ABU DHABI SEWERAGE SERVICES COMPANY (ADSSC)

GENERAL SPECIFICATION FOR ELECTRICAL WORKS

DIVISION 16 ELECTRICAL

SECTION 16040 POWER MONITOR (PM)

DOCUMENT CONTROL SHEET

Revision No.	Date	Revision Description / Purpose of Issue
01	April 2008	First Issue.
02		
03		
04		
05		
06		
07		
08		

TABLE OF CONTENTS

1. GENERAL

a) The Contractor shall comply with the provisions of Section 15001: General M&E Requirements.

b) The Power Monitor (PM) shall be a true RMS digital instrument, with LCD display, capable of controlling and measurement of highly non-linear loads accurately and able to detect voltage-based disturbances.

c) The LCD unit, complete with integral function keys, shall be minimum IP54 and be mounted locally on the Incomer cubicle door.

d) The PM shall be 'CE marked' and confirm to BS EN 61010-1.

e) The PM shall register all measured values and log current and previous measured values for reporting and printing purposes.

f) The PM shall be supplied with software, user manual and associated interconnecting cables.

g) The PM shall be provided with user-friendly software program (fully supported by the latest edition of a Windows®-based operating system) allowing easy access to all features with pull-down menus.

2. FEATURES

a) The Power Monitor shall include the following features as a minimum:

i. True RMS measurement of current and voltage.
ii. Control and measurement of highly non-linear loads.
iii. Capable of detecting voltage-based disturbances.
iv. Interface capability with PLC/RTU/Circuit Breaker.
v. Provide interface with Power Factor Correction Control equipment.
vi. RS-485 port.
vii. Modbus communication protocol.
viii. DNP3.0 Communication protocol.
ix. Web-enabled Ethernet capability.
x. Measurement of Harmonics.
xi. Monitoring of disturbances in the power supply network.
xii. Continuous sampling at 128 times per cycle.
xiii. Trending analysis for historical data collection.
xiv. Sequence of events.

3. MEASUREMENTS

a) The following parameters shall be displayed on the LCD:

i. RMS current of each phase.
ii. RMS voltage L1-L2-L3-N.
iii. Average System Voltage (Vav).

iv. Average System Current (Iav).
v. Real Power (kW).
vi. Reactive Power (kVAr).
vii. Apparent Power (kVA).
viii. Power Factor (cosØ).
ix. Peak demand.
x. Frequency (Hz).
xi. Temperature (T).
xii. THD Current (%Ithd.)
xiii. THD Voltage (%Vthd).
xiv. K-factor100.

END OF SECTION