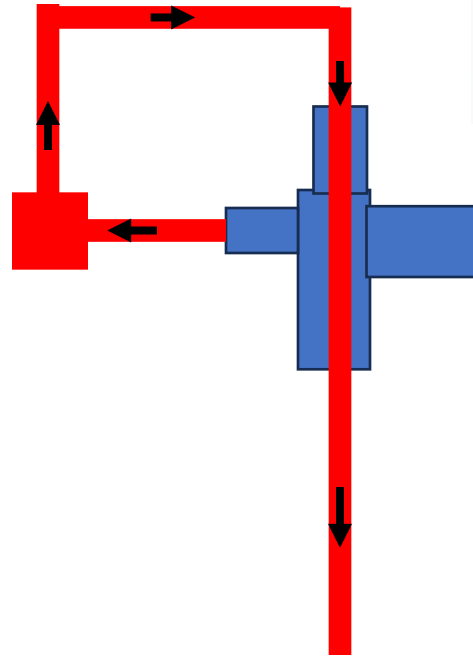**A new invention – A retrofit device to convert existing hot water tanks into low cost heat stores.**

Creating larger simple heat stores it is possible to replace gas and oil boilers from existing homes
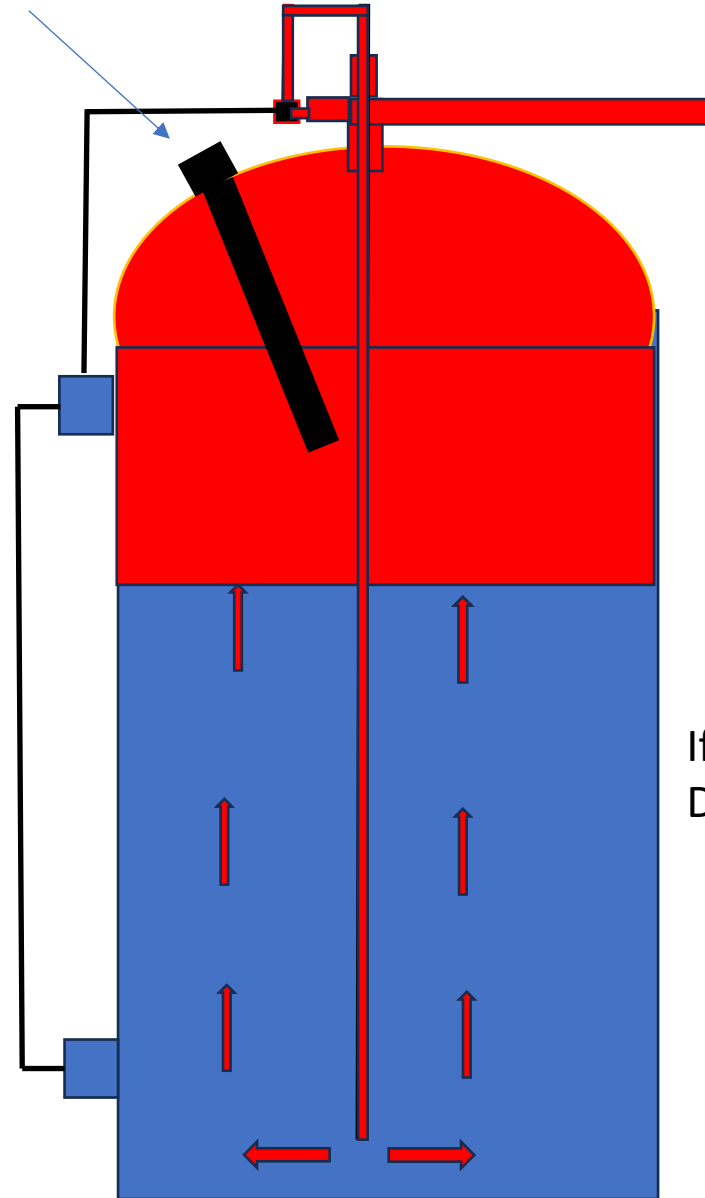
Pump

For storing hot water for space heating and for washing and bathing and replacing fossil fuel boilers in existing homes
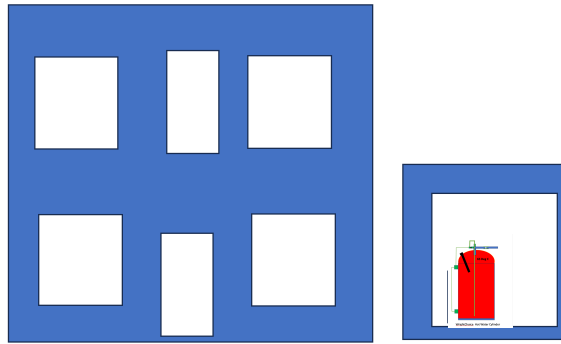
Existing Standard Immersion Heater

T1

The immersion heater will only only heat the top 1/3rd of a tank without this device. With this device the whole tank is heated with
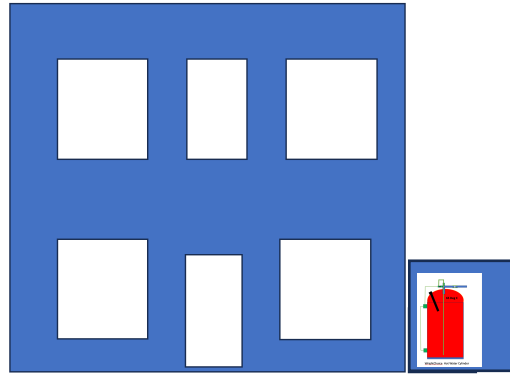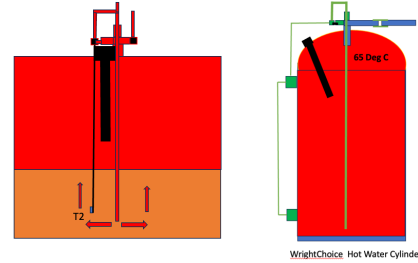
If T1>60 Deg C and T2 <50 Deg C then turn pump on.
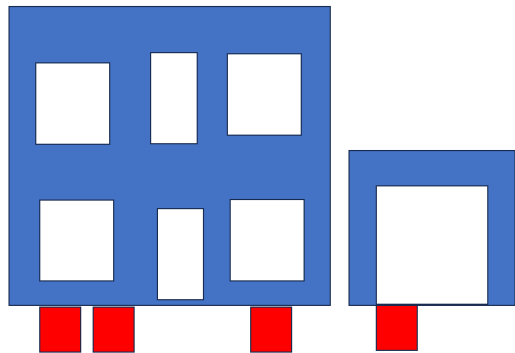
T2

Heat Storage For Central Heating

Easy Retrofit

Easy Retrofit

New Build

4 x 1,000 litres of water heat store gives the equivalent of 8 hours output from a 24 KW combination boiler.

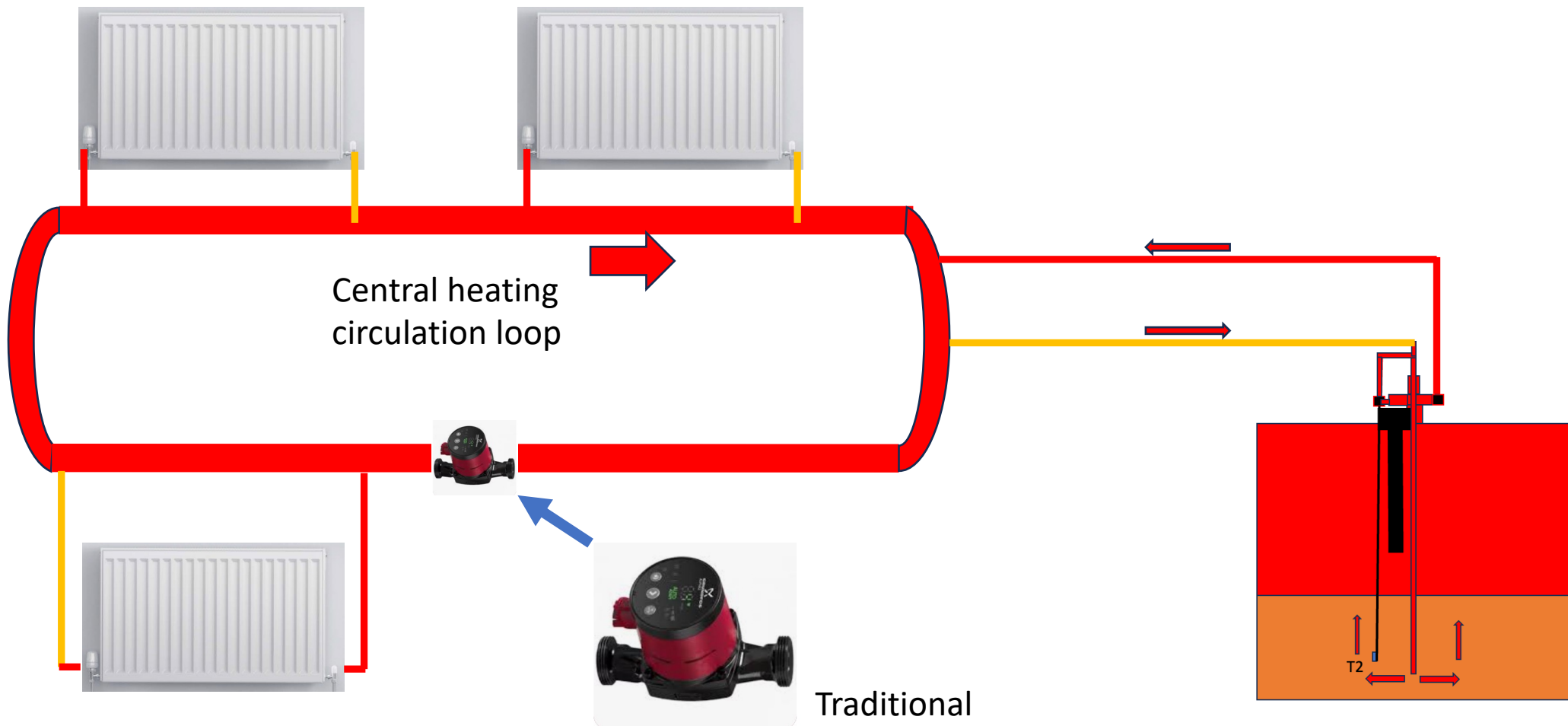NO MORE FOSSIL FUEL BOILERS

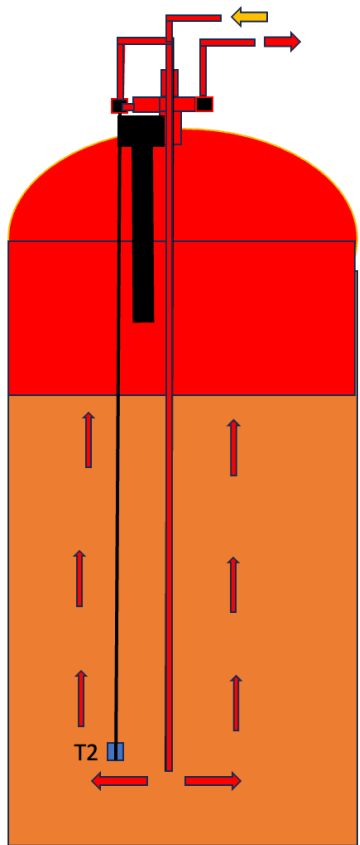| Energy		
Mass of water	1,000	kg ▾
Initial temperature	20	°C ▾
Final temperature	65	°C ▾
Total energy	52.38	kWh ▾

WrightChoice Hot Water Cylinder
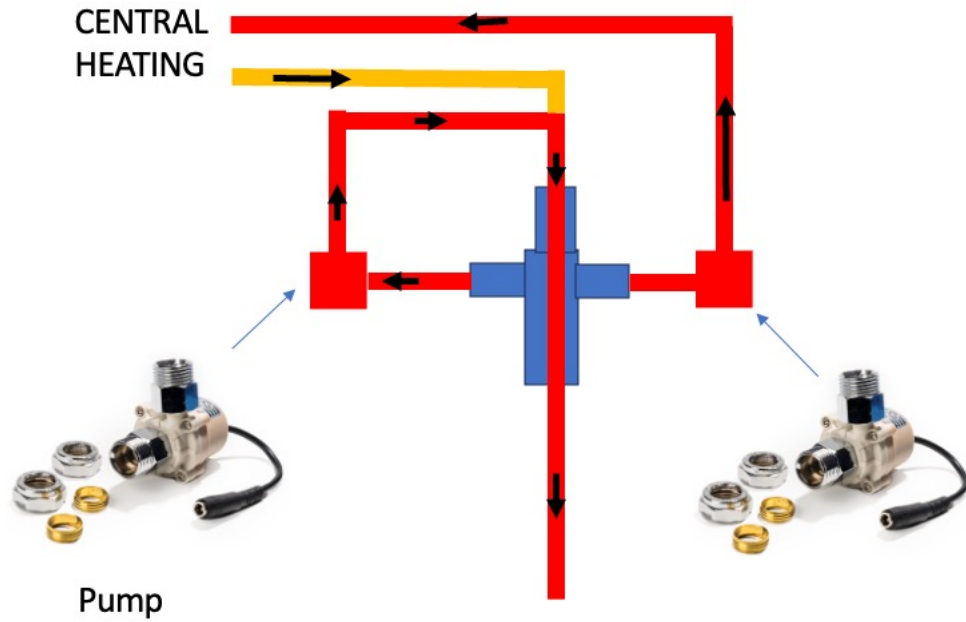
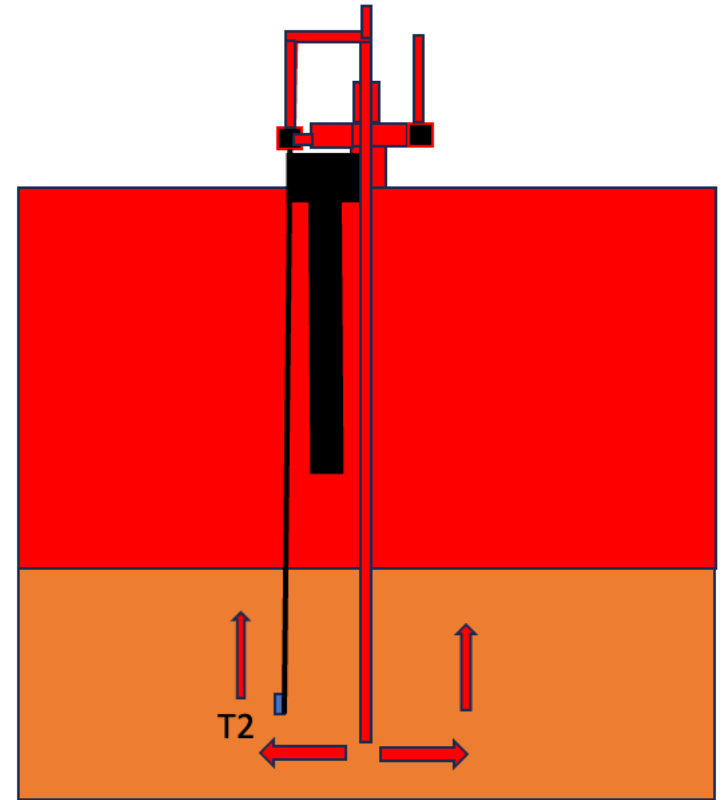Central heating circulation loop

Traditional Circulation Pump

Retaining the existing radiators in a home and adding heat stores can either replace part of the heating demand or all of the heating demand to allow removal of the fossil fuel boiler.
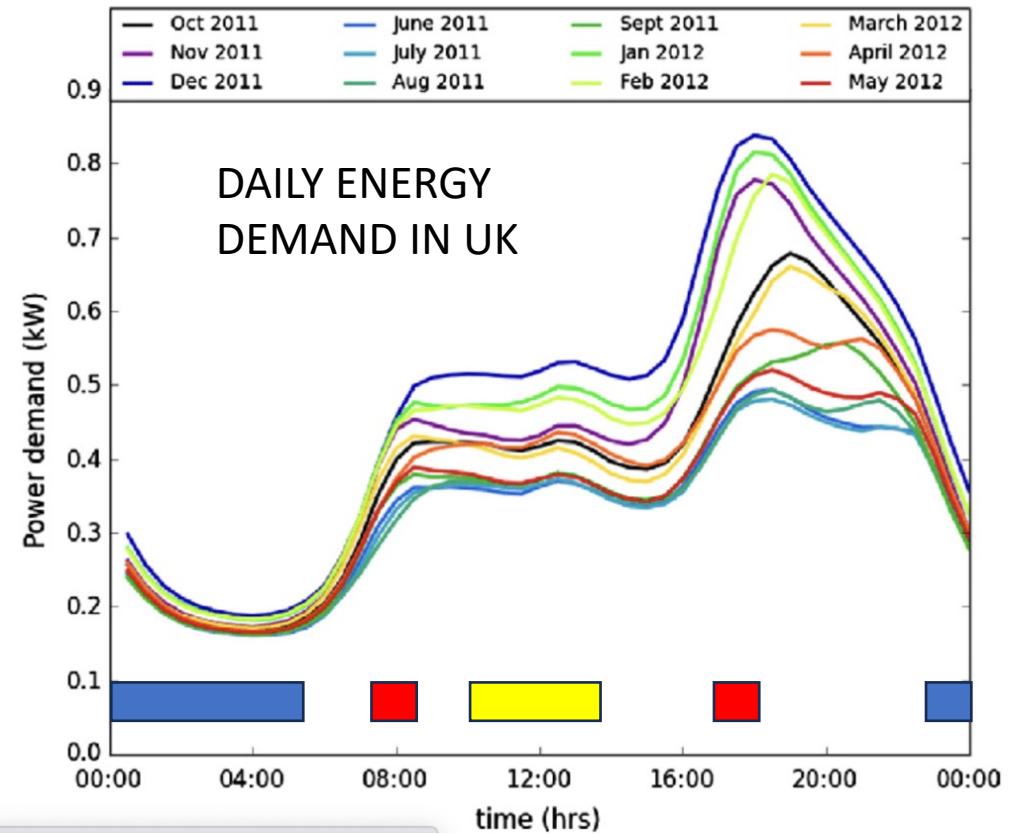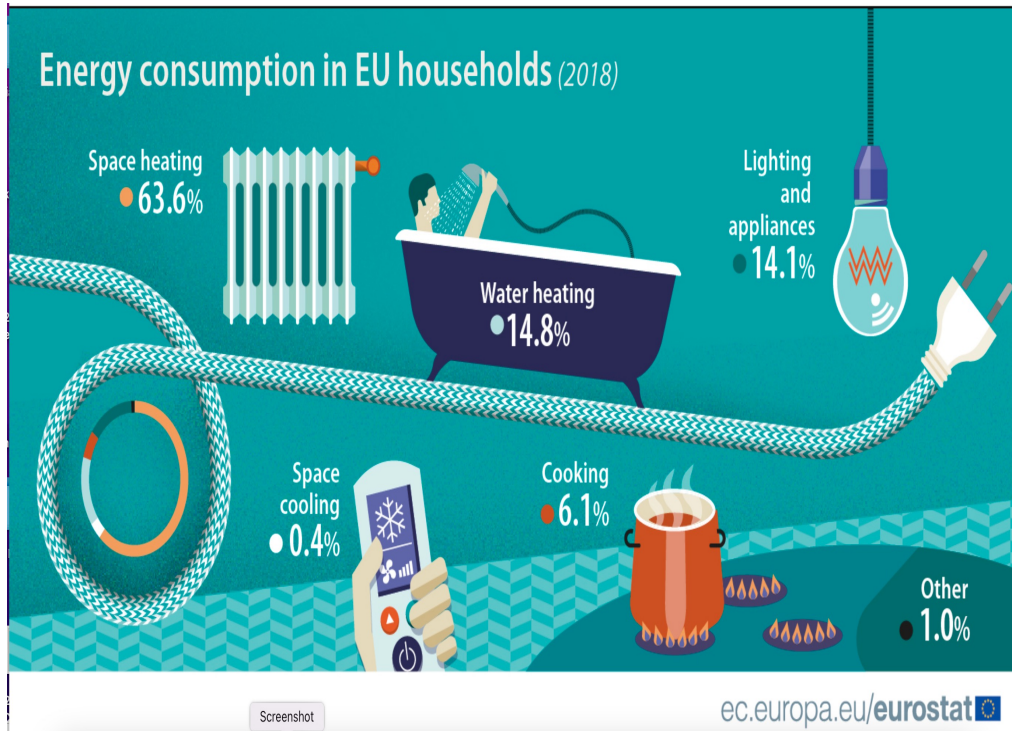
T2

High, Medium & Low Pressure Systems

Central Heating Storage Tank Integration

Low Pressure Systems

CENTRAL HEATING

Pump

T2

Energy consumption in EU households (2018)

- Space heating ● 63.6%
- Water heating ● 14.8%
- Lighting and appliances ● 14.1%
- Space cooling ● 0.4%
- Cooking ● 6.1%
- Other ● 1.0%

ec.europa.eu/eurostat

DAILY ENERGY DEMAND IN UK

Legend:
- Oct 2011
- Nov 2011
- Dec 2011
- June 2011
- July 2011
- Aug 2011
- Sept 2011
- Jan 2012
- Feb 2012
- March 2012
- April 2012
- May 2012

CENTRAL HEATING CONSUMES TEN TIMES MORE ENERGY THAN THAT USED FOR WASHING AND

HEATING IN DECEMBER JANUARY & FEBRUARY

🟥 Electric showers draw power at peak demand

🟦 Grid energy stored at periods of off-peak demand at night and used at peak demand periods

🟨 Solar energy stored at periods of solar supply and used at peak demand periods

PUBLIC WIND POWER.

In order meet demand for energy for the winter period there will need to be an increase in wind power and solar power.
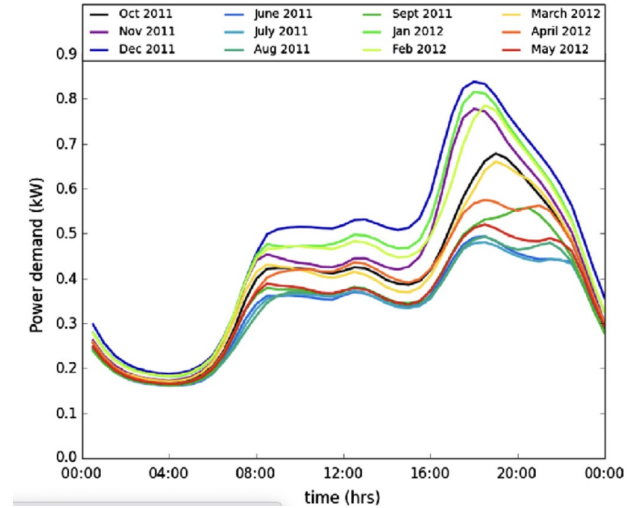
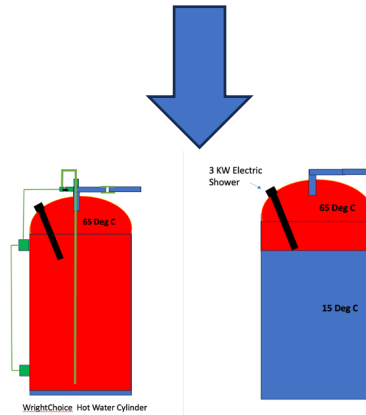This effectively provides 'Free' energy in the summer
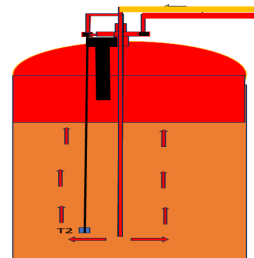

PUBLIC SOLAR PV

PRIVATE SOLAR PV

WrightChoice Hot Water Cylinder

DEMAND OVER 24 HOURS VARIES
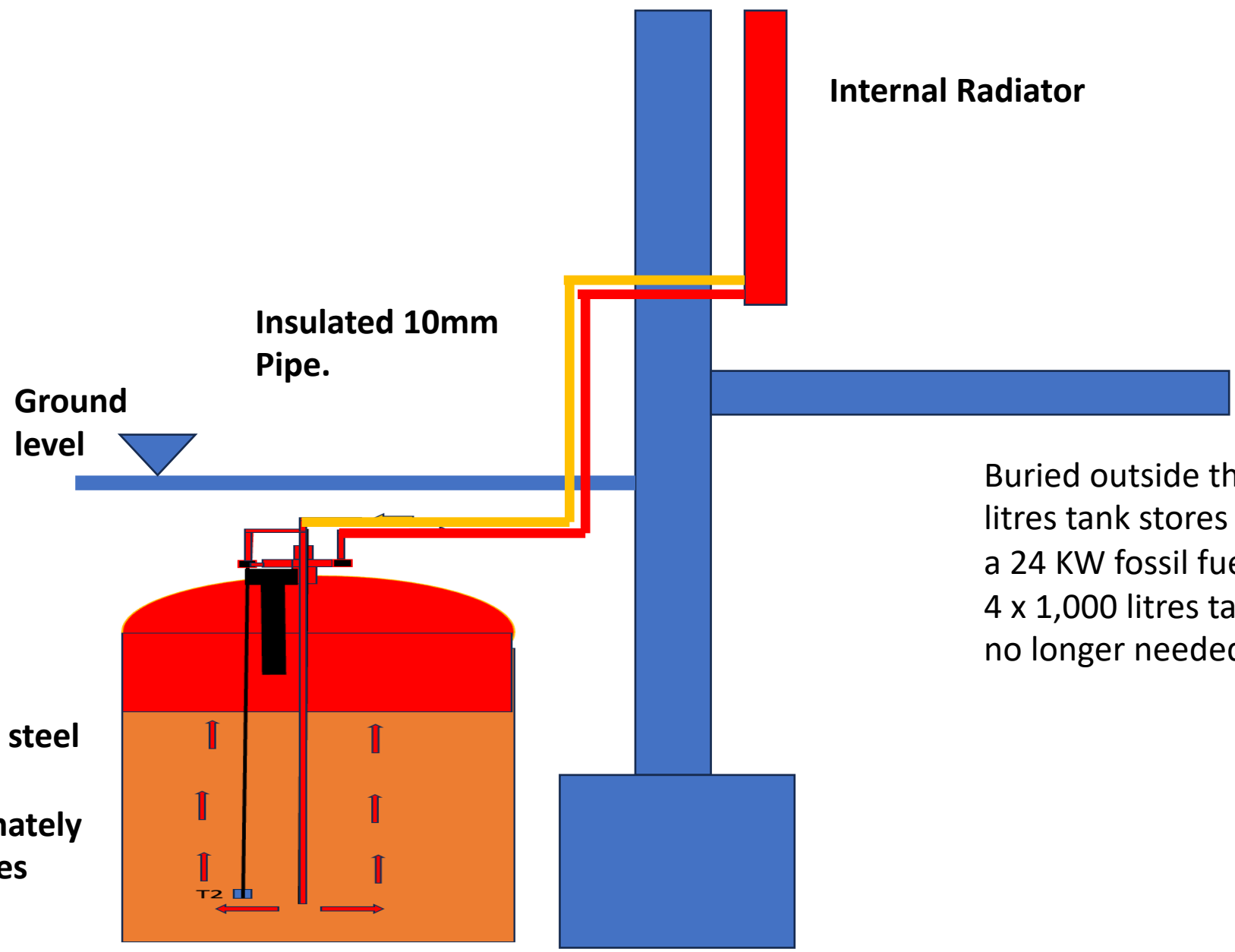HIGH DEMAND IS UP TO X5 LOW DEMAND

Tanks within the home can supply hot water for washing and bathing for 24 hours usage.

Tanks adjacent to the house can supply central heating needs for 24 hours and 3 days for washing and bathing.

Internal Radiator

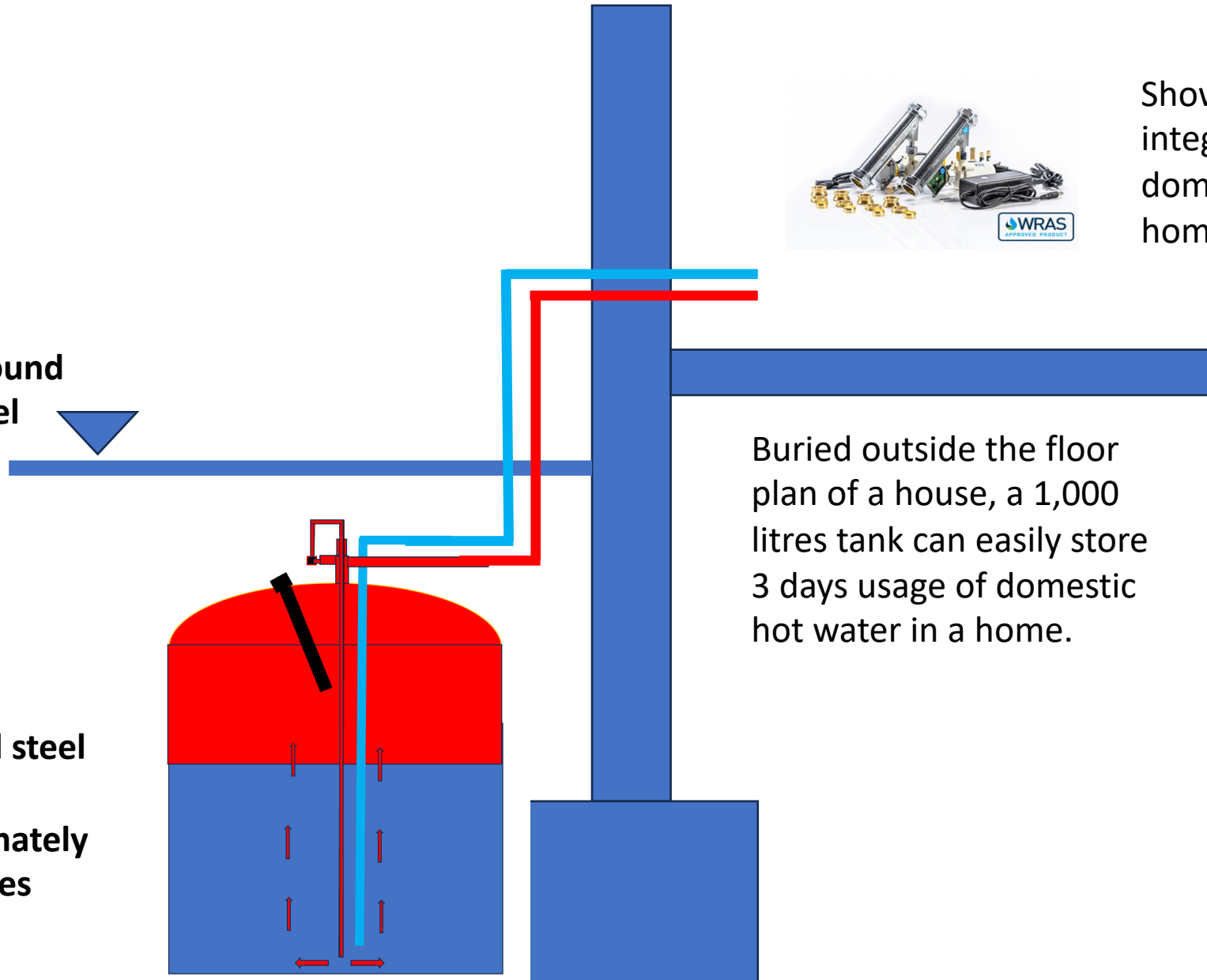Insulated 10mm Pipe.

Ground level

Factory Insulated steel cylinder Approximately 1,000 litres each

Buried outside the floor plan of a house, a 1,000 litres tank stores the same energy as produced by a 24 KW fossil fuel boiler running for 2 hours. 4 x 1,000 litres tanks and the fossil fuel boiler is no longer needed for space heating

ShowerPowerBoosters can integrate the heat store with any domestic water system in a home

Ground level

Buried outside the floor plan of a house, a 1,000 litres tank can easily store 3 days usage of domestic hot water in a home.

Factory Insulated steel cylinder Approximately 1,000 litres capacity

CENTRAL HEATING

TANK DEVICE

RADIATOR BOOSTER

ShowerPowerBooster
SP21S

Information Manual
www.showerpowerbooster.co.uk

Boosts water flow to any shower, tap & so much more!

30/11/2023

SHOWER POWER BOOSTER
INLINE MICRO PUMP