

## Post-Production Costs

### Just the Facts

#### Who owns the natural gas?

Unlike many other countries, oil and natural gas rights – along with other subsurface property rights – are typically owned by private property owners. While the surface owner often owns the subsurface oil, gas and mineral rights, that is not always the case, as it is not unusual for the subsurface rights to have been conveyed to another property owner over time. Whoever is lawfully entitled to drill for oil or natural gas owns the oil or natural gas that is produced from the well. In basic terms, this means that both the drilling operator and leaseholder(s) own the natural gas that is produced. The proportional ownership of the natural gas and other critical terms are negotiated and agreed to by the leaseholder(s) and the operator as part of the lease.

Under Pennsylvania's Oil and Gas Lease Act, any leases entered into on or after September 18, 1979 must provide at least a one-eighth (12.5%) royalty rate to be valid. Leases in existence and wells drilled prior to this date, which did not provide at least a one-eighth royalty rate, shall be escalated to this rate should the well be altered. As in other major oil and natural gas producing states, the owners of the natural gas (in this case, the operator and the leaseholder) proportionally share the expenses required to get the natural gas to market for sale, unless the parties have mutually agreed to a different arrangement.

#### Who bears the costs to prepare the well site, drill and construct the well?

The natural gas operator typically assumes all financial risk and bears all costs associated with constructing a well and placing it into production. It is not uncommon to incur costs between \$6 - \$8 million, or more, for each horizontal, unconventional shale gas well.

#### What costs are associated with constructing a well and placing it into production?

A multitude of costs are associated with constructing a well and placing it into production. These include costs related to researching title ownership and deed restrictions, leasing drilling rights from the property owner, surveying, engineer and design work related to the well pad, construction or preparation of access roads to the well pad, drilling and constructing the well, well stimulation and completion. Additionally, there are significant costs associated with preparing numerous environmental and other permit applications to comply with federal, state and local regulatory requirements.



## What are post-production costs?

Post-production costs are the expenses incurred in order to get the gas from the wellhead to market. These costs include gathering, compression, dehydration, processing, fractionation, marketing, treating, handling and transportation. Below are descriptions of some of these costs:

<b>Gathering</b>	Typically include the construction of underground pipelines used to gather the natural gas from a well or series of wells in order to send it to its next destination, whether a compressor or processing facility (i.e dehydration, fractionation or other facility where the natural gas is further refined for ultimate sale).
<b>Processing</b>	Compressing, dehydrating, fractionating and separating, treating or otherwise physically preparing the natural gas for ultimate sale. Examples may include increasing or stabilizing the pressure, removing water, or separating the natural gas into its various constituencies (i.e. ethane, propane, butane, natural gasoline, etc.)
<b>Marketing</b>	Finding a willing buyer and negotiating the terms of sale for gas and/or liquids.
<b>Transportation</b>	Transporting the natural gas from a well pad or processing facility to a point of sale. The natural gas may be transported hundreds or even thousands of miles until it reaches a customer.

## How much are post-production costs?

The exact amount varies from operator to operator depending on a variety of factors, including volume, quality of the natural gas, and distance to market. However, as recently as February of 2016, the Pennsylvania Independent Fiscal Office (IFO) estimated average post-production costs in Pennsylvania to be approximately \$0.82 per mcf.

