

**Cost-per-unit of energy—
Performance rating methods**

This document provides the Statewide Average of Energy Prices of common fuels for use in complying with ASHRAE 90.1 “*Energy Standard for Buildings Except Low Rise Residential*” Section 11, “*Energy Cost Budget Method*” or Appendix G, “*Performance Rating Method*.”

ASHRAE Standard 90.1 allows these two performance rating methods for demonstrating compliance with the standard and the State of Oregon accepts both methodologies. An applicant must demonstrate that the simulated whole building energy consumption *cost* for the *proposed design* shall not exceed the *cost* of a *budget building design* using similar forms of energy and designed in compliance with the requirements of ASHRAE Standard 90.1, Section 11 or Appendix G.

Applicants must utilize the same energy costs, specified in Table 1, to determine the energy consumption costs for both the *proposed design* and *budget building design*. Rates from different sources may not be mixed in the same project. Full compliance with Section 11 or Appendix G will be demonstrated utilizing the modeling requirements as listed in ASHRAE Standard 90.1 for those compliance paths. The applicant must demonstrate the accuracy and reliability of their calculations as outlined and defined in the standard.

TABLE 1: STATEWIDE AVERAGE OF ENERGY PRICES (2018-2021)¹

Energy Source	BTU Unit Conversion	Unit of Measure	Price (\$)²
Electricity	3,413 BTU/kWh	kWh	0.088
Natural Gas	100,000 BTU/Therm	Therms	0.761
Distillate Fuel Oil	138,800 BTU/Gallon	Gallons	2.189
LPG/Propane	91,300 BTU/Gallon	Gallons	1.555
Biomass	16,659,000 BTU/BoneDryTon	Bone Dry Tons	164.924

Source: Energy Information Administration (EIA). <https://www.eia.gov/oregon>

¹ These prices will be updated with the standard code change cycle, or, if significant changes in relative energy prices occur.

² *Electricity* price represents annual data from EIA in February 2021. *Natural Gas* price represents annual data from EIA in 2019. *Residual Fuel Oil (Fuel Oil #6)* is no longer listed in EIA tables as a fuel source for Commercial purposes in Oregon.

budget building design: a computer representation of a hypothetical design based on the actual *proposed design*. This representation is used as the basis for calculating the *energy cost budget*.

design energy cost: the annual *energy cost* calculated for a *proposed design*.

energy cost budget: the annual *energy cost* for the *budget building design* intended for use in determining minimum compliance with this standard.

proposed design: a computer representation of the actual proposed *building design*, or portion thereof, used as the basis for calculating the *design energy cost*.

distillate fuel oil: products known as No. 1, No. 2, and No. 4 fuel oils are used primarily for space heating and electric power generation.