

## STANDARD COMMISSIONING PROCEDURE FOR HIGH EFFICIENCY MOTORS

**BUILDING NAME:** \_\_\_\_\_ **APPLICATION #:** \_\_\_\_\_  
**BUILDING ADDRESS:** \_\_\_\_\_  
 \_\_\_\_\_

**NAME & FIRM OF PERSON(S) DOING TEST:** \_\_\_\_\_  
**DATE(S) OF TEST:** \_\_\_\_\_

**General Notes:**

1. This is a generic test procedure for high efficiency motors that were installed under Seattle City Light conservation programs. If the complexity, configuration, or other aspects of a specific project require substitute tests or additional tests, explain on the comments sheets, and attach the additional test procedures and field data.
2. In all test sections, circle or otherwise highlight any responses that indicate deficiencies (i.e. responses that don't meet the criteria for acceptance). Acceptance requires correction and retest of all deficiencies, as defined in each test section under "Criteria for Acceptance" or "Acceptance". Attach all retest data sheets. Complete the Deficiency Report Form for all deficiencies.
3. This Commissioning Procedure does not address fire and life safety or basic equipment safety controls.
4. To ensure that this Commissioning Procedure will not damage any equipment or affect any equipment warranties, have the equipment manufacturer's representative review all test procedures prior to execution.
5. It is not necessary to repeat any tests or observations that are documented in other commissioning procedures, but refer to those documents where relevant.

**MOTOR NAMEPLATE & EFFICIENCY RATING DATA:**

**Criteria for Acceptance:** Nameplate data must be in accordance with submittals as approved by Designer and Commissioning Agent.

DESCRIPTION	UNIT #							
Serves what equipment?								
Manufacturer								
Model/Type								
Rated Horsepower								
Efficiency Rating, Nominal								
Efficiency Rating, Minimum								
Efficiency Required by City Light								
Efficiency required by City Light minus nominal efficiency rating (%). Acceptance: Nominal eff. must be within 0.3% of required eff. for motors ≥25HP, and 0.5% for motors <25HP.								
Enclosure Type (ODP, TEFC, etc.)								
Service Factor								
Voltage / Phase								
Rated Full Load Amperes								
Frame Size								
Full Load Speed Rating (RPM)								

Building Name: \_\_\_\_\_

**COMMENTS ON NAMEPLATE ITEMS (add more sheets if needed):**

ITEM #	UNIT #	COMMENT
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

**INSTALLATION VERIFICATION (for motors 5 horsepower and greater, only):**

**Instructions:** Under each unit write "Y" for yes, "N" for no, "NA" for not applicable, or a number to refer to any needed comments. If other information is requested such as voltage, write the appropriate values. For electrical measurements, use either a true RMS or high quality digital multimeter, calibrated within the past 12 months.

**Criteria for Acceptance:** All items except those marked with "\*" require answers of "Y" (or "NA", where relevant).

DESCRIPTION	UNIT #							
1. Motor environment clean								
2. Adequate motor access for ventilation and maintenance								
3. Nameplate intact and readable								
4. No unusual noise or vibration								
5. Equipped with VFD <sup>1</sup> *								
6. Drive type (belt/direct/gear) *								
7. Belt tension is correct / belt & sheaves in good condition	/	/	/	/	/	/	/	/
8. Measure voltage each phase <sup>1</sup> *	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /
9. Calculate average voltage *								
10. Is the largest voltage difference from the average, divided by the average, less than 2%?								
11. Is measured voltage ±10% of rated voltage?								
12. Measure amps each phase <sup>1</sup> *	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /
13. Calculate average amperage *								
14. Is average amperage less than rated full load amperage?								
15. Are overload heaters sized for nameplate FLA?								
16.								

<sup>1</sup> If the motor is driven by a VFD, take all electrical measurements immediately upstream of the VFD. Also, complete the Standard Commissioning Procedure for VFDs.

**COMMENTS ON INSTALLATION VERIFICATION CHECKLIST ITEMS (add more sheets if needed):**

ITEM #	UNIT #	COMMENT
_____	_____	_____
_____	_____	_____
_____	_____	_____

Building Name: \_\_\_\_\_

\_\_\_\_\_  
I certify that the data and test results as recorded herein are accurate.

\_\_\_\_\_  
Signature, Commissioning Agent

\_\_\_\_\_  
Date

\_\_\_\_\_  
Firm Name

\_\_\_\_\_  
(Area Code) Phone Number