Hot Water Heater replacements and repairs.

- **Electric hot water heaters** 250 litres and above are usually on off peak . if you find that your hot water has gone cold and you have a 250 litre heater or bigger in capacity most likely you are on off peak this means that your electricity supplier is supplying you with electricity at a reduced rate for using it to heat your hot water outside of peak hours. Your off peak duration will normally be between 11:00pm and 7:00am . The electricity supplier will send a signal down the wires to your electricity box to turn the switch off and on sometimes this switch fails and you have no hot water So give your supplier a ring first. Integral Energy 131002 Energy Australia 131535 AGL 131909

  If there end is ok there is one of three possible problem your thermostat is not functioning correctly and should be replaced the heating element is burnt out and should be replaced or there in rare cases there is a wiring problem is a problem.

- We can **change thermostats and elements for you** and if your heater is smaller than 250 litres it is most probably not on off peak.

- **Pressure relief valves**, also known as the combinded pressure and temperature relief valve, This little valve which sits at the top of the heater usually on the side is designed to discharge water, when water is heated it expands and this valve discharges this water it is not uncommon for it to discharge up to about 8 litres or say two standard buckets of water during a off peak heating cycle. Any more than this the valve is probably faulty and or thee is a inlet pressure problem the pressure coming into the tank is too high and the valve is discharging water because of the high pressure. If this is the case a pressure limiting valve needs to be fitted to the heater to regulate the pressure.The other thing that can cause the valve to discharge is the temperature and this can be caused by a faulty thermostat or in a gas unit a malfunctioning gas controller.

- **Tempering Valves.** Where the water is being used for personal hygiene. The National Plumbing and Drainage Code AS/NZS 3500.4.1 says in new hot water installations the water shall be delivered at a temperature not exceeding 50°C to avoid the likelihood of scalding. Tempering valves serve this purpose. They pre mix hot water at say 65°C with cold water to produce warm water delivered at your tap not exceeding 50°C.

Tempering Valve 

- **When to chance anodes,**

Sacrificial Anodes

The storage cylinder used in a manufactured storage water heater is made of mild steel for strength. This cylinder has a continuous coating of vitreous enamel on its internal surface. The function of vitreous enamel lining is to separate the stored water from the mild steel cylinder. This vitreous enamel lining protects the mild steel cylinder against corrosive action by the potable water.

A sacrificial anode is incorporated in the cylinder design for added protection. The anode will extend the service life of the cylinder using cathodic protection.

Cathodic Protection

When two dissimilar metals are connected together and are both in contact via an electrolytic solution, a weak electric current is formed. This weak current produces a cathodic/anodic reaction between the two metals. Therefore, one metal will corrode in order to protect the second metal. The atoms of the less stable metal form a protective coating over the more stable metal.

In the instance of a water heater, the two dissimilar metals are the anode and the mild steel cylinder. These two metals are connected at the anode fitting at the top of the cylinder. The electrolytic solution is the potable water in the cylinder. The vitreous enamel lining separates the water from the mild steel cylinder, preventing the electrolytic circuit from being complete.

However, if any minute areas of steel become exposed, protection is given by the sacrificial anode. The anode provides protection by forming a protective coating over the exposed areas of mild steel, extending the life of the cylinder.

The rate of protection depends on water quality, level of total dissolved solids (TDS) and water temperature. The most suitable type of anode material is determined by the water quality.

Anode Inspection

The anode(s) in the water heater will slowly dissipate whilst protecting the cylinder. The life of the water heater cylinder may be extended by arranging for an authorised person to inspect the anode(s) and replacing if required.

The suggested time after installation when the anode should be inspected is usually 8 years for a standard heater and 10 years for a non standard model 7 years for commercial : For softened water supplies or in areas of bad water quality, it is recommended the anode be inspected three years earlier than shown above. As early as 5 years would be an exceptable inspection time.

Remember, headroom of one water heater length should be left above the water heater.

Replacements of hot water heaters the brands we can supply are. Rheem, Dux, Vulcan, Aquamax, Rinnai, Hot water heaters.
We can usually do a replacement within the same day.