

**VERIFICATION OF PHOTOVOLTAIC SUPERVISORY
CONTROL AND DATA ACQUISITION (PVSCADA) KIT**

AINUN MARDIAH BINTI JAFAR

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In the name of ALLAH S.W.T, the most Merciful and the most Gracious.

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ABSTRACT

Data acquisition systems are widely used in Photovoltaic (PV) system applications in order to collect data regarding the PV system performance. In general, the development of a photovoltaic supervisory control and data acquisition (PVSCADA) kit can be described as a system to monitor PV system performance. It can monitor hardware and software performances. The proposed PVSCADA kit consists of a set of sensors for measuring both meteorological (such as temperature and irradiance) and electrical parameters (voltage and current at PV arrays, batteries and load). PVSCADA kit has an analytical monitoring system called datalogger and it needs to be verified. In this paper, using precision electronic devices is used and then compared with data from datalogger by the calculating accuracy of full scale or percentage of error for each parameter.

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

Malaysia Government was sponsored Suria 1000 program is coming to an end on December 1 2009 and Malaysia government's official launching of GREEN Technology Policy on 24 July 2009 that will encourage and promote the use renewable energy for Malaysia future sustainable development. By 2015, about 1 GW must come from renewable energy, according to Ministry of Energy, Green Technology and Water (KETHHA).

Oil and Gas contribution to national electricity generation mix is expected to diminish from current 50% to only about 30%. Therefore to increase Photovoltaic (PV) contributions to national energy mix from currently 0.013% to 1.5% from 2010 to 2015 and promote more efficient and cost saving of distributed generation or micro grid in rural electrification.

The photovoltaics industry is growing rapidly throughout the world. Photovoltaics have been technologically driven since the discovery of the silicon cell. This is essential in the early years, because the technical goals to be met were so challenging. It is still the case that the major excitement at international conferences comes from new achievements in material and device development. [1]