# Reusing Heat from Waste Water

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Every time we wash our hands, bathe or shower, wash dishes or clothes, hot water passes down the drain and the energy is lost. This document proposes a method of reusing that energy, and thus reduce our energy consumption and carbon footprint.

We require to have a well-insulated grey water storage tank in the basement of the house, or buried in the ground outside close to the foundations. Drains from bath, shower, sinks and washing machines must be well insulated and have their temperature measured by a rapid response sensor. If the water is hotter than the water in the grey water storage tank, a valve directs the water into it; if the water is cooler, it goes to the sewer. If the grey water tank is full, the water from the bottom of the tank is released to the sewer to make space for the incoming warmer water.

If you have an air conditioning system or a refrigeration system on your premises, the grey water tank can be used as the means of absorbing the waste heat from these systems.

Many people use an air-source heat pump for providing hot water and domestic heating. By using the warm water in the grey-water storage tank as the primary energy source for the heat pump, the heat pump has less work to do and so electricity is saved.

If you check the document “Untreated Sewage Dumped during Storms into Rivers, Lakes and the Sea”, (see references), it proposes having a holding tank for grey water to be used for flushing toilets. This will reduce the wasteful flushing of potable quality water; clearly, there is benefit in combining these two proposals.

Reference:
http://www.intint.co.uk/Untreated%20Sewage%20Dumped%20during%20Storms.pdf

 