

Understanding Compressors and Sound

FORTUNA ENERGY INC.

Fortuna Energy Inc. is committed to being a welcome and responsible member of the communities in which we operate. As part of this commitment, we take sound levels into consideration when locating our facilities and we strictly comply with all applicable state and community noise regulations.

For Fortuna to produce gas, we must be able to deliver it into a high pressure transmission line. These high pressure lines generally operate between 800 and 1,200 psi. If the well pressure is greater than this, it will flow gas into the transmission line. While reservoir pressure is initially sufficient for natural gas to flow from a Trenton Black River well, a Marcellus well does not have enough reservoir pressure. For Marcellus wells, and later in the life cycle of a Trenton Black River well, a compressor may be needed to boost the well's flowing pressure to be able to sell its gas. Our compressor sites are engineered and built to strict engineering and safety standards.

Compressor Placement

Our compressors are driven by natural gas engines and their noise is similar to that of farm tractors or farm machinery. Whenever Fortuna initiates a compressor project, a high priority is to minimize noise at the nearest residence. To do this we seek to locate compressors as far away from houses as possible. We also utilize woods and terrain features as natural sound barriers. When placing single well compressors on a well site, we carefully work with location constraints to best meet the needs of the local residents to mitigate impacts on the community.

Measuring Noise

The human ear can detect an enormous range of sound levels (loudness) and frequencies. Sound is perceived as noise when its loudness and frequency reach unwanted levels. Sound levels are commonly measured in decibels (dB) which express human sensitivities relative to a zero dB reference set at the threshold of hearing. Unlike typical background noise such as wind, road traffic, or farm activities, the sound of a compressor is stable and therefore can be carefully measured in decibels.

Fortuna aims to minimize the sound of a compressor and commits to maintaining a target level of 40 dB at residences nearest our compressors. The following chart illustrates sound levels:

Type of Sound	Decibels
Threshold of hearing	0 dB
Mosquito	20 dB
Compressor sound received at nearest residence	40 dB
Conversation at three feet	60 dB
City traffic	80 dB
Motorcycle, farm tractor	100 dB
Airplane takeoff	120 dB
Rifle shot	160 dB

Our Process

Fortuna takes the following steps to ensure noise compliance when embarking on a compressor project:

- 1. Perform a Preliminary Sound Survey** - This initial survey creates a baseline sound profile at potentially affected residences prior to compressor operation.
- 2. Communicate with Residents and Town Officials** - Fortuna obtains required approvals and works closely with communities to ensure compressor projects proceed smoothly.
- 3. Conduct a Follow-Up Sound Survey** - Once the compressor is installed, follow-up ensures we meet and maintain our 40 dB noise level commitment.

Should you have any questions about Fortuna compressors, please contact us at:

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