

**WAC 480-100-338 Accuracy requirements for electric meters. (1)**  
**Watt-hour meter accuracy.**

(a) The requirements for watt-hour meters used for measuring electrical quantities supplied include, but are not limited to:

(i) All meters must be of proper design for the circuit on which they are used, be in good mechanical and/or electronic condition, have adequate insulation, correct internal connections, and correct register;

(ii) Mechanical meters must not creep at "no load" more than one full revolution of the disk in five minutes:

(A) When the load wires are disconnected and potential is impressed; or

(B) In a shop test where the load wires are disconnected and the permissible voltage variation is impressed;

(b) All meters must be capable of registering no more than plus or minus 2.0 percent error when subject to a current ranging between five and ten percent of the meter's nameplate test current (ta) value, at the meter's rated voltage, and at unity power factor;

(c) All meters must be capable of registering no more than plus or minus 2.0 percent error when subject to a current ranging between seventy-five and one hundred fifty percent of the meter's nameplate test current (ta) value, at the meter's rated voltage, and at unity power factor;

(d) All meters must be capable of registering no more than plus or minus 3.0 percent error when subject to approximately one hundred percent of the meter's nameplate test current (ta) value, at the meter's nameplate rated voltage, and at a fifty percent lagging power factor;

(e) All polyphase meters must have the elements in balance within 2.0 percent when subject to a current approximately one hundred percent of the nameplate test current value, at the meter's rated voltage, at both unity and fifty percent lagging power factor.

**(2) Demand meter accuracy.**

(a) The requirements for demand meters, demand registers, or demand attachments used to measure a customer's service include, but are not limited to:

(i) The device must be in good mechanical and electrical condition;

(ii) The device must have the proper multiplier, indicating scale, resetting apparatus, and contact device if used;

(iii) The device must not register at no load;

(b) The device must achieve the following accuracies:

(i) Curve-drawing meters that record quantity-time curves, and integrated-demand meters must be accurate to within plus or minus 2.0 percent of full scale throughout their working range;

(ii) Timing elements measuring specific demand intervals must be accurate to within plus or minus 2.0 percent and the timing element that provides the time of day record of when the demand occurs must be accurate to within plus or minus four minutes in twenty-four hours;

(iii) Lagged-demand meters must be accurate to within plus or minus 4.0 percent of final indication;

(c) Mechanical and lagged demand meters must be tested at load points above fifty percent of full scale as specified in ANSI C12.1. Information about the ANSI C12.1 regarding the version adopted and where to obtain it is set out in WAC 480-100-999, Adoption by reference.

[Statutory Authority: RCW 80.01.040 and 80.04.160. WSR 01-11-004 (Docket No. UE-990473, General Order No. R-482), § 480-100-338, filed 5/3/01, effective 6/3/01.]