1.1 **GENERAL**

1.2 **Related Technical Requirements**

.1 *Division 20, Section 20 00 06 Meters*
.2 *Division 33, Section 33 10 00 Water Utilities; Section 33 51 00 Natural Gas Distribution*

1.3 **Coordination Requirements**

.1 SFU Facilities

1.4 **Description**

.1 SFU requirements for Metering.

2.1 **MATERIAL AND DESIGN REQUIREMENTS**

2.2 **General**

.1 Switchgear manufacturer shall supply and install Revenue meter to unit sub manufacturer at the project’s cost.

.2 All substations central metering are to be connected via MODBUS to SFU’s SCADA system.

2.3 **Revenue Metering**

.1 Revenue meter shall be Measurement Canada approved, Schneider Electric Type 7350 ION Multifunction Meter with Ethernet options.

.2 It shall be for use with 3 current transformers and programmed for CT’s to allow for direct readout.

.3 The meter shall be flush mounted @ 54" above finished floor (centre of meter) in a separately barriered instrument compartment in the distribution enclosure. Provide surface mounted on the inside of the door of the metering compartment a 10-pole test block for current and potential circuits.

.1 For 120/208V Systems wire the meter as shown on Drawing E4-4.
.2 For 347/600V Systems wire the meter as shown on Drawing E4-5.

.4 Approved Test Block Manufacturers:

.1 ABB type FT-1.
.2 Sangamo.
.3 Superior #1082F.

2.4 **Metering Transformers**

.1 Metering transformers shall be provided by the switchgear manufacturer.

.2 Three current transformers (CT’s) shall include revenue metering accuracy of 0.3B0.9, ratio XXX/5 for Schneider Electric 7350 ION multifunction meter. Mount CT’s on transformer secondary bus.

.3 Metering at 600V secondary shall include three voltage transformers, revenue accuracy, 360:120 ratio shall be mounted in a separate barrier instrument compartment.
.4 Substation meters are to be connected via MODBUS to SFU’s SCADA system. 48V DC power is required for this metering.

2.5 Mechanical Meters

.1 Heating water BTU energy meters are directly connected from DDC to SCADA system. For full details refer to Division 20, Section 20 00 06 Meters.

.2 For gas and water meters refer to Division 20, Section 20 00 06 Meters for latest requirements.

3.0 OTHER

.1 A raceway shall be provided between the 7350 ION meter and the nearest communications closet. Provide an IT demarcation box within 3 metres of the 7350 ION meter.

***END OF SECTION***