Impact Fee Update

In June 2015, the Independent Fiscal Office (IFO) issued Research Brief 2015-3, which reported unconventional gas well impact fee collections for calendar year (CY) 2014 along with three potential scenarios for CY 2015 collections (to be remitted in April 2016). This research brief uses recent data published by the Department of Environmental Protection to project CY 2015 collections.[1] The research brief also translates the impact fee into an annual average effective tax rate (ETR) based on recent natural gas price and production data. The ETR is a metric that quantifies the implicit tax burden imposed by the impact fee in a given year.

Since 2012, Pennsylvania has imposed an annual impact fee on unconventional natural gas wells that were drilled or operating in the previous calendar year. To date, the impact fee has generated approximately $856 million in revenues, which were distributed to local governments and state agencies to offset the impact from unconventional natural gas extraction. The proceeds are used to provide for infrastructure, emergency services, environmental initiatives and various other programs. (See Table 1.)

The annual impact fee for an unconventional natural gas well is determined according to a bracketed schedule, based on the number of years since a well became subject to the impact fee (operating year), the type of well (horizontal or vertical) and, to a limited extent, the average annual price of natural gas.[2] Wells that produce less than 90 Mcf (thousand cubic feet) per day on average are known as "stripper wells." Horizontal wells in operating years four or greater qualify for exemption from the impact fee if their production does not exceed the stripper well threshold. Vertical wells that produce below the threshold also are exempt from the fee, as well as all plugged wells after remitting the fee in the first year.

The projected amount of the impact fee for CY 2015 is $185.5 million, which is $38.0 million lower than the amount collected for the prior year. This projection generally corresponds to the "Current Trends" scenario outlined in the June 2015 research brief (2015-3). Table 2 on the next page details the well count, fee schedule and projected collections by operating year.[1] The primary reasons for the projected decline in collections are as follows:

- Lower fee schedule. The 2015 impact fee schedule will decrease by $5,000 per well for wells in operating years one, two, four and five. This is the result of the annual average price of natural gas on the New York Mercantile Exchange ($2.66) moving below the $3.00 per MMbtu threshold.[2] Estimated impact: -$32.7 million.
- Fewer new wells. Wells pay the highest impact fee for their first operating year. The estimated 785 wells spud in 2015 represent a 42.9 percent decline compared to the prior year. Estimated impact: -$25.3 million.
- All other. Includes the net effect of: (1) additional collections from more wells becoming subject to the impact fee (new wells less new stripper wells); and (2) reduced fees from existing wells as they age and migrate down the fee schedule. For example, the per-well impact fee decreases by $10,100 for operating year two, $5,000 for operating year three and $15,100 for operating year four. Estimated net impact: +$20.0 million.

Table 1: Impact Fee Revenues and Distributions

	2011	2012	2013	2014	2015
Total Revenues	$204,210	$202,472	$225,752	$223,500	$185,500
Counties, Municipalities and HARE Fund[1]	108,726	107,683	123,151	123,300	100,500
Marcellus Legacy Fund	82,484	79,289	84,601	82,200	67,000
Commonwealth Agencies	10,500	10,500	10,500	10,500	10,500
Conservation Districts/Commission	2,500	5,000	7,500	7,500	7,500

Note: Dollar amounts in thousands.
Source: Pennsylvania Public Utility Commission. CY 2015 estimates by the Independent Fiscal Office.
[1] Housing Affordability and Rehabilitation Enhancement Fund.

Table 2: Well Count and Estimated Collections for 2015					
Operating Year[1]	Number of Wells[2]	Number of Exempt Wells[3]	Number of Wells Subject to Fee	Fee Amount[4]	Estimated Collections
1	785	-	785	$45,300	$35,500,000
2	1,374	5	1,369	35,200	47,800,000
3	1,216	13	1,203	30,200	35,900,000
4	1,352	288	1,064	15,100	15,800,000
5	4,887	1,436	3,451	15,100	50,500,000
Total	**9,614**	**1,742**	**7,872**	**n.a.**	**185,500,000**

[1] Wells spud before 2011 are considered to have been spud in 2011 (operating year 5) for the purposes of the impact fee.
[2] Represents the number of wells that have been spud, including both horizontal and vertical wells.
[3] Includes wells qualifying as "stripper wells," and those designated as shut in, plugged, and spud but not completed.
[4] Represents the fee for horizontal wells. Vertical wells are subject to 20 percent of the fee levied on horizontal wells.

The impact fee does not directly respond to the price of natural gas or the volume of production, and it does not provide a measure of tax burden relative to natural gas sales. For the latter purpose, this research brief computes an annual average ETR. The ETR is equal to the annual impact fee revenues divided by the total market value of unconventional natural gas production. The market value is equal to the product of (1) the annual average regional price of natural gas net of post-production costs and (2) the total production of all unconventional wells.[3,4] The ETR represents an average for all wells in operation during the year.[5]

For 2015, the ETR is estimated to be 5.5 percent, an increase of 3.4 percentage points from 2014. The annual ETR for 2011 to 2014 declined in each successive year. (See Table 3.) The main cause of that trend was the dramatic increase in production over the time period. The 2015 increase is predominantly motivated by the sharp decline of natural gas prices (54.2 percent prior to the deduction of post-production costs).

Endnotes

1. Data collected from Pennsylvania Department of Environmental Protection's oil and gas production reports from 2011 to 2015 (last accessed February 16, 2016) and spud well reports (last accessed February 10, 2016).
2. Pursuant to 58 Pa.C.S. §§ 2301 *et seq.*, the average annual price is the annual average of the settled prices for near-month contracts on the New York Mercantile Exchange. The fee schedule is adjusted downward if the price of gas falls between $2.25 and $2.99, and downward again if it falls below $2.25. See 46 Pa.B. 632 for the published fee schedule.
3. The price used for this calculation is the average Dominion South spot price for the calendar year, converted to dollars per thousand cubic feet ($1.56 for 2015) using Pennsylvania-specific heat content, net of post-production costs ($0.82). Prices are from BENTEK Energy. Post-production cost estimates are based on a Range Resources investor presentation from January 6, 2016, adjusted for wet and dry gas production.
4. Total production was obtained by an IFO analysis of DEP production reports (see note 1).
5. An alternative to the annual average ETR is the lifetime ETR, which is the average tax burden over the lifetime of a single new well; this measure is best used to quantify the prospective tax burden on new wells across states. (See the IFO's previous publication, *Effective Tax Rate Comparisons - Severance Taxes*, for a further description of the lifetime ETR concept.)

Table 3: Impact Fee Annual Effective Tax Rates					
Calendar Year	Impact Fee Revenues	Unconventional Production (MMcf)	Price of Gas ($/Mcf)[1]	Market Value[2]	Annual ETR
2011	$204,210	1,064,000	$3.60	$3,830,400	5.3%
2012	202,472	2,042,700	2.14	4,371,400	4.6
2013	225,752	3,102,900	2.89	8,967,400	2.5
2014	223,500	4,070,700	2.60	10,583,800	2.1
2015	185,500	4,581,100	0.74	3,390,000	5.5

Note: Dollar amounts in thousands. MMcf is million cubic feet.
[1] Net of post-production costs.
[2] Does not include natural gas liquids (condensate).