

Project Design Phase-I

Proposed Solution

Date	12 OCTOBER 2022
Team ID	PNT2022TMID08747
Project Name	Gas Leakage Monitoring and Alerting System
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	The sensor near a hole location will help us to identify and alert the user whether it needs any more hole occurs at that moment monitored through application. Thus increasing difficulties in industry leads to the way of inventing many new technologies that will help the members to take some precautions to avoid losses in gas
2.	Idea / Solution description	Gas leakage is characterized by the usage of technology in order when it comes to managing gas. This makes it possible to plan more efficient routes for the gas collectors who empty the pipeline, but also lowers the chance of any gas being full for over a week.
3.	Novelty / Uniqueness	A gas monitoring solution not only detects toxic gases but also identifies changes in air quality. It can also be used commercially in in-house buildings to detect the presence of carbon dioxide and other combustible gases.
4.	Social Impact / Customer Satisfaction	The system is Short Message Service (SMS) based and uses wireless technology for providing security against gas leakage to users hence cost effective and more adaptable. The system comprises of sensors for detecting gas leak interfaced to microcontroller that will give an alert to user whenever there is a gas leakage, display warning information by using Liquid Crystal Display (LCD), sending SMS to the user for notification wherever he/she might be and turning off electric power with the help of magnetic relay. This will enable the user to take precaution of explosion disaster which may result on Liquefied Petroleum Gas (LPG) cookers like loss of properties, injury or even death. GLDS provides ideal solution to gas

		leakage problems faced by home owners in daily life.
5.	Business Model (Revenue Model)	Leakage of gas is a major issue in the industrial sector, residential buildings, and gas-powered vehicles, one of the preventive methods to stop accidents associated with gas leakage is to install gas leakage detection devices. The focus of this work is to propose a device that can detect gas leakage and alert the owners to avert problems due to gas leakages. The system is based on a microcontroller that employs a gas sensor as well as a GSM module, an LCD display, and a buzzer. The system was designed for gas leakage monitoring and alerts with SMS via an Arduino microcontroller with a buzzer and an MQ2 gas sensor.
6.	Scalability of the Solution	As the product laser sensor is offered with subscription service, further development in both software and hardware can be made for gas losses