

# B.C. ENERGY EFFICIENCY ACT STANDARDS: Electric Water Heaters

## MEMPR INFORMATION BULLETIN 09-04



**What products are you regulating?** Electric storage-type water heaters with a rated storage capacity of 50 to 454 litres.

**Are you forcing me to replace my water heater?** No. The regulation applies to voluntary purchases of new or replacement water heaters. Individuals can keep their existing water heaters for as long as they wish.

**What is the regulated energy efficiency standard for those products?**

The standby loss (in watts)<sup>1</sup> must be equal to or less than:

$$25 + (0.20 \times V) \quad \text{for those having a top inlet and a rated volume}^2 \text{ of 50 to 270 litres or}$$

$$(0.472 \times V) - 48.5 \quad \text{for those having a top inlet and a rated volume of } >270 \text{ and } \leq 454 \text{ litres}$$

The maximum standby loss for water heaters with a bottom inlet<sup>3</sup> is identical to existing federal standards set by Natural Resources Canada.

The standby loss (in watts) must be equal to or less than:

$$40 + (0.20 \times V) \quad \text{for those having a bottom inlet and a rated volume of 50 to 270 litres or}$$

$$(0.472 \times V) - 33.5 \quad \text{for those having a bottom inlet and a rated volume of } >270 \text{ and } \leq 454 \text{ litres}$$

Here is the new maximum Standby Loss levels for several common sizes:

Rated Storage Capacity in litres (imperial gallons)	Maximum Standby Loss For Top Inlet	Maximum Standby Loss for Bottom Inlet
114 L (25 imp gal)	48	63
136 L (30 imp gal)	52	67
182 L (40 imp gal)	61	76
272 L (60 imp gal)	80	95
364 L (80 imp gal)	123	138

For a lookup table with all sizes, go to:

[www.empr.gov.bc.ca/EEC/Strategy/EEA/Pages/default.aspx](http://www.empr.gov.bc.ca/EEC/Strategy/EEA/Pages/default.aspx)

**What are the new installation requirements for electric water heaters?**

Homeowners and installers should be aware that all electric storage-type water heaters must have a functioning heat trap<sup>4</sup> installed at the inlet and outlet, or, in the case of bottom inlet water heaters, at the outlet.

In addition, all water heaters must be installed with R-4 (RSI 0.70) pipe insulation on the first 3.0 metres (9.8 ft) of exposed<sup>5</sup> outlet piping down stream of the tank or heat trap and the first 3.0 m of exposed water inlet piping upstream of the tank or heat trap. If there is an

