

# Inter-Collegiate Research Convention

AVISHKAR 2022-23

Slot No. :

## CNG Leakage Alert System

Category : C5

Level : UG

### Problem Statement

CNG leakage is becoming a big problem these days and if there is a small leakage, it is not even noticeable that's why the vehicles can have problems like low mileage or some blast etc.

### Introduction

In proposed system it will generate an alert after detecting a CNG leakage from tank and subsequently send a message to the driver of the vehicle.

### Unique Features

- We have designed a system which is not yet widely used in India
- Even a small leakage also this system will quickly detect it and generate the alert

### Future Scope

- Needs to be used upgraded GSM module.
- When alert generate at the same time should share a contact of any closest specialist who doing a CNG related work.

### Objectives

- To detect CNG Leakage using MQ-4 sensor and Arduino.
- To send the SMS (alert messages) to specified mobile numbers.
- To secure life of the people in danger situation.
- An alert is indicated by the GSM module

### Planning of the Project



### Limitations

- GSM SIM900A requires 2G SIM which is not easily available now a days.
- There might be range problems in some places so alert message may not to be send to the driver mobile.

Block diagram

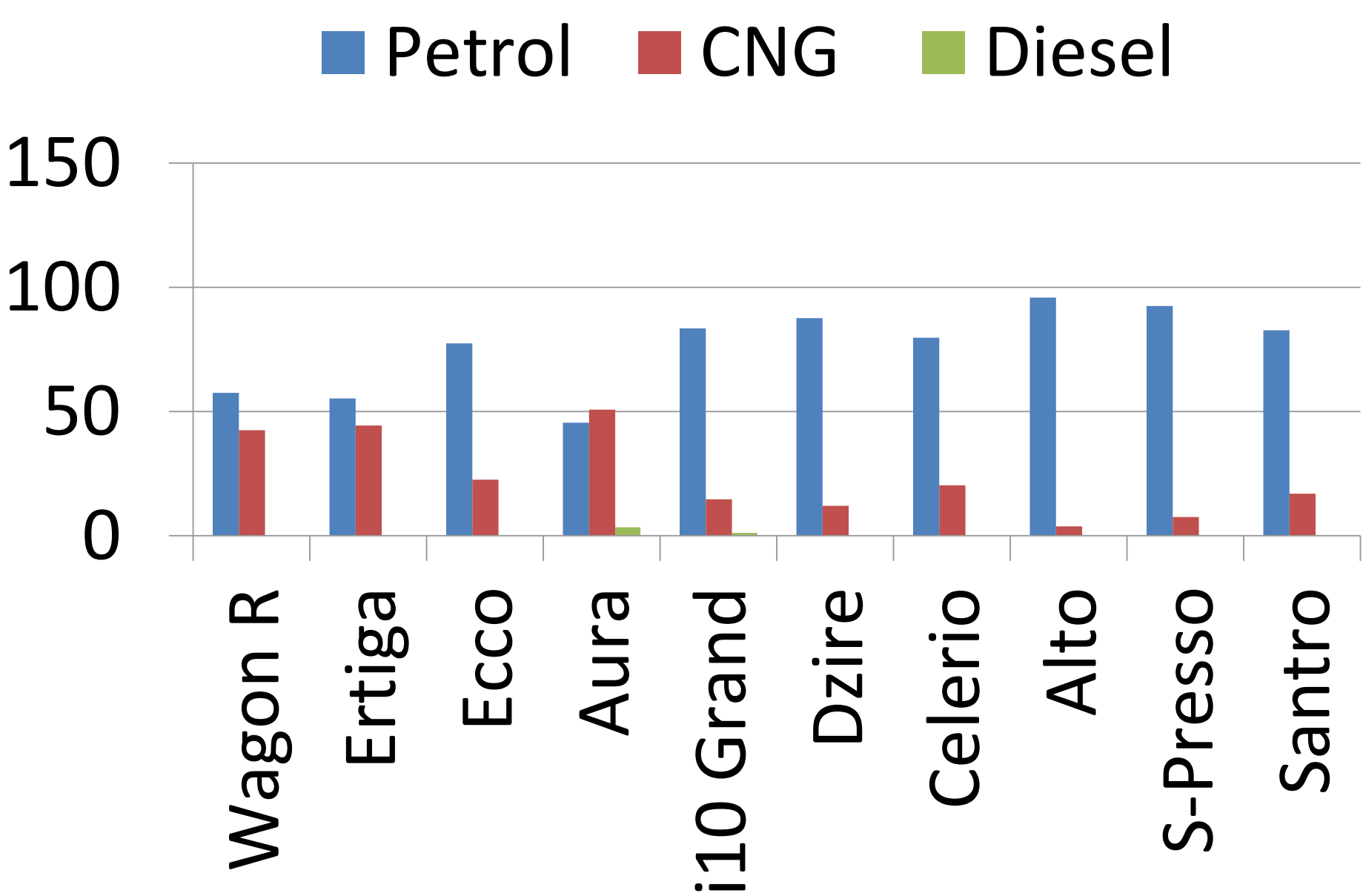
Connections

Output

### Conclusion

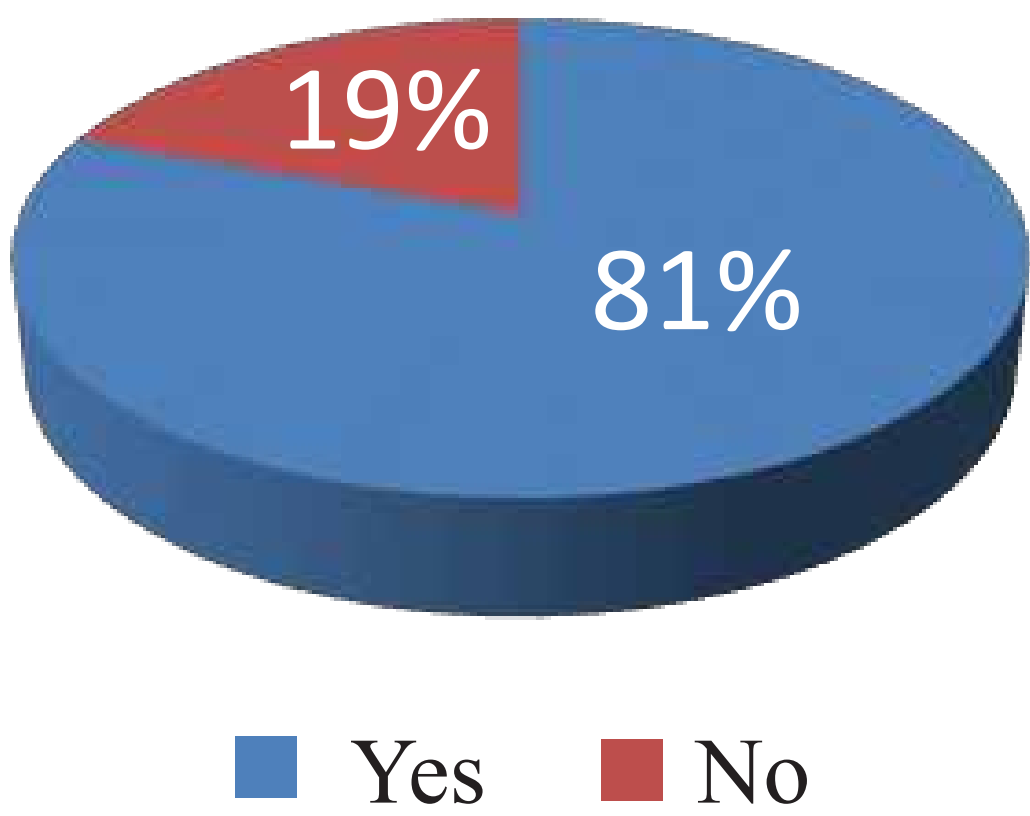
We can conclude that if there is a CNG leak then this system will detect it quickly and it will solve all the subsequent problems.

### CNG vs Other Fuel Variants



### Survey

If such a system were given to you would you use it ?



### Result

After CNG gas leakage is detected it will send the alert message to the user via GSM module