



# EFFICIENT AND DATA ACQUISITION IN SMART GRID



A PROJECT REPORT

*Submitted by*

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*in partial fulfillment for the award of the degree*

*of*

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## BONAFIDE CERTIFICATE

Certified that this project work titled "EFFICIENT AND DATA ACQUISITION IN SMART GRID" is the bonafide work of BOOPATHIRAJA.G(710419105009), SUGUNA DEVI.S (710419105036), NANDHINI.R (710419105025) who carried out the project work under my supervision.

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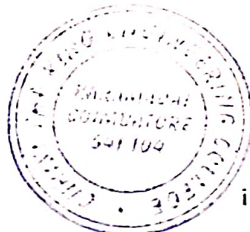
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## ABSTRACT

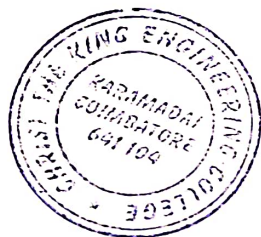
It's an undeniable fact that things in our lives are getting smarter: from cars, to homes and workplace technology, and even urban infrastructure. The foundation that drives this 'smartening' trend is the inclusion of new technology that connects devices – sensors, controllers, and meters – around us, commonly called the "Internet of Things" (or IoT, for short). IoT applications benefit users by optimizing or creating automated processes. Third party vendors often deliver IoT applications using software as a service -based control application and a pay-as-you-go delivery model. The monitoring devices or systems which are presently used for monitoring distribution transformer exist some problems and deficiencies. Few of them are mentioned below. Ordinary transformer measurement system generally detects a single transformer parameter, such as power, current, voltage, and phase. Many monitoring systems use power carrier communication to send data, but the power carrier communication has some disadvantages: serious frequency interference, with the increase in distance the signal attenuation serious, load changes brought about large electrical 2 noises. So, if use power carrier communication to send data, the real-time data transmission, and reliability cannot be guaranteed According to the above requirements, we need a distribution transformer real-time monitoring system to detect all operating parameters operation, and send to the monitoring center in time. It leads to online monitoring of key operational parameters of distribution transformers which can provide useful information about the health of transformers which will help the utilities to optimally use their transformers and keep the asset in operation for a longer period. This will help to identify problems before any serious failure which leads to a significant cost savings and greater reliability




## CHAPTER 7

### CONCLUSION

This project analysis the method of smart transformer monitoring using sensors and it is analyzed. In this method the colour of the silica gel breather can be detected by colour sensor and the moisture content inside the breather can be determined by the humidity sensor. Smart transformer Monitoring is efficient and it is useful for collecting the data for TNEB. The Transformer bursting can also be reduced. It is the easiest way of monitoring the transformer without examining the transformer site. It is compact and user-friendly device. It saves the time of operators and records of the data are easily maintained.



  
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