

Meter and Instrumentation Maintenance in Substations and Generation Plants



1. Scope

This work practice covers the required maintenance schedule for substation, generation, and intertie watthour meters, indicating instrumentation, and associated equipment. It applies to all Seattle City Light (SCL) substation and generation facilities, as well as those facilities owned by foreign utilities where SCL has an interest in power generation, purchases, or sales.

Test procedures and accuracy limits are outside the scope of this work practice. See SCL 2505.15 and SCL 2505.14

2. Application

This work practice is for use by SCL station meter electricians. It documents the intervals at which maintenance testing is to be performed.

3. Introduction

Routine maintenance shall take place in accordance with the maintenance interval schedule described in Table 3.

For substation and generation plant watthour meters, the Utility owner of the primary source metering will perform the test. Any interested parties shall witness said test and may perform a Standards Compare test to validate test results.

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An Automatic Generation Control (AGC) common source verification test shall be performed in conjunction with the meter testing, when conditions allow, on all systems where SCL and at least one other utility is receiving an AGC signal, regardless of ownership. Contact Power Dispatcher for direction.

Table 3. Routine Meter Maintenance Schedule

Generation Plants and Substations	Maintenance Interval	Includes
Generation plant watthour meters and associated devices	2 years	Cedar Falls, South Tolt, Boundary, Box Canyon, Ross, Diablo, Gorge, CB Hydro (EBC, PEC, RD Smith, Main Canal, and Summer Falls), Columbia Ridge, and Stateline Wind
Intertie watthour meters and associated devices	2 years	BPA, PSE, Grant County PUD, and Avista
SCL receiving/distribution substation watthour meters and associated devices	2 years	All SCL transformer banks and SCL transmission lines
All SCL substation and generation plant indicating instruments	3 years	All instrumentation in SCL-owned facilities that are not part of PaCE Maintenance

4. References

SCL Work Practice 2505.14; “Accuracy Limits for Substation and Generation Watthour Meters”

SCL Work Practice 2505.15; “Accuracy Tests for Substation and Generation Watthour Metering”

5. Sources

Eltrich, Patrick; Station Meter Electrician and subject matter expert for 2526.10 (patrick.eltrich@seattle.gov)

Everist, Arlen; Station Meter Electrician and subject matter expert for 2526.10 (arlen.everist@seattle.gov)

TM-101; “Meter and Instrument Maintenance in Substation and Generation,” Allestad, Ted, January 12, 2006

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