Most of LPG explosions are caused by undetected gas leakage in the pre-detection condition. So that, LPG detection system is needed. The purpose of this system is to detect gas leakage, and prevent the explosion. Gas leakage could happen due to improper regulator installation or the hose is broken. This detection should not work in just one location because gas can leak at the gas regulator and its hose. Therefore, Internet of Things (IoT) is one of the methods that suitable for detecting gas leakage in the wider area. This method uses gas sensor to detect leakage of gas. Explosion prevention system works based on alarm/buzzer, exhaust fan, and automatic gas regulator. If the gas leaks, the sensor will send its data wirelessly to Arduino. Then, explosion prevention system will be activated. Both systems will be fully controlled by Arduino platform.