The WVHTC Foundation has been developing a concept for hydraulic fracturing of the Marcellus shale that could better confine the fractures within the relatively thin Marcellus stratum and avoid creating large fractures close to the wellbore. The WVHTC Foundation concept would confine fractures within the relatively thin Marcellus stratum. In doing so, much smaller volumes of fracturing fluids would be required, lowering the risk of accidental spills at the surface, and reducing the extensive truck traffic involved in transporting fracturing fluids.

In addition, with fracture heights of less than 100 feet compared to the 3,000 feet heights of some conventional hydraulic fractures, the WVHTC Foundation system would avoid intersecting abandoned wells, or natural faults. To help maintain adequate production levels with shorter fractures, the WVHTC Foundation method will produce greater fracture branching and more complete coverage of formation volumes than conventional hydraulic fracturing methods.

Stimulation of marginal wells and gas wells

Another concept that has been explored at the WVHTC Foundation is the idea of using a combination of gas wells and gas companies review producers. The WVHTC Foundation would work in conjunction with the producers to create additional mini-wells that would aid in the recovery of reserves that have been cut off from the main productive structure. According to industry standards, there were more than 57,000 oil and gas wells in West Virginia that had lost productivity over the last few years. The WVHTC Foundation method would be to divide the reservoir into smaller units and then focus on each small area separately. This would allow for more efficient use of resources, which could result in significant cost savings.

In a larger long-term vision, the WVHTC Foundation has been exploring an energy strategy for commercial buildings, which would include energy management services and equipment. For example, the WVHTC Foundation is looking into ways to improve the efficiency of energy systems, such as by reducing the amount of energy needed to heat and cool buildings. The WVHTC Foundation is also working on developing new technologies to improve the energy efficiency of buildings, such as by developing new materials that are more energy efficient. The WVHTC Foundation is also working on developing new energy storage technologies, such as by developing new methods to store energy for use during peak demand periods.