10.6.1.2 TSP and DSP Testing Requirements for EPS Metering Facilities

(1) At a minimum, the TSP and DSP EPS Meter Inspector shall conduct testing of EPS Meters on an annual basis, within the same month of each year as the previous year’s test. Metering Facilities used in the ERCOT system for settlement must be tested pursuant to the TSP or DSP tariffs, the SMOG and these Protocols.

(2) Instrument transformers used in settlement metering circuits must be tested per the ANSI C12.1 guidelines:

(a) Magnetic Instrument Transformers do not require periodic testing;

(b) Coupling Capacitor Voltage Transformers (CCVTs) shall be tested for accuracy

(i) by the end of the year in which the fifth anniversary of the previous test occurs; or

(ii) if the previous test occurred during the fourth quarter of the year, by the end of the year in which the sixth anniversary of the previous test occurs.

(c) Fiber-optic Current Transformers (CTs) shall, at a minimum, be ratio tested on a five year cycle, by the end of the fifth year after the previous test. .

(3) ERCOT may determine that periodic testing of CCVTs and fiber-optic CTs is not required once these devices have been proven to be stable. If the devices have shown themselves to be unstable, ERCOT may discontinue the use of these devices for settlement purposes.

# 7 General Specifications for Instrument Transformers for EPS Metering

## 7.1 Purpose

(1) This Section 7, General Specifications for Instrument Transformers for EPS Metering, specifies the technical requirements for current transformers and voltage transformers to be used for ERCOT-Polled Settlement (EPS) Metering Facilities.

## 7.2 Application

(1) This Section 7, General Specifications for Instrument Transformers for EPS Metering, applies to the following:

(a) Single-phase current transformers;

(b) Single-phase voltage transformers;

(c) Single-phase combination current/voltage transformers;

(d) Coupling capacitor voltage transformers; and

## 7.3 Standards

(1) All instrument transformers covered by this Section 7, General Specifications for Instrument Transformers for EPS Metering, shall be designed, manufactured, tested and supplied in accordance with the applicable American National Standards Institute (ANSI)/Institute of Electrical and Electronics Engineers (IEEE) standards and as required by the ERCOT Protocols and this Settlement Metering Operating Guide (SMOG).

## 7.4 Definitions

(1) Refer to the latest edition of the Edison Electric Institute (EEI) Handbook for Electricity Metering and Protocol Section 2, Definitions and Acronyms.

## 7.5 Specifications

### 7.5.1 General

(1) All instrument transformers covered by this Section shall meet the minimum Basic lightning impulse Insulation Level (BIL) rating, as specified in American National Standards Institute (ANSI) C12.11 or Institute of Electrical and Electronics Engineers (IEEE) Standard C57.13-1993 Table 2, appropriate for the designated nominal system voltage or the latest ANSI standard.

### 7.5.2 Nameplate Data

(1) Instrument transformers shall be provided with a nameplate that lists the following but not limited to: manufacturer’s name, type of device, serial number, ratios, burden, accuracy class, thermal rating factor, and impulse level.

### 7.5.3 Current Transformers

(1) Current transformers shall be wire wound.

7.5.3.1 Current Transformer Windings

(1) Current transformer windings (typical configurations) shall be either:

(a) Single primary winding and single secondary winding with single or multi ratio tap(s);

(b) Dual primary winding and a single ratio tap;

(c) Single primary winding and one or more secondary windings with single or multi ratio tap(s); or

(d) Other combinations as available and approved by ERCOT.

7.5.3.2 Rated Primary Current

(1) The rating selected for primary current must be as specified by the Transmission and/or Distribution Service Provider (TDSP) based on supplied information.

7.5.3.3 Rated Secondary Current (Wire Wound)

(1) The rated secondary current must be five amperes at rated primary current.

7.5.3.4 Placeholder

7.5.3.5 Accuracy (Wire Wound)

(1) All current transformers shall have an accuracy of:

(a) Standard – 0.3% accuracy class; or

(b) Optional – 0.15 % accuracy class.

7.5.3.6 Placeholder

7.5.3.7 Continuous current rating factor

(1) All current transformers shall meet or exceed a continuous current rating factor of:

(a) Standard – 1.5 at 30 degrees C Ambient; or

(b) Optional – 1.0 at 30 degrees C Ambient.

7.5.3.8 Short time thermal current rating

(1) The short time thermal current rating shall meet the standards defined in IEEE Standard C57.13 – 1993 or the latest C57.13 Standard.

7.5.3.9 Mechanical short time current rating

(1) The mechanical short time current rating shall meet the standards defined in IEEE Standard C57.13-1993 or the latest C57.13 standard.