Selection of Site

The selection sites will be done such that the sites are representative of all sector of the electricity sector.

♦ Installation of Power Quality Logger

In this project, the power quality loggers will be installed at 500 industrial sites to get the 1 day data. For the 1st year, power quality logger will be installed at 250 sites at the northern and eastern region and another 250 sites at the central and southern region during the 2nd year. Equipment that will be used for data recording is RESMOS.

♦ Industrial Survey

An industrial survey regarding the power quality problems in the industries will be conducted to collect information regarding the type of load, mitigation technique used and the associated cost due to power quality problems.

The survey will be carried out to enable the consultant to understand the industry production process, the equipment employed and losses incurred due to the incidence of power quality events. From this survey, the various cost associated to power quality especially harmonics and voltage sags will be accurately assessed.

UTM UNIVERSITI TEKNOLOGI MALAYSIA | Centre of Electrical Energy Systems

Global Technology and Innovation Management Sdn Bhd (GTIM) is the consulting arm of UTM. Centre of Electrical Energy Systems (CEES) through GTIM has been awarded with a 30 months consultancy project, namely *Power Quality Baseline Study for Peninsular Malaysia.*

Consultant Project Team

1) Khalid Mohamed Nor
- ♦ Project Leader
- ♦ khalidmn@fke.utm.my

2) Dalila Mat Said
- ♦ Harmonic, PQ analysis
- ♦ dalila@fke.utm.my

3) Fatimah Salim
- ♦ Voltage sag, PQ standards
- ♦ fatimah@ic.utm.my

4) Mohamed Onn Daud
- ♦ Logging and monitoring

5) Mohd Salleh Serwan
- ♦ PQ database

SURUHANJAYA TENAGA

Mohd. Nawawi bin Mohd Said Abdullah
Head of Electricity Supply & Services Monitoring Unit
Phone: +603-8870 8581
Fax: +603-8888 8650
nawawi@st.gov.my

Suraiya Nadzrah bt Ramli
Executive of Electricity Supply, Services & Monitoring
Phone: +03-8870 8584
Fax: +03-8888 8650
suraiya@st.gov.my

Suruhanjaya Tenaga

Request for Voluntary Participant of Power Quality Baseline Study for Peninsular Malaysia

Objective

- To obtain the baseline data on power quality events and the sources through the power quality monitoring programs.
- To determine the standard utility and consumer reference impedance, estimate the industrial economic losses, and validate the international standards with Malaysia environment.
- The results from this study will be used by the Energy Commission to determine the suitable period for implementation and enforcement of the Malaysian Standards regarding to power quality.

Requirement:

◊ Permission for competent person to access the premises for PQ logger installation.

◊ Reasonable procedure in obtaining access permission.

Benefits:

◊ Contribute to the development of good Power Quality standards for the benefits of all in Malaysia.

◊ The host company will be given a copy of the data recorded no cost.

◊ The recorded data can assist the host company to evaluate and improve its power quality.

RESMOS

Applications

Its compact size makes its fit into various types of substations or Electrical Distribution Point for both 1Phase/3Phase systems such as standard sub, compact and pole mounting substation, feeder-pillars and main switchboard cabinets (indoor and outdoor .The equipment will be installed at low voltage distribution board for the objective of recording the network parameters at required duration and time of the day.

Technical Specification

- ◊ 1P/2W or 3P/4W (Selectable) Unbalance Data Logging System.
- ◊ 4 Phase Voltage (RN, YN, BN).
- ◊ 4 Phase Current up to 10 Feeders (R,Y,B,N).
- ◊ Single & Three Phase Power Factor to All Feeders.
- ◊ Harmonic measurement up to 21st level and calculation of THD up to 21st for both Current and Voltage.
- ◊ Neutral Current up to 9 Feeders
- ◊ Single & Three Phase kVA, kW, kVAR, Phase Angle to All Feeders
- ◊ Current RYBN) Harmonic up to 10 Feeders
- ◊ 3 Voltage (RYBN) Harmonic
- ◊ Sampling rate at 64 sample per cycle
- ◊ Data Display Interval at 1 minute/Sample (default)
- ◊ RMPU data transfer 115 kbps
- ◊ All weather operation

Certified by

SIRIM–SIME Technology BERHAD (SIRIM) with full System Accreditation while the harmonics values are calibrated from National Metrology Lab.

MS IEC 60950-1:2003 & IEC 60950-1:2001

RESMOS Installation on Low Voltage Board

PQ LOGGER

- ◊ In this project, the data will be logged at a sampling time of 2 minutes and this time interval is selectable. The sampling time can be set as low as 1 minute per sample. The power quality logger used in this project can measure up to 21st odd harmonics reading.
- ◊ The power quality logger will measure the rms voltage and rms current for every feeder. As the feeder is a radial feeder, the ratio of the rms voltage and rms current.

Reply Form

Please tick at the box provided below:

☐ Yes, I would like to participate as a volunteer in this project

☐ No

Name: _____

Designation:_____

Company Address: _____

_____

Tel: _____

Fax: _____

For any enquiries, please contact Fatimah bt Salim at 03-2615 4398/ 4515 or email to fatimah@ic.utm.my or fax to 03-2515 4516

IMPORTANT NOTES

- ◊ All data are confidential and will not be used for any regulatory enforcement.
- ◊ Energy Commission will not use this data as basis for any action under electricity act and regulation.
- ◊ Data will be used as representative sample to get accurate picture of power quality statistic in Peninsular Malaysia for appropriate action that will benefit all stakeholder.