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

BRITISH COLUMBIA
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## 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)[1] must be equal to or less than:

| | |
|---|---|
| 25 + (0.20 x V) | *for those having a top inlet and a rated volume[2] of 50 to 270 litres* or |
| (0.472 x V) - 48.5 | *for those having a top inlet and a rated volume of >270 and ≤454 litres* |

The maximum standby loss for water heaters with a bottom inlet[3] 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 x V) | *for those having a bottom inlet and a rated volume of 50 to 270 litres* or |
| (0.472 x V) - 33.5 | *for those having a bottom inlet and a rated volume of >270 and ≤454 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

**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[4] 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[5] 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