Public Review Draft, Normative Annex X – Investment Criteria

Background on Rules Development for HB 1257.

The Department of Commerce is authorized by HB 1257 to develop rules for the adoption of the Washington State Energy Performance Standard for Commercial Buildings. HB 1257 requires Commerce to use ANSI/ASHRAE/IES standard 100-2018, Energy Efficiency in Existing Buildings (standard) as the basis for these rules. Rules will be implemented that adopt the standard by reference, with amendments.

Amendments to the standard will be made to make the standard consistent with the features prescribed in HB 1257. The standard will also be modified to clarify administrative procedures. Additional rules may be required outside of this standard as well.

The following draft rule has been developed by Commerce staff. Then modifications to the various sections of the standard are made to provide consistency between the rule and HB 1257.

Interested parties are encouraged to review standard 100 and modifications made by Commerce staff. Input can be provided on any element that will align the standard with the legislation or existing state laws, clarify application, or improve administrative procedures.

Stakeholders are invited to participate in workshops scheduled to review specific sections of this work. Commerce request that written post workshop comments relating to sections covered at each workshop be received within by the scheduled time period posted on the Commerce Clean Buildings Web site. All comments will be posted on the buildings web site.

Submit comments via email; [buildings@commerce.wa.gov](mailto:buildings@commerce.wa.gov).

Review comments and schedules on the Commerce Clean Buildings web site: <http://commerce.wa.gov/buildings>

When editing the standard, please use a standard markup format that includes the following:

* Copy the entire sub-section to be edited
* Underline text to be added
* Use cross out text to indicate deletions
* Provide a reason statement for the change

For any new sections, provide suggested location in the document by referencing the previous section.

# Comments Specific to this Draft

Earlier Commerce posted a straw proposal for Public Review Draft, Normative Annex X – Investment Criteria. We received limited comment, but it did influence this draft. In an effort to control cost of audits, we have included a number of modifications.

1. We provided an exception that allows a level 2 energy audit to provide direction on adoption of measures.

2. We limited use of the Level 3 protocol to select sections about cost and life cycle cost assessment. Many other elements of the level 3 audit are not required.

With respect to the life cycle cost assessment, commerce will provide direction on the selection of some of the key economic variables. (section X4). Commerce will update these each year and publish any fixed values in the Level 3, Economic Evaluation of EEMs form specified in Normative Annex Z. This form will also incorporate the calculations required to provide the required NIST 135 analysis

I

Public Review Draft, Normative Annex X – Investment Criteria

**Section 2 Definitions**

***service life*.** See *useful life.*

***useful life***: *Useful Life* is the expected remaining service life of building systems or equipment. Used interchangeably with *Service Life* and Measure life.

**NORMATIVE ANNEX X - INVESTMENT CRITERIA**

**X1. Demonstrating compliance with the investment criteria.** Buildings seeking compliance using the exception to Section 9.1.1.1 or Section 9.1.1.2 shall demonstrate compliance with the financial investment criteria of this Annex. The investment criteria shall be documented using level 2 energy audit and by performing the Life Cycle Cost Analysis (LCCA) as per X2.2.

**X2. ENERGY AUDITS AND INVESTMENT CRITERIA PATHWAY**

**X2.1** Buildings qualifying under the investment criteria must complete a LCCA and implement an optimized bundle of energy efficiency measures that provide maximum energy savings without resulting in a savings-to-investment ratio of less than one.

Exception: Building owners may demonstrate compliance with this section by completing the level 2 energy audit and implementing all EEMs determined to have a simple payback that is less than the EEMs expected useful life.

**X2.2** The procedures for developing the investment criteria shall be based on ANSI/ASHRAE/ACCA Standard 211 Section 5.5.2 and Section 5.5.3 Life-Cycle Cost Analysis (LCCA) as modified by section X2. The LCCA shall also follow, and consider the findings of, the Level 2 Audit as defined by ANSI/ASHRAE/ACCA Standard 211 section 5.4.

**X2.3 Investment Criteria Chronological Process**

**X2.3.1 Level 2 Audit.** Evaluate a comprehensive list of individual EEMs using simple payback as a screening criteria. Individual EEMs determined to have a simple payback that is less than the EEMs useful life may be excluded from further consideration.

**X2.3.2 Life Cycle Cost Assessment.** Identify an optimized bundle of EEMs that provides maximum energy savings without resulting in a savings-to-investment ratio of less than one. The optimized bundle of measures shall be implemented based on the schedule established within the Energy Management Plan.

**X2.3.2.1 Phased Implementation.** The LCCA and Energy Management Plan may include phased implementation such that the building owner is not required to replace a system or equipment before the end of the system or equipment's useful life.

**X3. INCLUDED LCCA COSTS AND SAVINGS**

**X3.1** The costs and savings to be included within the life cycle cost analysis shall be based on ANSI/ASHRAE/ACCA Standard 211 Section 5.5.2 and 5.5.3 as modified by the following;

**5.5.2 Cost and Cost Savings of Recommended EEMs.**

Estimate the initial and recurring costs, energy cost savings, and nonenergy cost savings of each measure and each integrated group of measures. Cost estimates shall either be

a. obtained from a vendor at the quoted price, or

b. based on quotations of similar projects within the last year ~~or~~

~~c. any other cost method as approved by the owner’s representative.~~

**5.5.3 Life-Cycle Cost Analysis (LCCA).** LCCA 7,8,9,10 of each recommended EEM shall be conducted for a timeframe that spans, at a minimum, the life of the measure with the longest ~~service~~ useful life and shall include the following:

a. Initial costs (per Section 5.4.8.1).

b. Financing costs.

c. Annual energy costs.

d. Escalation rates as published by the AHJ. ~~citing the source within the energy audit report.~~

e. Discount rates as published by the AHJ. ~~citing the source within the energy audit~~

~~report.~~

f. Tax credits and deductions.

g. Cash incentives, grants, and rebates.

h. Expected periodic replacements.

i. Estimated recurring nonenergy costs (maintenance, etc.), of each measure or set of measures. Such costs include annual maintenance and service labor costs, routine replacement of worn parts, or annual warranty fees from manufacturers.

J. Contingency funds not to exceed 5% of EEM implementation cost.

k.Water & Sewer Savings from EEM. EEMs that provide water and/or wastewater savings shall include the operations and maintenance savings resulting from implementation of the EEM.

**X4. LIFE CYCLE COST ANALYSIS METHODOLOGY, Form AND KEY VARIABLES**

**X4.1** Life-cycle cost analysis completed for buildings qualifying under the investment Criteria shall follow the National Institute of Standards and Technology (NIST) Life-Cycle Costing Manual Handbook 135 except as specified in this standard in Table X4.

**Table X4 Life Cycle Cost Analysis variables independent of NIST Handbook – 135 methodology.**

|  |  |
| --- | --- |
| Public Owner Discount Rate | A fixed annual rate based on the cost of borrowing through the Washington State Treasurer, Certificate of participation programs, the local program and the **State Lease-Purchase Program.** |
| Private Owner Discount Rate | Shall be the published Wall Street Journal Prime Rate for based on the average of the previous 12 months. |
| Financing | Applicants with documented costs of borrowing assuming one hundred percent of the EEM implementation costs are financed at an actual cost of borrowing and stated terms when the property being improved is listed as loan collateral. |
| Rate of Inflation | A fixed annual rate, as published annually by the WA State Office of Financial Management. |
| Fuel Escalation Rate | Based on the most recent edition of *NIST Handbook – 135 Annual Supplement - Fuel Escalation Rates.* |
| Study Period | Equal to the useful life of the longest-lived EEM within an optimized bundle. (STD 211, 5.5.3) |

**X4.2 Publication of Analysis Variables.** The AHJ shall update the contents of Table X4 on an annual basis and incorporate the results with the Level 3, Economic Evaluation of EEMs form specified in Normative Annex Z.