

# INDUSTRIAL IOT FUEL CELL SYSTEM

Project by:  
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Diploma in Electrical Engineering (Year 3)

## PROJECT OBJECTIVES

To design and develop a standalone methanol fuel cell power supply system with remote condition monitoring to power video surveillance systems and other devices in places such as open fields, overhead bridges, and isolated locations where electricity is not easily available.

## PROJECT SUMMARY

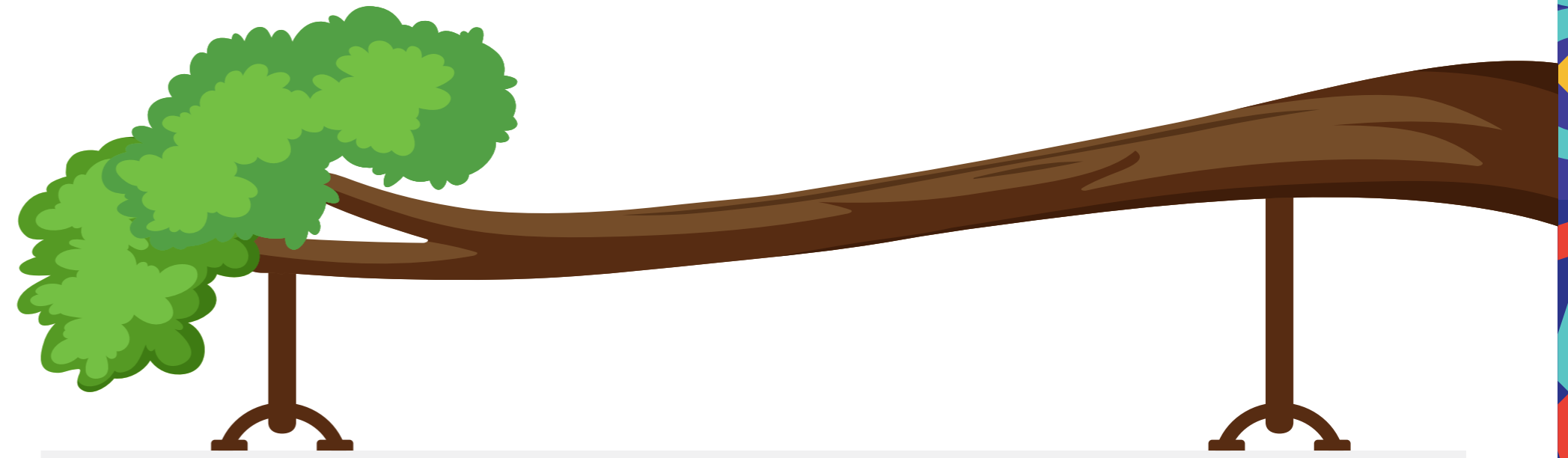
This project is a standalone industrial modular fuel cell system which is fuelled by a mixture of methanol in water. It provides DC power supply to power surveillance security cameras in remote locations where grid power is inaccessible.

The remote on-line data access using 4G technology makes the fuel cell condition monitoring and performance assessment available from anywhere at any time. This project solves the problem that users are unable to deploy their portable video surveillance systems and other equipment at locations where there are no power source from the grid.

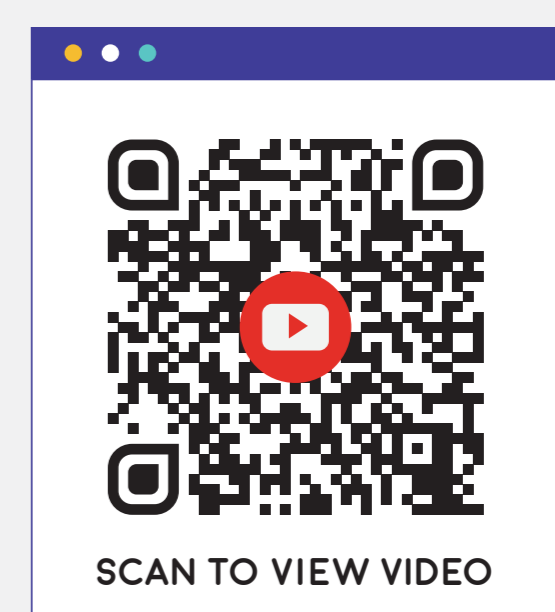
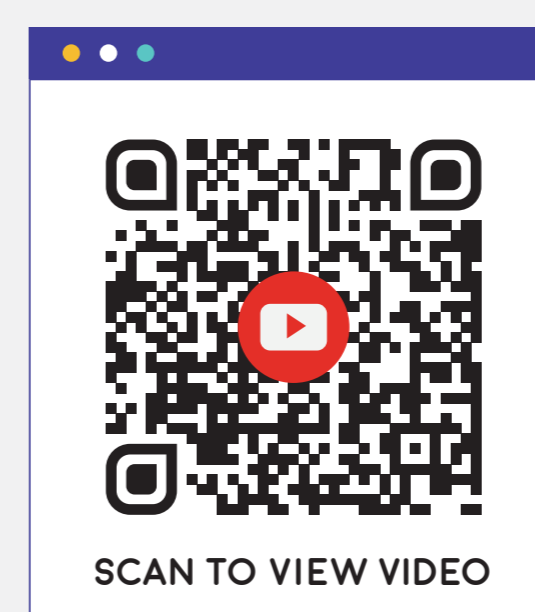
This system's operating conditions can be remotely monitored using a cloud-based system.

## PROJECT OUTCOMES

1. A working modular fuel cell system with operational power delivery up to 100W.
2. An accessible remote fuel cell condition monitoring and performance assessment with data dashboard visualisation capability.



Industrial IoT Fuel Cell System Fuelled by Mixture of Methanol in Water



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