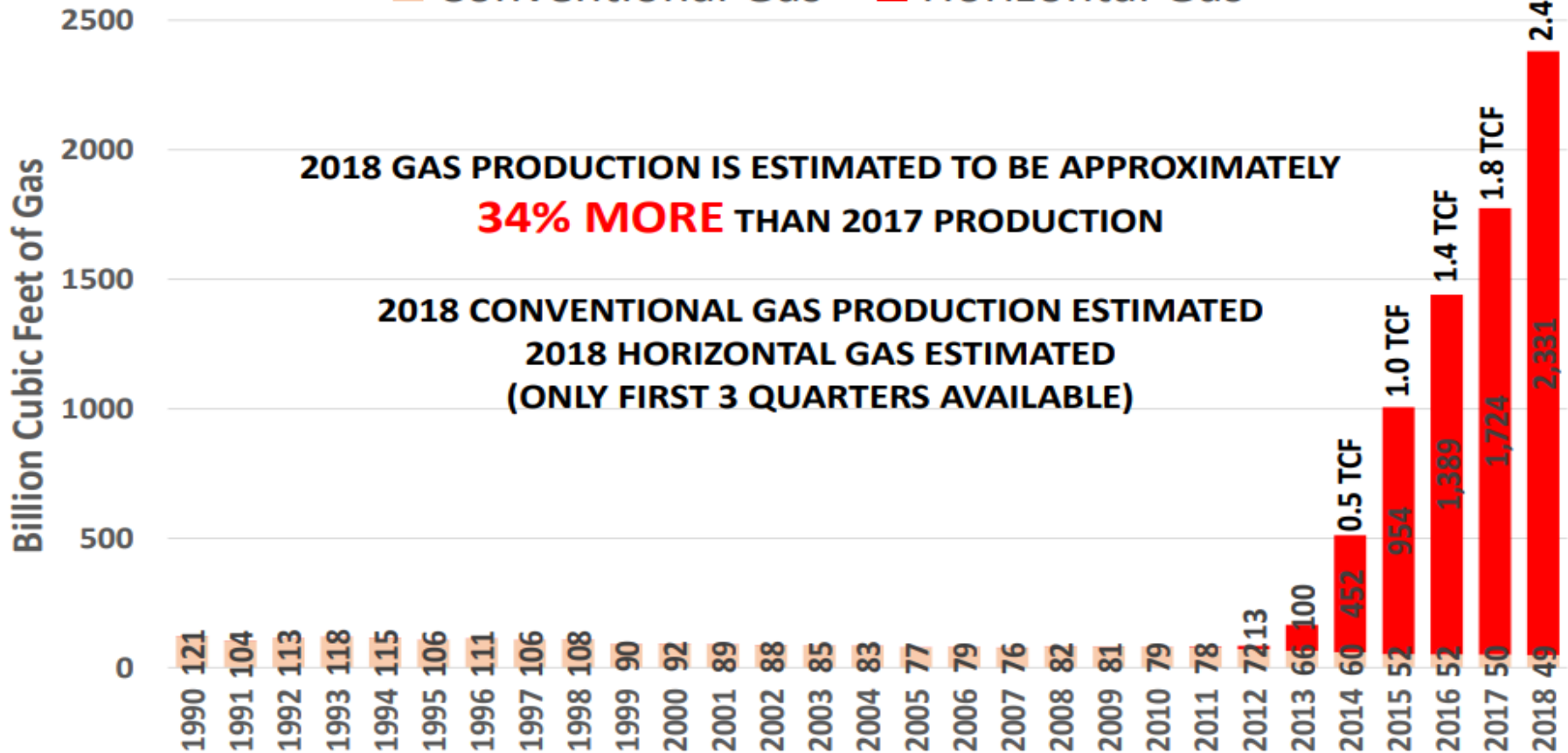


# Conventional and Shale - Gas



## Production Summary – Gas By Year

■ Conventional Gas ■ Horizontal Gas





# NEW Pipeline Investment



| <u>Company</u>                             | <u>Project</u>         | <u>Investment</u>          | <u>Miles</u>           | <u>Transporting</u>             | <u>Status</u> |
|--|------------------------|----------------------------|------------------------|---------------------------------|---------------|
| Enbridge/Spectra                           | NEXUS                  | \$1.5 Billion              | 250                    | 1.5 Bcf/d                       | Operating     |
| Enbridge/Spectra                           | Texas Eastern/<br>OPEN | \$468 Million              | 76                     | .55 Bcf/d                       | Operating     |
| Energy Transfer                            | ROVER                  | \$4.3 Billion              | 570                    | 3.2 Bcf/d                       | Operating     |
| Kinder Morgan                              | UTOPIA                 | \$500 Million              | 215                    | 50,000 bpd                      | Operating     |
| TransCanada/<br>Columbia<br>Pipeline Group | LEACH                  | \$1.4 Billion              | 161                    | 1.5 Bcf/d                       | Operating     |
| <b>Total</b>                               | <b>5<br/>Projects</b>  | <b>\$8.168<br/>Billion</b> | <b>1,272<br/>Miles</b> | <b>6.75 Bcf/d<br/>50,00 bpd</b> |               |

# NEW Natural Gas Power Plants



| <u>Company</u>                      | <u>Project</u>                   | <u>Investment</u>      | <u>Megawatts</u>        | <u>Households</u>  | <u>Jobs</u>           | <u>Status</u>      |
|-------------------------------------|----------------------------------|------------------------|-------------------------|--------------------|-----------------------|--------------------|
| Advanced Power Services             | Carroll County Energy            | \$900 million          | 740                     | 750,000            | 730                   | <b>Operating</b>   |
| South Field Energy LLC.             | Columbiana County Energy         | \$1.1 billion          | 1,100                   | 900,000            | 900                   | Under Construction |
| Oregon Clean Energy LLC             | Oregon Clean Energy              | \$860 million          | 960                     | 500,000            | 475                   | <b>Operating</b>   |
| Oregon Clean Energy LLC             | Oregon Clean Energy 2            | \$860 million          | 960                     | 500,000            | 475                   | Permitted          |
| NTE Energy                          | Middletown Energy Center         | \$600 million          | 513                     | 600,000            | 430                   | <b>Operating</b>   |
| NTE Energy                          | Pickaway Energy Center           | \$900 million          | 1,000                   | 1,000,000          | 500                   | Proposed           |
| Rolling Hills                       | Rolling Hills Generating Station | \$700 million          | 1,414                   | 1,400,000          | 400                   | <b>Operating</b>   |
| Clean Energy Future                 | Lordstown Energy Center          | \$850 million          | 940                     | 700,000            | 700                   | <b>Operating</b>   |
| Clean Energy Future Trumbull        | Trumbull Energy Center           | \$850 million          | 940                     | 850,000            | 700                   | Permitted          |
| APEX Power Group LLC.               | Guernsey Power Station           | \$1 billion            | 1,650                   | 1,000,000          | 525                   | Permitted          |
| EmberClear                          | Harrison Power Project           | \$900 Million          | 1,000                   | 1,000,000          | 530                   | Permitted          |
| Ohio River Partners Shareholder LLC | Hannibal Port Power Project      | \$500 Million          | 485                     | 600,000            | 400                   | Under Construction |
| <b>TOTAL</b>                        | <b>12</b>                        | <b>\$10.02 Billion</b> | <b>11,702 Megawatts</b> | <b>9.8 Million</b> | <b>6,765 Thousand</b> |                    |

# NEW Ethane Cracker Plants



| <u>Company</u>         | <u>Project</u>        | <u>Investment</u>       | <u>Jobs</u>   | <u>Status</u>      |
|------------------------|-----------------------|-------------------------|---|--------------------|
| Shell                  | Beaver County, PA     | \$6 Billion             | 5,000-6000<br>500-600                               | Under Construction |
| PTT<br>Global Chemical | Belmont County, OH    | \$5 Billion             | 4,000- 5,000<br>400-500                             | Pending            |
| Odebrecht /<br>Braskem | Wood County, WV       | \$4 Billion             | 3,000-4,000<br>300-400                              | Stalled            |
| <b>TOTAL</b>           | <b>3<br/>Projects</b> | <b>\$15<br/>Billion</b> | <b>12,000-<br/>15,000</b><br><br><b>1,200-1,500</b> |                    |

# NEW Ethane Storage



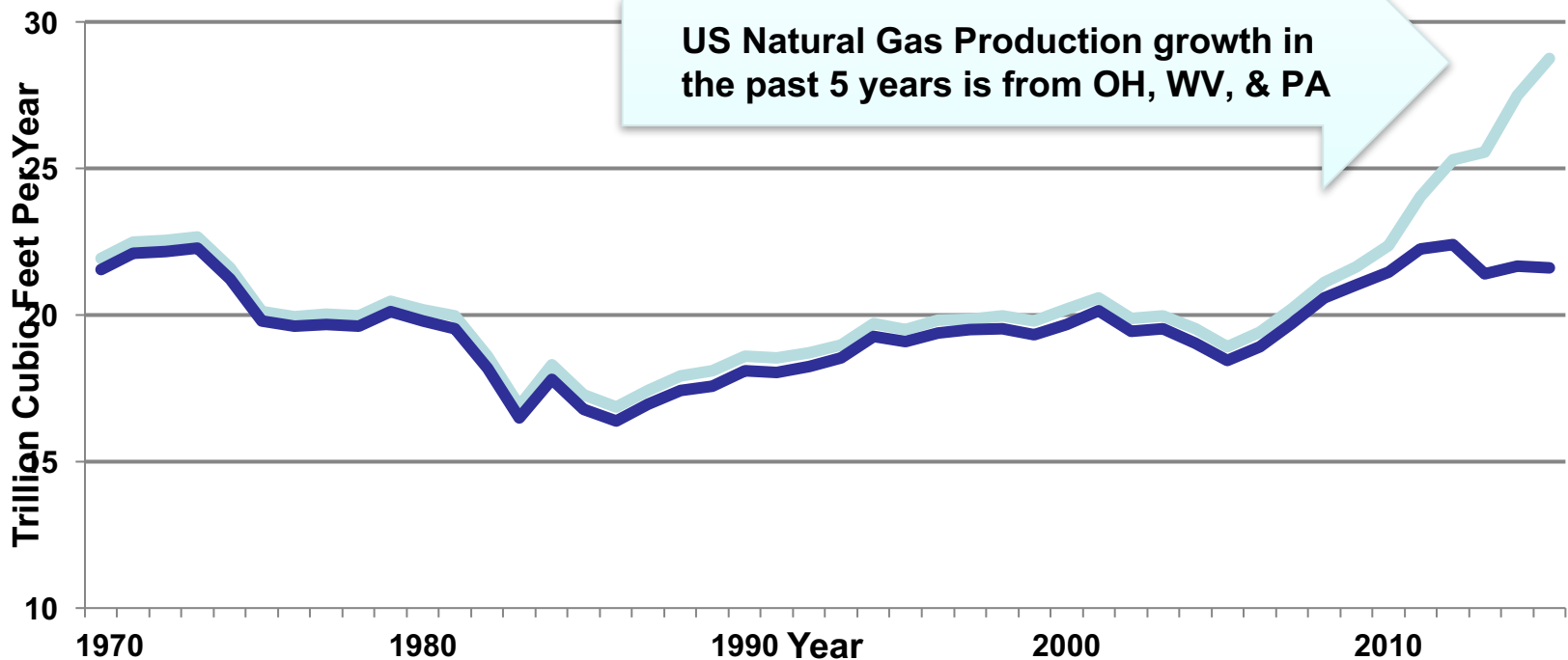
| <u>Company</u>             | <u>Project</u>                                   | <u>Investment</u> | <u>Jobs</u>                                | <u>Status</u> |
|----------------------------|--|-------------------|--|---------------|
| Mountaineer<br>NGL Storage | 220 Acres<br><br>Clarington,<br>Monroe<br>County | \$500 Million     | 200<br>Construction<br><br>20<br>Permanent | Pending       |

- Scalable to more than 10 Million barrels of NGL storage
- Awaiting Ohio ODNR Permits

# What Changed?

## Natural Gas Production (1970 - 2015)

— US Natural Gas Totals — US Natural Gas Totals without OH, WV, PA



# Shale Crescent USA



THE MID-OHIO VALLEY OFFERS A WORLD-CLASS ADVANTAGE TO ENERGY INTENSIVE MANUFACTURING INDUSTRIES.

[Visit Us](#) [About Us](#)

**PROXIMITY TO MARKET:**  
**50% OF NORTH AMERICAN MARKETS**  
**WITHIN A DAY'S DRIVE**



# Advantages

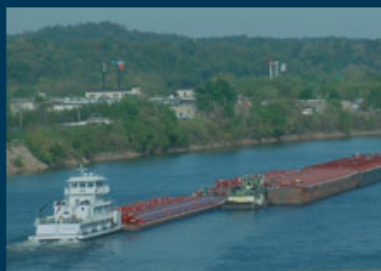


## WORLD CLASS ADVANTAGES



### NATURAL GAS

LOWEST NATURAL GAS PRICES IN THE DEVELOPED WORLD



### WATER

ABUNDANT FRESH WATER SUPPLY FOR PROCESS & TRANSPORTATION TO THE WORLD



### MARKET

ACCESS TO 50% OF NORTH AMERICAN MARKETS WITHIN A DAY'S DRIVE

Without considering the time value of money, the pre-tax cash flow of the **Shale Crescent USA** project from 2020 to 2040 amounts to **\$11.5 Billion**, compared to \$7.9 Billion for a similar Gulf Coast project, a **pre-tax cash flow advantage of \$3.6 Billion** for a nearly \$3 Billion investment in an ethylene/polyethylene plant.” Source: IHS Markit

We are proud to announce...



A 2017 Report

# OHIO'S OIL AND GAS INDUSTRY PROPERTY TAX PAYMENTS

As Prepared by The Ohio Oil and  
Gas Association and Energy In Depth

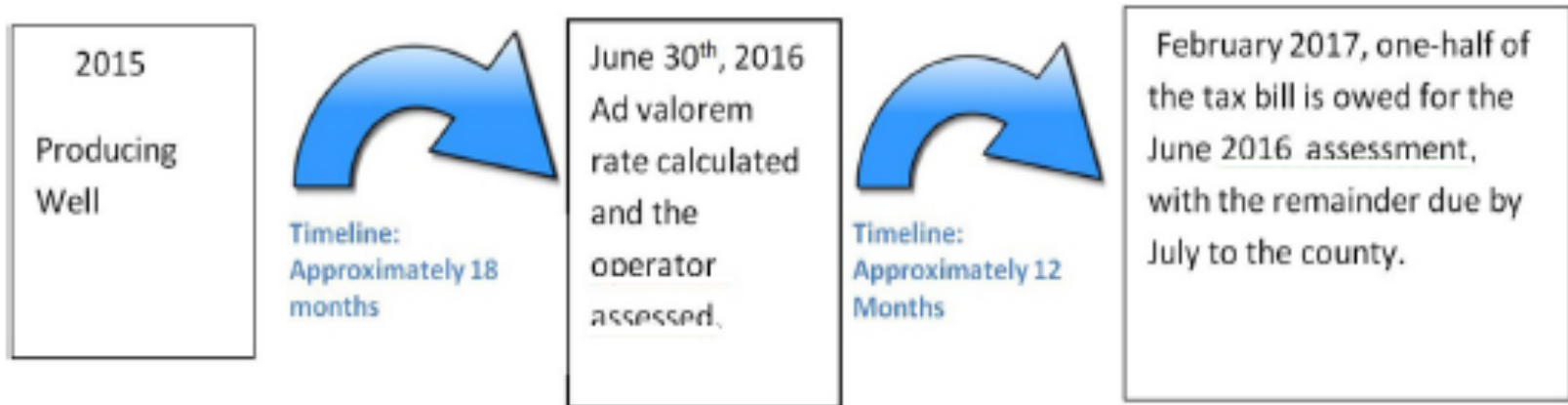
THE UTICA SHALE LOCAL SUPPORT SERIES



Senior  
Centers  
Law Enforcement  
Local School Funding  
CITIES taxes  
townships  
villages  
INFRASTRUCTURE  
consumer savings  
**JOBS**  
AFFORDABLE energy  
economic  
development  
Roads & Bridges



# Understanding Ad Valorem

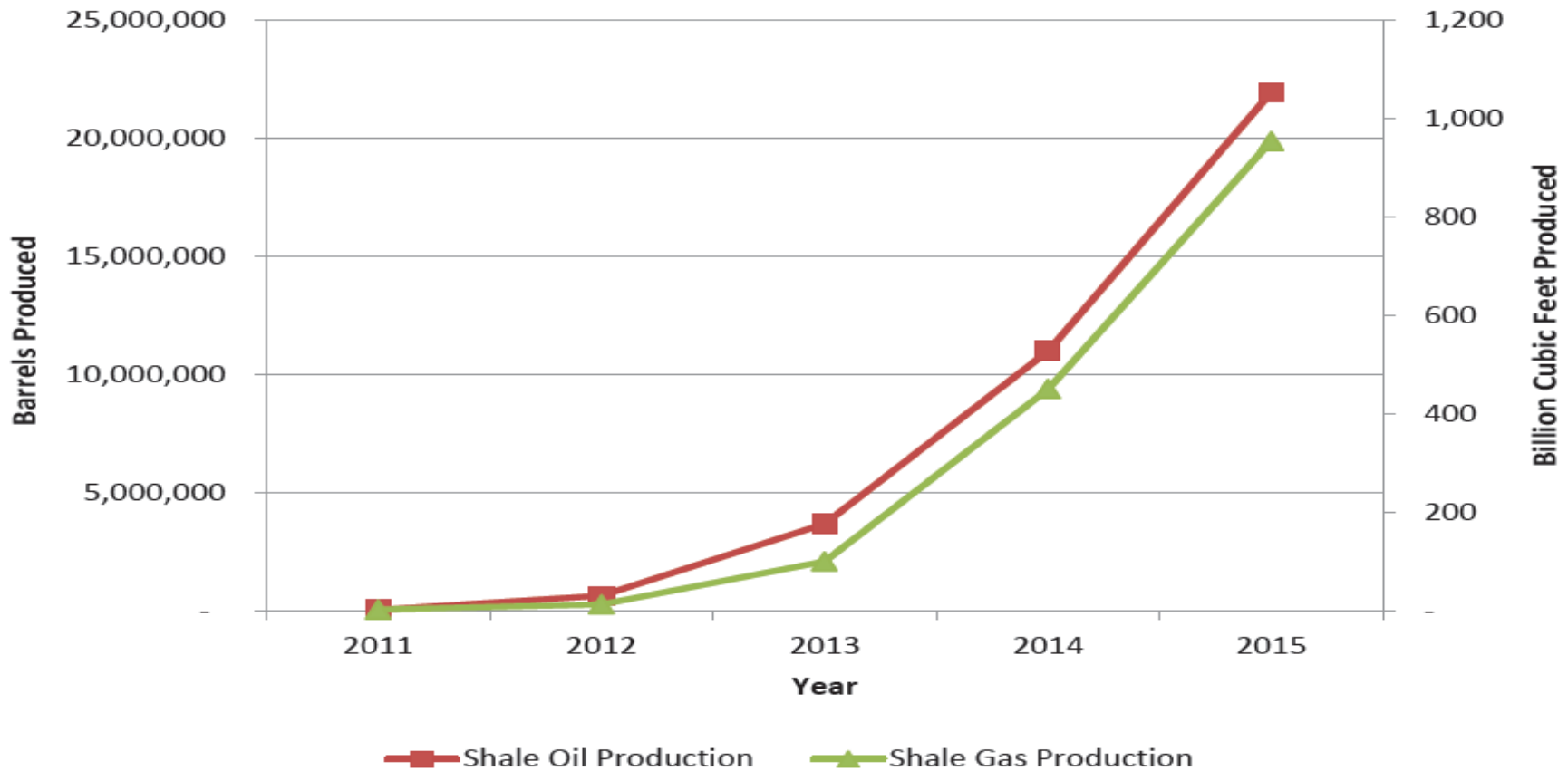


# Ad Valorem Top Level Findings



- **Real Estate Property Tax Paid for Eight Counties**      **\$45.8 Million**
  
- **Projected Taxes To Be Paid (2016-2026)**      **\$200-\$250 Million**
  
- **Amount Paid to Local Government/Schools**      **100 Percent**
  
- **% of Tax Collection to Ohio Local Schools**      **60-70 Percent**

# Production 2011-2015

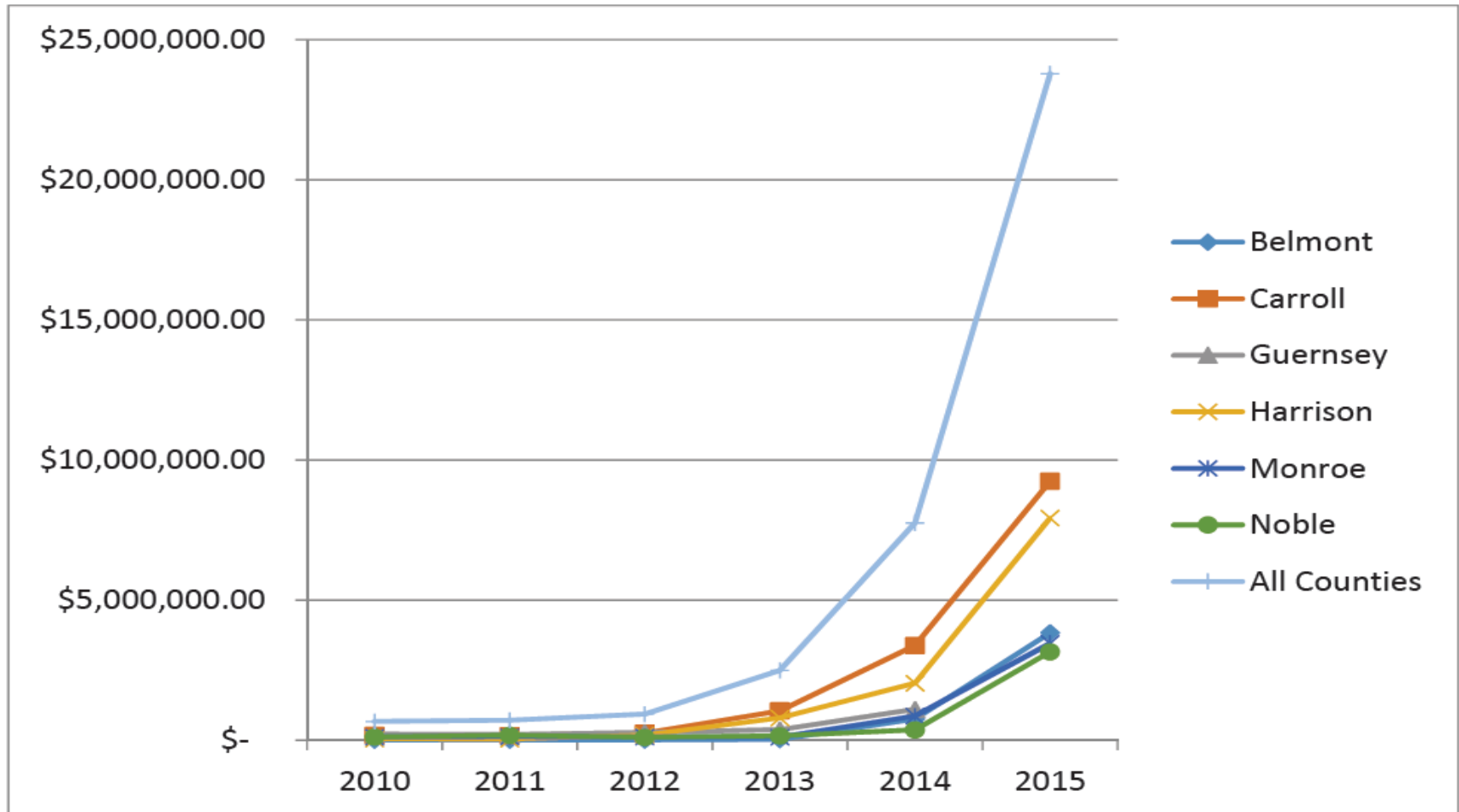


Source: Ohio Department of Natural Resources Department of Oil & Gas Resources (<http://oilandgas.ohiodnr.gov/shale>)

# \$45.8 Million Paid



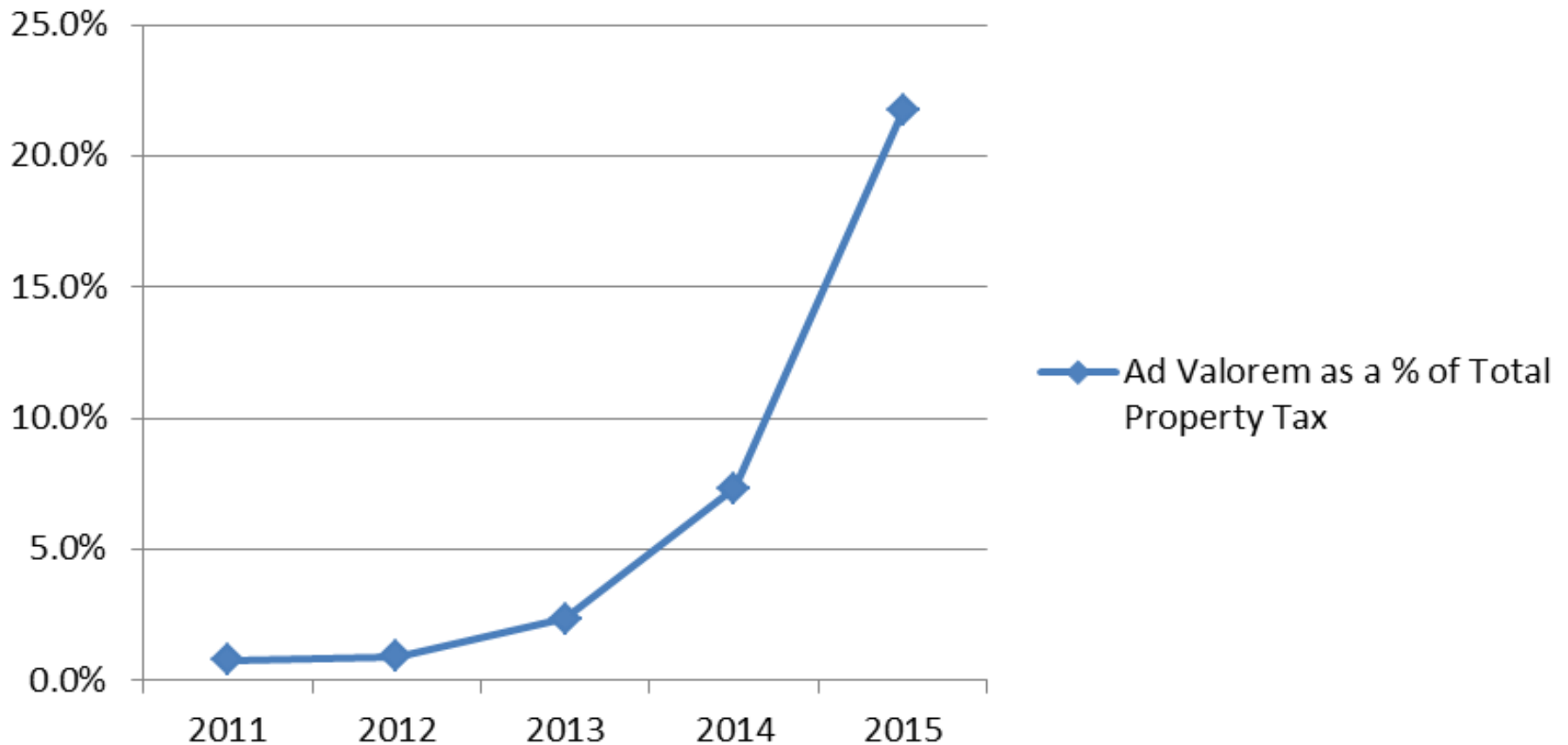
## Real Estate Property Taxes Paid for Oil & Gas Wells(2010-2015)



# Real Estate Tax from Wells is 24% of Total Property Tax



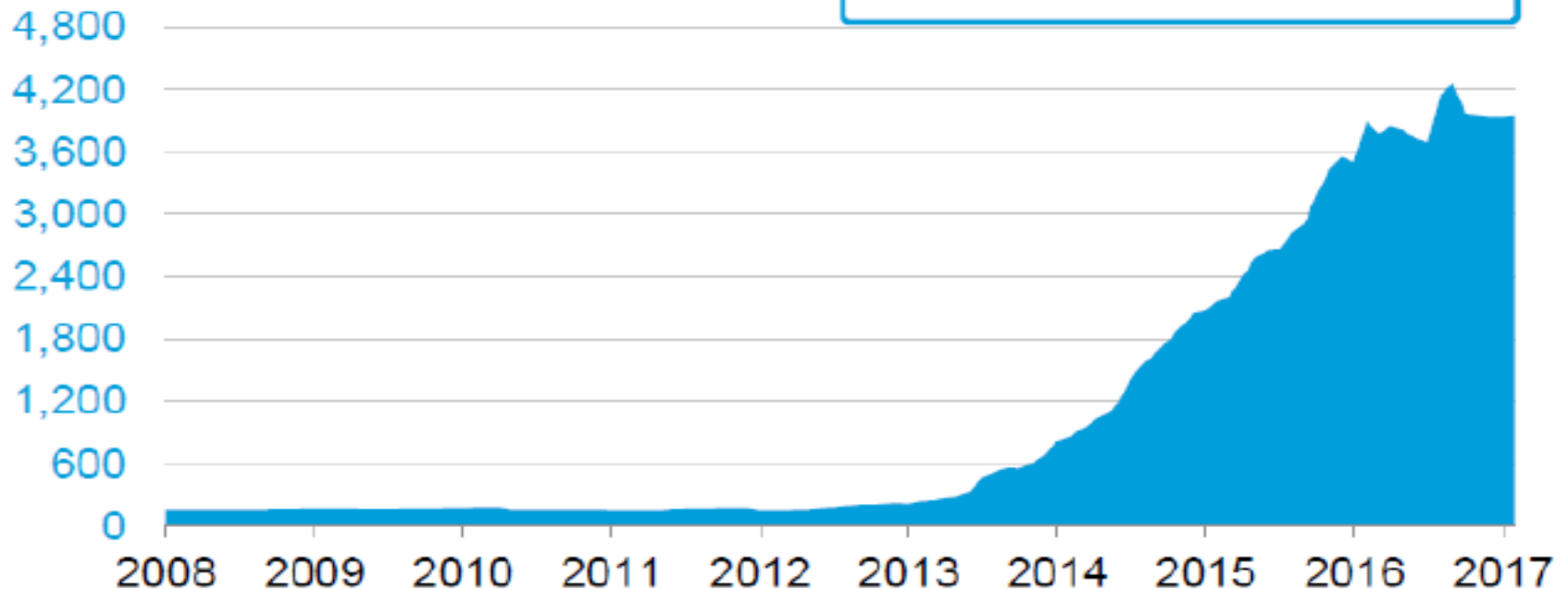

## Real Estate Property Tax from Wells as a % of Total Property Tax



# \$200-\$250 Million To Come

## Utica Region Natural gas production million cubic feet/day

**Gas +15**  
million cubic feet/day  
month over month

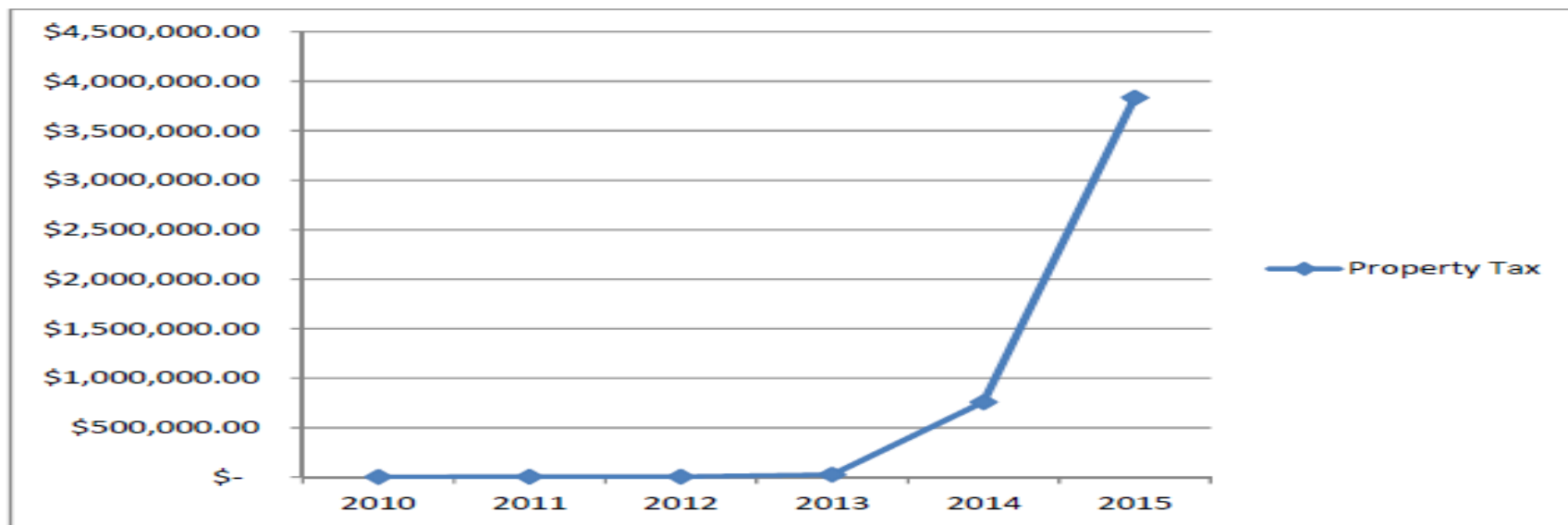


# Belmont County



| Belmont County Shale Production & Property Taxes |               |                      |                 |
|--|---------------|----------------------|-----------------|
| Year   | Oil (barrels) | Gas Production (Bcf) | Property Tax    |
| 2010   | 0             | 0                    | \$ 3,239.73     |
| 2011   | 0             | 0                    | \$ 5,889.65     |
| 2012   | 630           | 0                    | \$ 5,948.06     |
| 2013   | 21,374        | 12,360,722           | \$ 25,862.85    |
| 2014   | 154,013       | 95,246,696           | \$ 758,915.83   |
| 2015   | 257,129       | 270,251,876          | \$ 3,834,014.31 |
| Total  | 433,146       | 377,859,294          | \$ 4,633,870.43 |

**Belmont County Property Tax for Oil & Gas Wells**

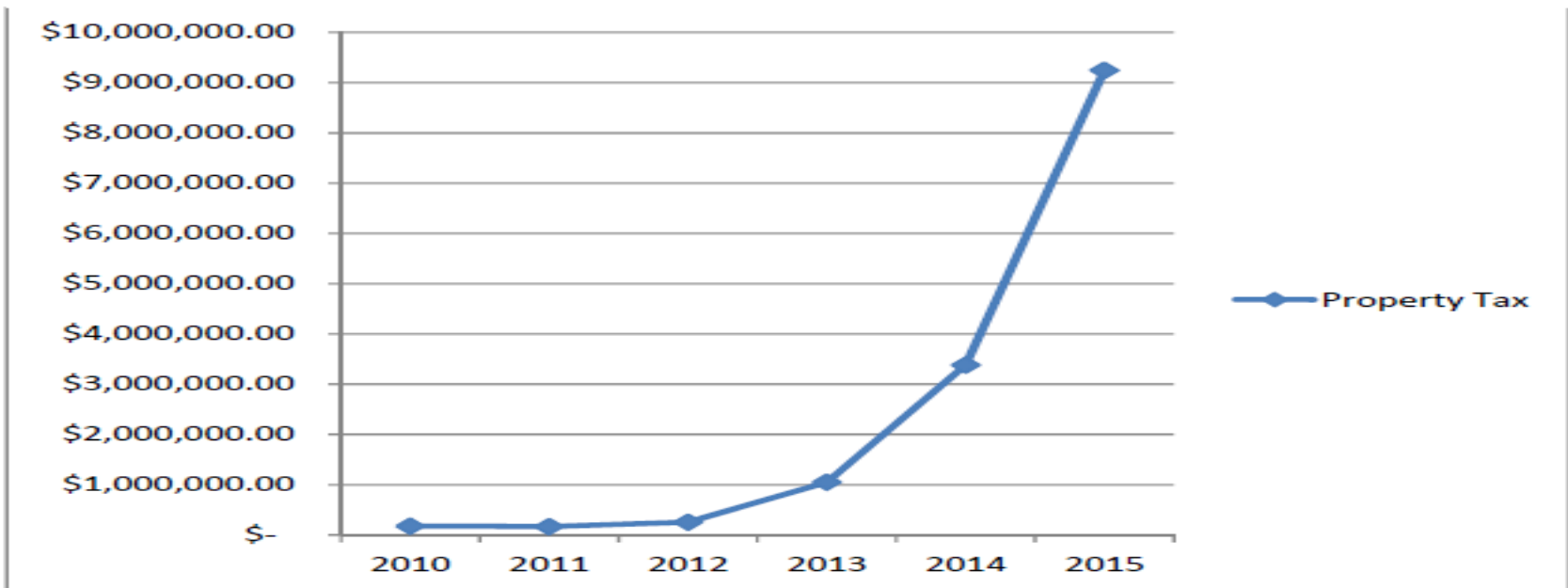


# Carroll County



| Carroll County Shale Production & Property Taxes |               |                      |                  |
|--|---------------|----------------------|------------------|
| Year   | Oil (barrels) | Gas Production (Bcf) | Property Tax     |
| 2010   | 0             | 0                    | \$ 177,732.00    |
| 2011   | 46,326        | 2,561,524            | \$ 166,687.00    |
| 2012   | 352,958       | 7,751,602            | \$ 255,821.00    |
| 2013   | 1,768,635     | 50,224,722           | \$ 1,048,405.00  |
| 2014   | 3,962,654     | 161,137,566          | \$ 3,381,772.00  |
| 2015   | 5,673,333     | 212,610,576          | \$ 9,244,863.00  |
| Total  | 11,803,906    | 434,285,990          | \$ 14,275,280.00 |

Carroll County Property Tax for Oil and Gas Wells



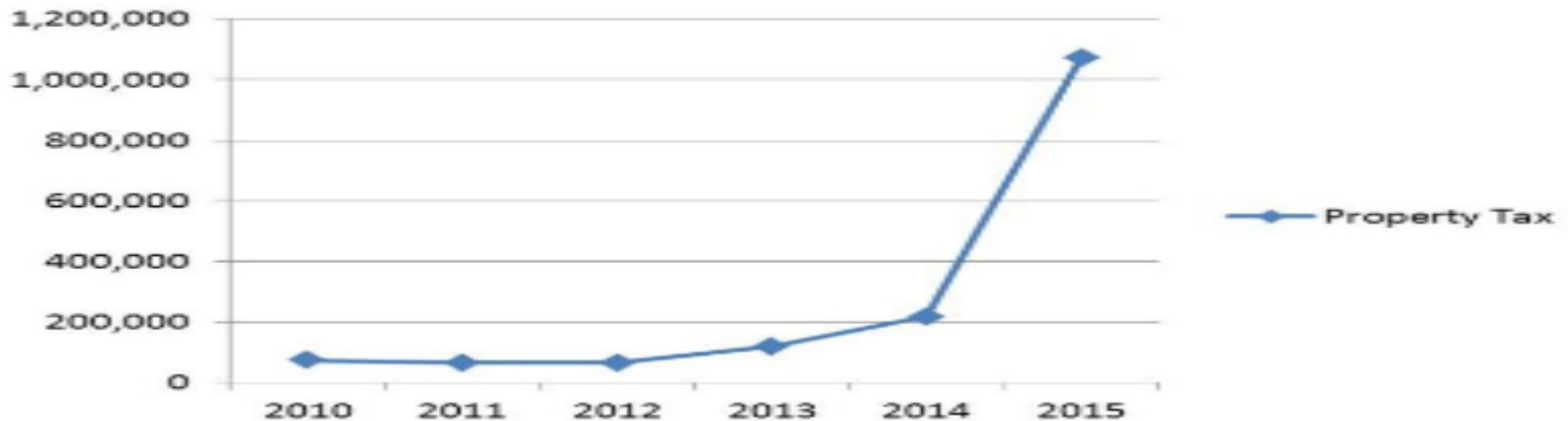


# Columbiana County



| Year  | Shale Oil (Barrels) | Shale Gas (MCF) | Property Tax   |
|-------|---------------------|-----------------|----------------|
| 2010  | 0                   | 0               | \$73,821.00    |
| 2011  | 0                   | 0               | \$65,445.00    |
| 2012  | 24,085              | 132,599         | \$66,728.00    |
| 2013  | 80,411              | 3,000,276       | \$121,434.00   |
| 2014  | 172,387             | 21,272,751      | \$216,954.00   |
| 2015  | 214,412             | 37,085,472      | \$1,072,685.00 |
| Total | 491,295             | 61,491,098      | \$1,617,067.00 |

## Columbiana County Property Tax for Oil & Gas Wells (Ad Valorem)

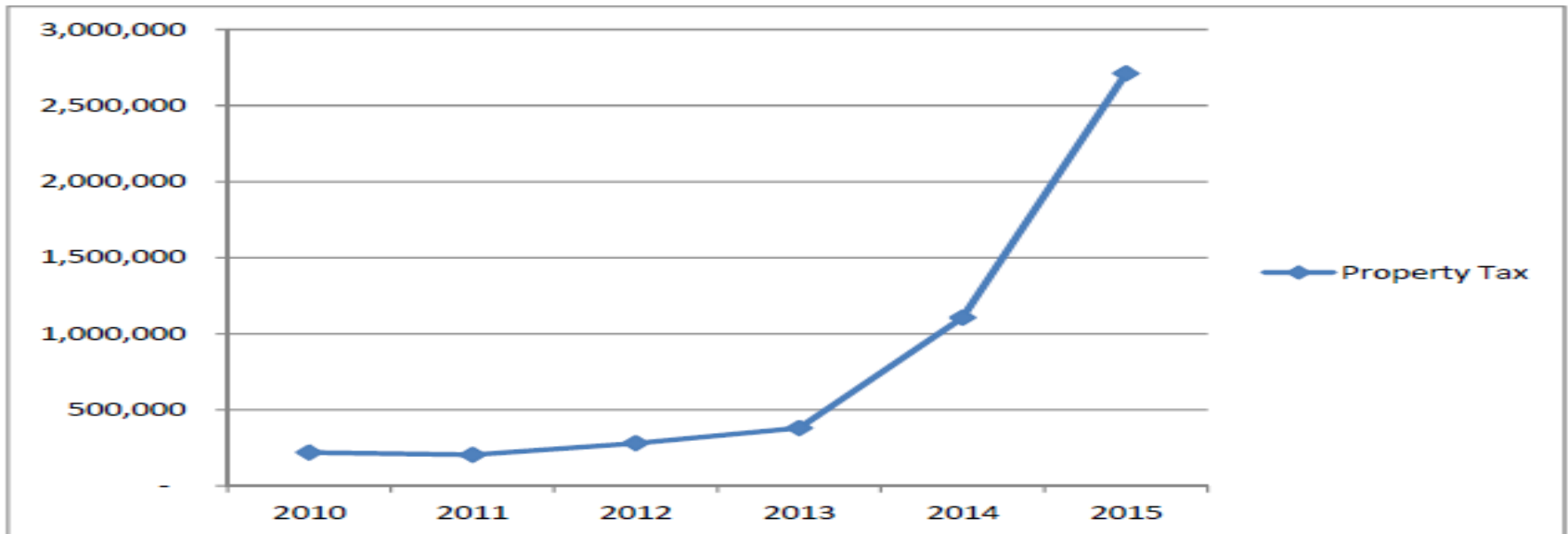


# Guernsey County



| Guernsey County Shale Production & Property Taxes |               |                      |                 |
|---|---------------|----------------------|-----------------|
| Year  | Oil (barrels) | Gas Production (Bcf) | Property Tax    |
| 2010  | -             | -                    | \$ 218,959.00   |
| 2011  | -             | -                    | \$ 204,000.00   |
| 2012  | 52,422        | 136,705              | \$ 279,382.00   |
| 2013  | 323,186       | 2,072,979            | \$ 379,962.00   |
| 2014  | 1,280,229     | 12,547,332           | \$ 1,105,735.00 |
| 2015  | 5,935,708     | 43,812,972           | \$ 2,711,412.00 |
| Total   | 7,591,545     | 58,569,988           | \$ 4,899,450.00 |

Guernsey County Property Tax for Oil & Gas Wells

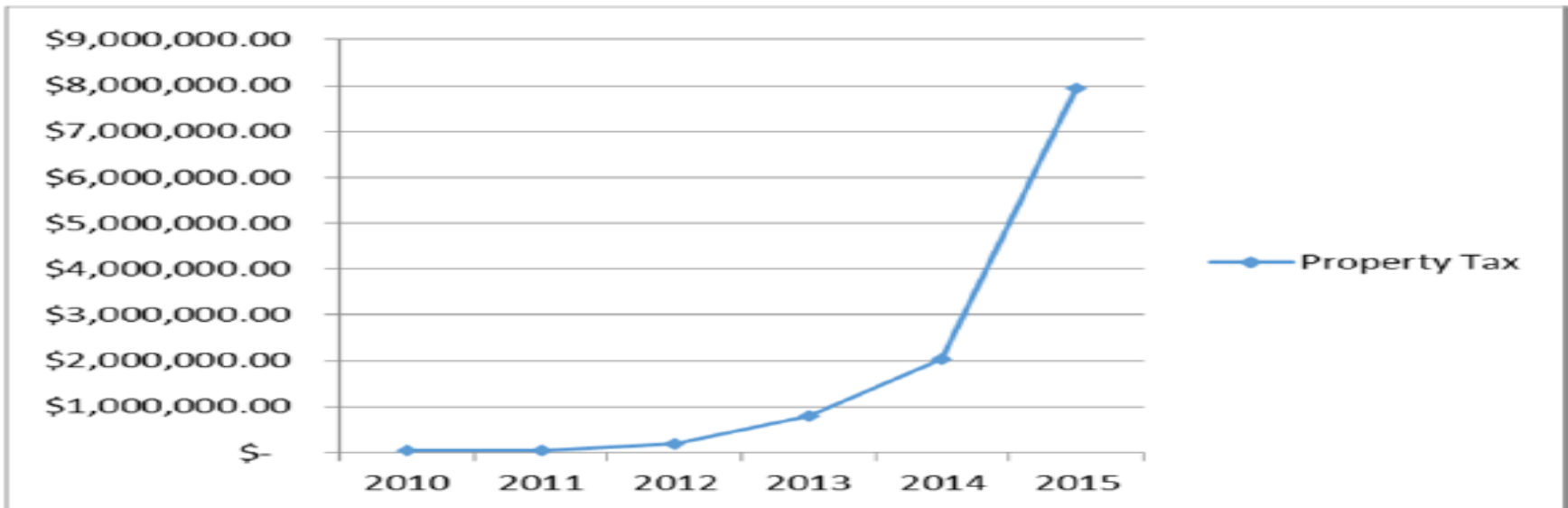


# Harrison County



| Harrison County Shale Production & Property Taxes |               |                      |                  |
|---|---------------|----------------------|------------------|
| Year  | Oil (barrels) | Gas Production (Bcf) | Property Tax     |
| 2010  | 0             | 0                    | \$ 45,875.00     |
| 2011  | 13,472        | 1,523,465            | \$ 42,005.00     |
| 2012  | 69,278        | 447,334              | \$ 181,697.00    |
| 2013  | 1,096,509     | 12,659,094           | \$ 796,460.00    |
| 2014  | 2,913,700     | 49,975,816           | \$ 2,036,462.00  |
| 2015  | 6,652,597     | 140,010,399          | \$ 7,931,754.00  |
| Total   | 10,745,556    | 204,616,108          | \$ 11,034,253.00 |

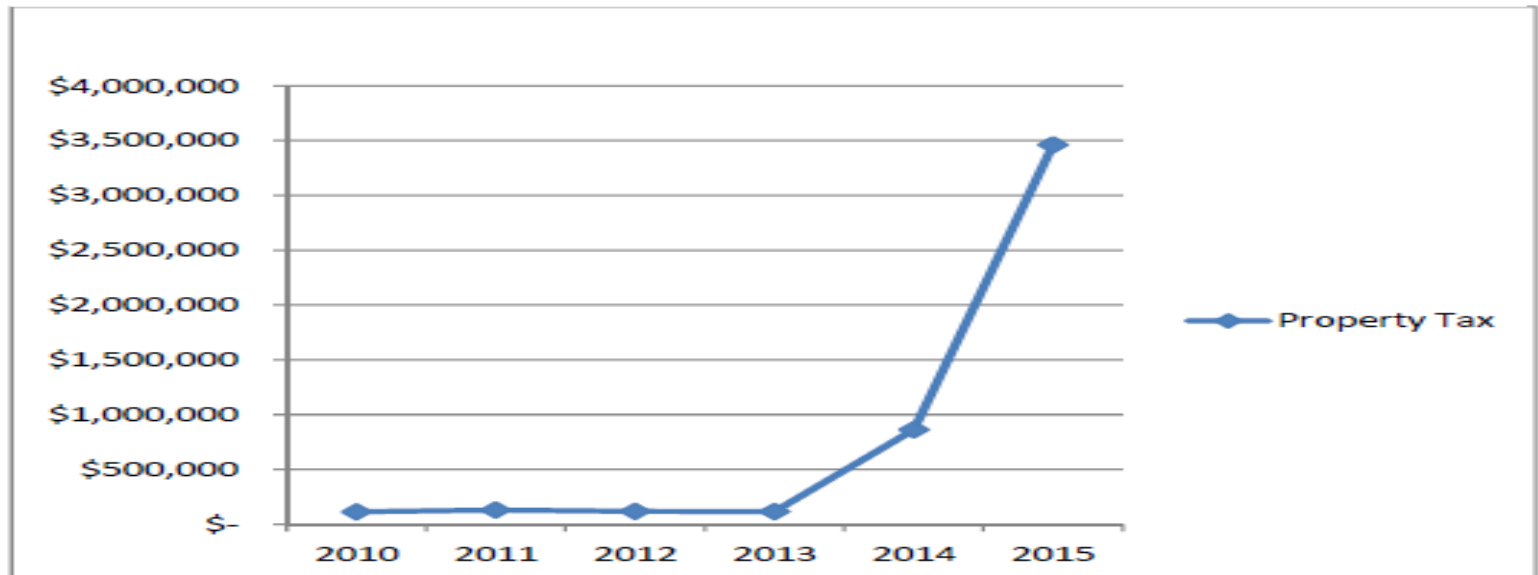
Harrison County Property Tax for Oil and Gas Wells



# Monroe County

| Monroe County Shale Production & Property Taxes |               |                      |                 |
|---|---------------|----------------------|-----------------|
| Year  | Oil (barrels) | Gas Production (Bcf) | Property Tax    |
| 2010  | 0             | 0                    | \$ 113,897.00   |
| 2011  | 0             | 0                    | \$ 129,062.00   |
| 2012  | 733           | 232,847              | \$ 118,069.00   |
| 2013  | 41,230        | 9,723,827            | \$ 115,607.00   |
| 2014  | 145,186       | 59,403,849           | \$ 862,784.00   |
| 2015  | 206,766       | 137,606,188          | \$ 3,460,418.00 |
| Total   | 393,915       | 206,966,711          | \$ 4,799,837.00 |

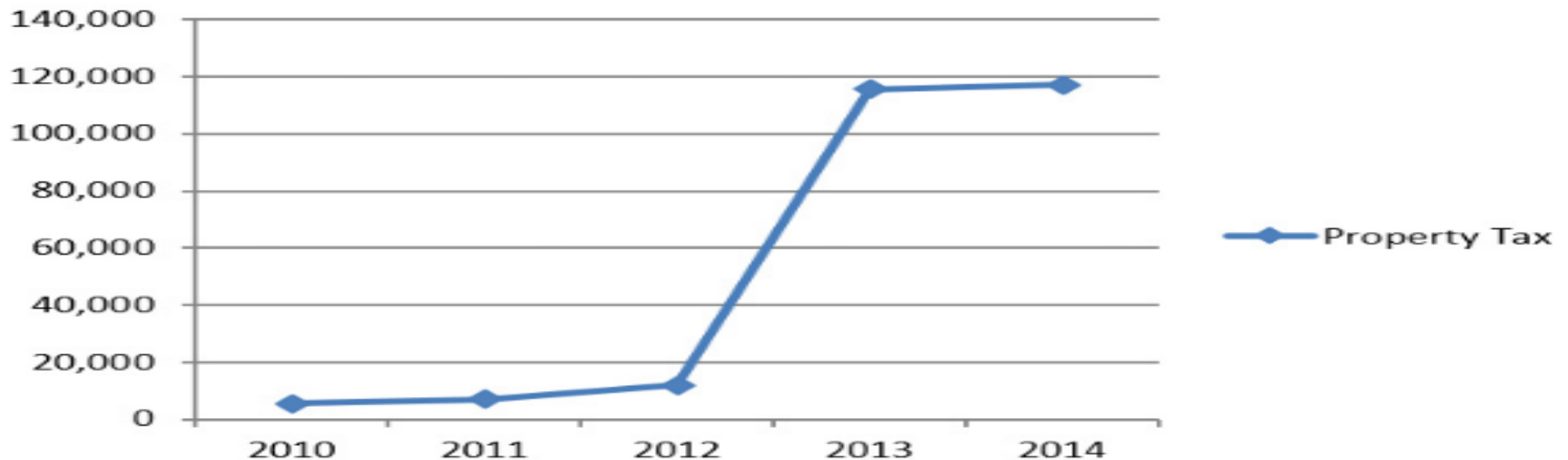
Monroe County Property Tax for Oil & Gas Wells



# Jefferson County

| Year         | Shale Oil (Barrels) | Shale Gas (McF)   | Property Tax         |
|--------------|---------------------|-------------------|----------------------|
| 2011         | 0                   | 0                 | \$ 5,653.06          |
| 2012         | 52                  | 1,623,836         | \$ 7,024.05          |
| 2013         | 40                  | 4,171,256         | \$ 12,005.51         |
| 2014         | 24                  | 7,775,426         | \$ 115,646.73        |
| 2015         | 355                 | 6,748,650         | \$ 117,127.57        |
| 2016         | 593                 | 46,012,135        | \$ 221,380.28        |
| <b>Total</b> | <b>1064</b>         | <b>66,331,303</b> | <b>\$ 478,837.20</b> |

## Jefferson County Property Tax for Oil & Gas Wells (Ad Valorem)



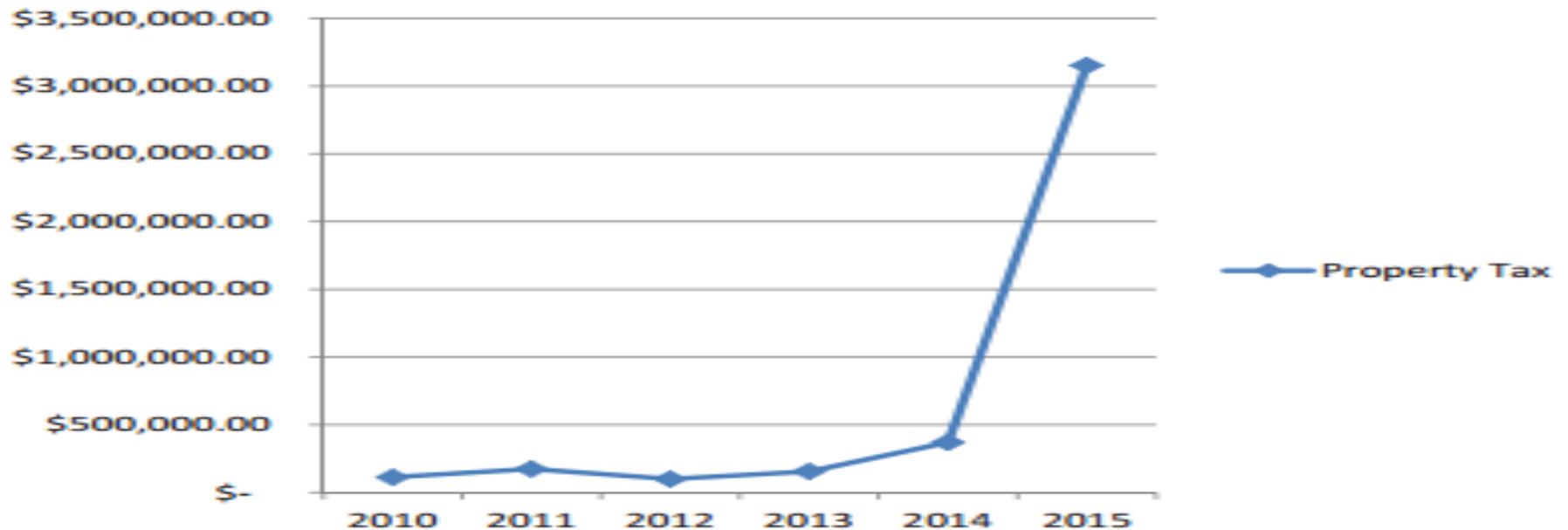
# Noble County



## Noble County Shale Production & Property Taxes

| Year  | Oil (barrels) | Gas Production (Bcf) | Property Tax    |
|-------|---------------|----------------------|-----------------|
| 2010  | 0             | 0                    | \$ 113,139.00   |
| 2011  | 0             | 0                    | \$ 172,945.00   |
| 2012  | 92,359        | 358,193              | \$ 99,443.00    |
| 2013  | 270,874       | 4,267,316            | \$ 154,947.00   |
| 2014  | 2,165,721     | 38,341,044           | \$ 369,989.00   |
| 2015  | 2,863,215     | 98,900,727           | \$ 3,153,112.00 |
| Total | 5,392,169     | 141,867,280          | \$ 4,063,575.00 |

## Noble County Property Tax for oil & Gas Wells



# Where does this money go?



# Real World Impact to Local Communities



- East Guernsey School District Budget
  - Pre Shale - \$2 Million
  - Post Shale - \$4.1 Million

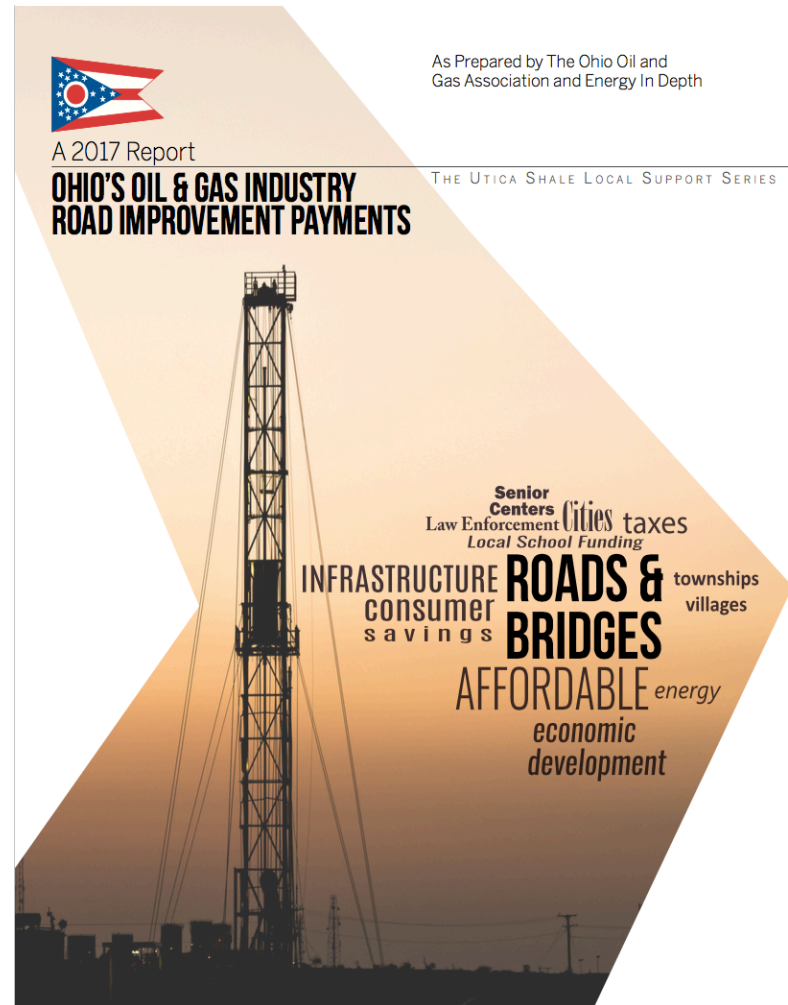




# Road Usage Maintenance Agreement (RUMA)



- OOGA and EID Study
- Public Records Requests
- 5 Year Look Back
- 8 Active Shale Counties
- 639 Road Miles Improved
- \$302 Million Invested



# County by County



| County        | Road Improvement Costs   | Miles Improved |
|---------------|--------------------------|----------------|
| Belmont       | \$ 62,355,737.70         | 93             |
| Carroll       | \$ 44,715,692.48         | 99.33          |
| Columbiana    | \$ 32,634,228.51         | 89.77          |
| Guernsey      | \$ 53,146,414.20         | 137            |
| Jefferson     | \$ 24,056,901.00         | 78.52          |
| Harrison      | \$ 31,409,026.56         | 54.75          |
| Noble         | \$ 12,587,467.00         | 14.92          |
| Monroe        | \$ 41,757,761.45         | 72             |
| <b>Totals</b> | <b>\$ 302,663,228.92</b> | <b>639.29</b>  |

# In Demand Jobs Week



## IN-DEMAND JOBS WEEK

May 6-10

In-Demand Jobs Week is a statewide celebration of jobs, industries and skills that are in-demand in Ohio. Community leaders statewide are encouraged to partner to plan engaging events and activities that will inspire excitement and awareness among students and job seekers.

### What does In-Demand Jobs Week mean for you?



#### **FOR STUDENTS, JOB SEEKERS AND PARENTS**

In-Demand Jobs Week is an opportunity to learn more through local events and activities about the rewarding and high-demand careers available in your region.



#### **FOR SECONDARY AND POST-SECONDARY EDUCATORS**

In-Demand Jobs Week is an opportunity to inspire students by focusing on in-demand careers and pathways in the classroom and beyond.



#### **FOR COMMUNITIES**

In-Demand Jobs Week is an opportunity to identify like-minded stakeholders to partner, plan events and increase awareness about jobs available in the community.



#### **FOR EMPLOYERS AND WORKFORCE PROFESSIONALS**

In-Demand Jobs Week is an opportunity to open your doors to students and job seekers to increase interest in local jobs and build a talent pipeline.

In-Demand Jobs Week is not possible without you! Plan an event, tell a friend, or encourage someone in your community to get involved. To submit an event to the official Event Map, email details to:

[In-DemandJobs@jfs.ohio.gov](mailto:In-DemandJobs@jfs.ohio.gov).

# Resources



- Ohio Department of Natural Resources Shale Activity
- Ohio Department of Job and Family Services Shale Report
- Ohio Oil and Gas Energy Education Program
- Cleveland State University Report
- Ohio Oil and Gas Association

**Thank You!**



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