Impact Fee and Natural Gas Production

Adjusting to a world where a new normal includes COVID-19 life, Pennsylvania's natural gas production does not seem to skip a beat, even after being faced with a multitude of economic disruptions. Yet again, 2021 was another record year for natural gas production. 2021 calendar year Act 13 impact fees were ***$234.44 million*** -- $88.1 million more than 2020.

Industry support groups and opponents of the impact fee, view Act 13 of 2012 as legislation that imposes a "*burdensome tax*" on the unconventional natural gas industry. Focus is traditionally centered on the total amount of fees imposed, rather than a metric such as Effective Tax Rate. Making the amount of total fees imposed a focal point is an effort to distract from a reality that this burden is barely felt by producers. Especially during a time when energy markets are seeing unprecedented fluctuations, and consumers are faced with utility price increases.

A review of the impact fee also requires an explanation of how fee collections are determined. Specifically, impact fees paid by each producer are determined by a multi-year fee schedule, based on the average annual price of natural gas. The following table shows all potential fee levels per unconventional well, as described in Act 13 of 2012, based on gas prices each year. Once a year, a fee is assigned to each well and is dependent upon the number of years a well has been in operation and the average annual price of gas as defined by the act.

Unconventional Gas Well Fee Schedule	**Average Annual Price of Natural Gas**				
	$0.00 - 2.25	**$2.26 - 2.99**	**$3.00 - 4.99**	**$5.00 - 5.99**	**$6.00+**
Year 1	$ 40,000	$ 45,000	$ 50,000	$ 55,000	$ 60,000
Year 2	$ 30,000	$ 35,000	$ 40,000	$ 45,000	$ 55,000
Year 3	$ 25,000	$ 30,000	$ 30,000	$ 40,000	$ 50,000
Years 4-10	$ 10,000	$ 15,000	$ 20,000	$ 20,000	$ 20,000
Years 11-15	$ 5,000	$ 5,000	$ 10,000	$ 10,000	$ 10,000
Note: Vertical well fees are 20% of horizontal well fees. Vertical wells are not subject to year 11-15 payments. The average annual price of natural gas is defined as the arithmetic mean of the ***New York Mercantile Exchange (NYMEX)*** settled price for the near-month contract as reported by the ***Wall Street Journal*** for the last trading day of each month of a calendar year for the 12-month period ending December 31.					

To explore the divergent paths that the impact fee and natural gas production are headed on, we can evaluate the "burden" of the fee. Such evaluation requires a per-calendar-year analysis of:

- production levels and impact fee collections
- impact fee collections and a calculation of the effective tax rate (ETR)

Production increases have outpaced collections every year since 2011. In comparing the difference in terms of percentage increase, the large discrepancy supports the notion of a lessening financial "burden" on producers and ongoing calls for enacting a severance tax.

CY 2011 - 2021 Pennsylavania Nat'l Gas Production											
	2011	*2012*	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*
Well Type	**bcf**	**bcf**	**bcf**	**bcf**	**bcf**	**bcf**	**bcf**	**bcf**	**bcf**	**bcf**	**bcf**
Unconventional	1,066	2,043	3,103	4,070	4,601	5,096	5,364	6,123	6,821	7,092	7,574
Conventional	240	218	162	176	163	112	101	101	121	89	82
Combined	**1,305**	**2,261**	**3,265**	**4,247**	**4,764**	**5,208**	**5,465**	**6,225**	**6,942**	**7,181**	**7,657**
Impact Fee *(millions)*	**$ 204**	**$ 202**	**$ 226**	**$ 224**	**$ 188**	**$ 173**	**$ 210**	**$ 252**	**$ 200**	**$ 146**	**$ 234**

As we explore the different trajectories of production and impact fee revenues, we cannot help but sit in awe of production milestones reached year-after-year. In a year when entire industries and their employees could not work, the natural gas industry in Pennsylvania was not only able sustain its existence but excel.

CY	Unconventional Well Production (bcf)	Yr-over-Yr Production Change	Impact Fee (millions)	Yr-over-Yr Impact Fee Change
2011	1,066		$ 204.2	
2012	2,043	92%	$ 202.5	-1%
2013	3,103	52%	$ 225.8	11%
2014	4,070	31%	$ 223.5	-1%
2015	4,601	13%	$ 187.7	-16%
2016	5,096	11%	$ 173.3	-8%
2017	5,364	5%	$ 209.6	21%
2018	6,123	14%	$ 251.8	20%
2019	6,821	11%	$ 200.4	-20%
2020	7,092	4%	$ 146.3	-27%
2021	7,574	7%	$ 234.4	60%
Change since 2011		**611%**	**$ 2,259**	**15%**

As we continue to analyze the impact fee, we can look at calculating an effective tax rate. The rate's calculation is a function of the annual impact fee, production, and the resulting market value for a particular calendar year.

The effective tax rate (ETR) for the impact fee shows that for 2021, the industry had its lowest "burden." A graphic illustration of the ETR emphasizes the evolution of unconventional well production in Pennsylvania and the respective ETR as calculated by the House Democratic Appropriations Committee (HACD).

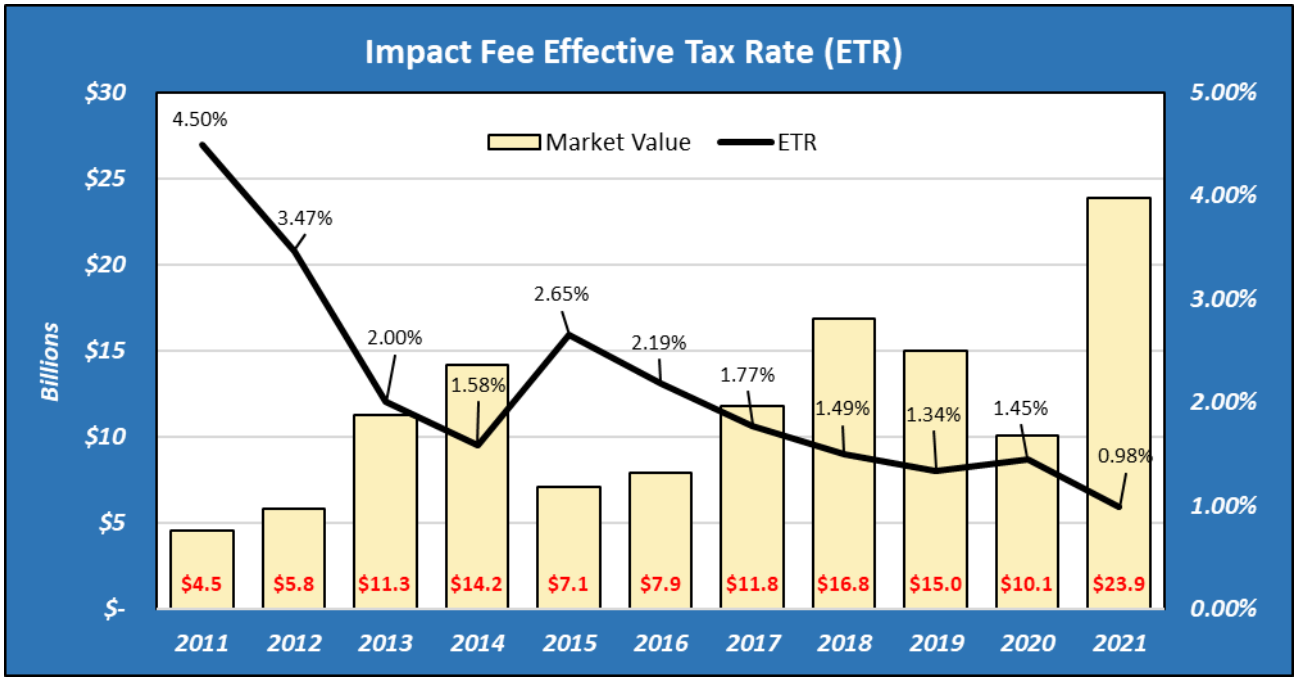
Impact Fee and Effective Tax Rate				
CY	Impact Fee[1]	Production[2] (mcf)	Market Value (MV)	ETR[3]
2011	$ 204,210,000	1,065,824,046	$ 4,538,151,847	4.50%
2012	$ 202,472,000	2,043,360,704	$ 5,838,597,436	3.47%
2013	$ 225,752,000	3,102,890,307	$ 11,266,209,483	2.00%
2014	$ 223,500,000	4,070,390,209	$ 14,167,431,796	1.58%
2015	$ 187,711,700	4,600,905,454	$ 7,076,806,042	2.65%
2016	$ 173,258,900	5,096,092,075	$ 7,928,042,207	2.19%
2017	$ 209,557,300	5,363,470,514	$ 11,809,316,198	1.77%
2018	$ 251,830,900	6,123,395,616	$ 16,848,328,224	1.49%
2019	$ 200,364,500	6,821,125,285	$ 14,967,446,696	1.34%
2020	$ 146,254,725	7,092,048,086	$ 10,080,154,937	1.45%
2021	$ 234,437,575	7,574,468,627	$ 23,871,233,328	0.98%

Notes:

(1) Impact Fee Data: PUC website, July 2022

(2) Production Data: DEP website, July 2022

(3) Effective Tax Rate (ETR) is calculated by dividing the Market Value (MV), as determined by HACD, by Impact Fee collections



As it stands, our evaluation of both analyses brings us to an important conclusion: Unconventional Gas Well production continues to increase and break records, while the Impact Fee endures a roller coaster ride. Year after year, we have seen this scenario unfold, which provides more proof that the enactment of a severance tax is needed.