1.0 GENERAL

1.1 Related UBC Guidelines

.1 Division 33, Section 33 10 00 Water Utilities - 2.4; Section 33 51 00 Natural Gas Distribution - 2.4; and Section 33 61 00 Hydronic Energy Distribution - 2.5; Division 27, Section 27 05 08 Description of System – 1.4; Division 25, Section 25 05 00 Building Management Systems (BMS); Division 01, Section 01 92 00 Monitoring Based Commissioning.

1.2 Coordination Requirements

.1 UBCO Energy

1.3 Description

.1 UBCO requirements for Metering.

2.0 MATERIAL AND DESIGN REQUIREMENTS

2.1 General

.1 Division 26 contractor shall supply and install primary meter at the project’s cost.

2.2 Electrical Metering

.1 Primary meter shall be at least ANSI C12.20-2010 Class 0.2 revenue grade, include BACnet communication protocol for BMS integration and be from one of the following manufacturers:
  .1 Siemens / Dent Instruments
  .2 Setra
  .3 Approved equivalent

.2 Sub-meters shall be at least ANSI C12.20-2010 Class 0.5 revenue grade, include BACnet communication protocol for BMS integration and be from one of the following manufacturers:
  .1 Siemens / Dent Instruments
  .2 Setra
  .3 Approved equivalent

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

.4 Approved Test Block Manufacturers:
  .1 ABB type FT-1.
  .2 Sangamo.
  .3 Superior #1082F.

2.3 Metering Transformers

.1 Metering transformers shall be provided by the Division 26 contractor.

.2 Three current transformers (CT’s) shall include revenue metering accuracy of 0.3B0.9, ratio XXX/5. Mount CT’s on transformer secondary bus.
2.4 Mechanical Meters

.1 Main building gas and water meters are to be integrated into the building BMS system and Siemens BMS. Pulse outputs from each of these meters are to be brought to a building automation controller for recording purposes.

.2 The Division 26 contractor shall install all pathways and wiring between the mechanical meters and the electric meter. Coordinate with Division 20 contractor, Division 25 contractor and UBCO Energy Team.

.3 District Energy meter shall be network connected directly to the building BMS system and Siemens BMS. Refer to Section 01 92 00 Monitoring Based Commissioning for applicable details.

***END OF SECTION***