WarmTrace Hot Water Temperature Maintenance Systems - Energy Savings

Thermon WarmTrace Hot Water Temperature Maintenance Systems have been successfully and extensively utilized throughout Australia and New Zealand for over 20 years. The design flexibility and capital cost benefits of our systems are well understood, but the energy, water, and overall running costs are more complex. Given the increasing costs of electricity, gas, and water; we understand the importance of the question, "what are energy savings versus the running cost of a WarmTrace system?"

WarmTrace maintains hot water in a no flow state in pipework between the hot water unit and the fixtures. Gas heated hot water is drawn through a non-heat traced pipe prior to use, and after the line is used the water remaining in the pipework cools and is flushed in the next usage. Both energy and water are wasted.

Case Study:

- In apartment living, occupants are charged for gas heated, metered hot water.
- 20 metres of 20 mm hot water pipe fitted with Thermon HSX-60-2-OJ self-regulating heater cable and thermally insulated as per Thermon design requirements.

Gas Hot Water Heating Energy Costs:

- Daily cost of gas based on average hot water consumption of 68 litres is $1.69026, or 0.02489 cents per litre.
- Each hot water usage, e.g. shower, wastes 6.254 litres. Based on three uses per day, 18.762 litres are wasted per day.
- Cost of daily wasted hot water is $0.466986 x 365 days = $170 per annum

Electricity Costs For WarmTrace System:

- Power (P = V x A/m x L) 240 x 0.0327 x 20 = 156.96 watts
- Per annum Energy: 156.96 watts x 24 hours x 365 days = 137.497 Kw hours x 25 cents per Kw hour = $34.37 per annum

Overall Savings Of WarmTrace:

- Cost of gas heater hot water ($170) minus cost of electricity ($34.37) = $135.63 per annum

Capital Cost And Pay Back Of WarmTrace:

- Capital cost of $537 divided by $135.63 savings on running cost = 3.95 years payback.

Information presented in this document is current as of 2017.