

# Leading edge “greenplumbing products

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## So what are the challenges (opportunities) moving forward?

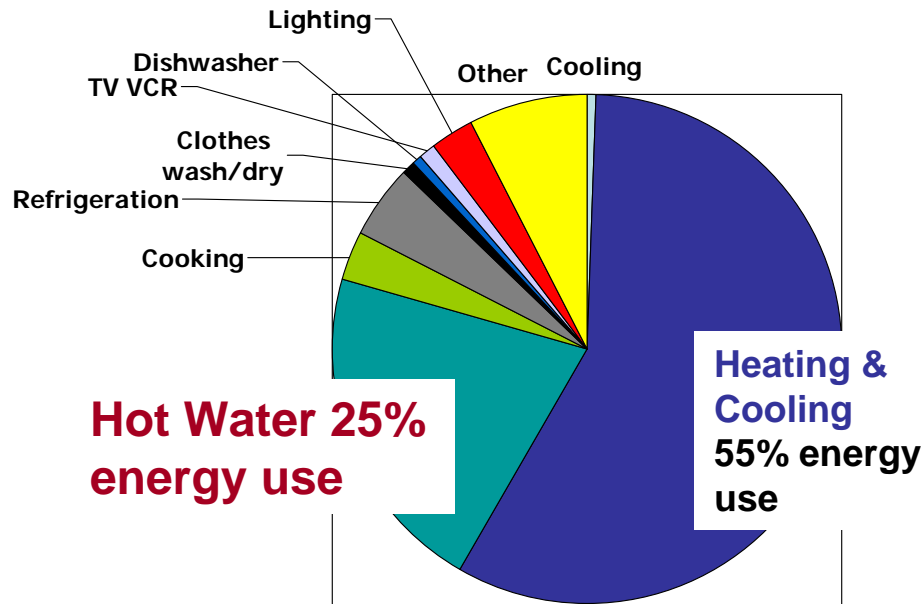


- Existing building stock that needs to be upgraded  
*(over 8 million buildings)*
- Climate change (hotter weather / less rainfall?)
- increase in population
- Aging infrastructure
- ETS (“energy consumption tax”)



# Average Australian Household Energy and Water Usage

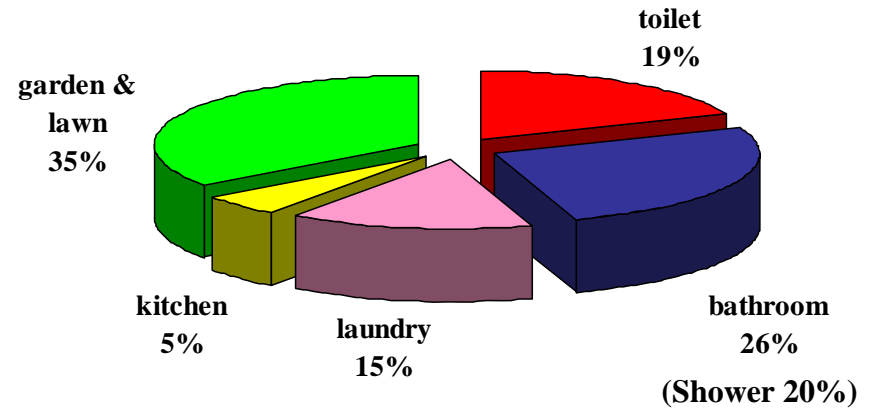
## Energy Consumption



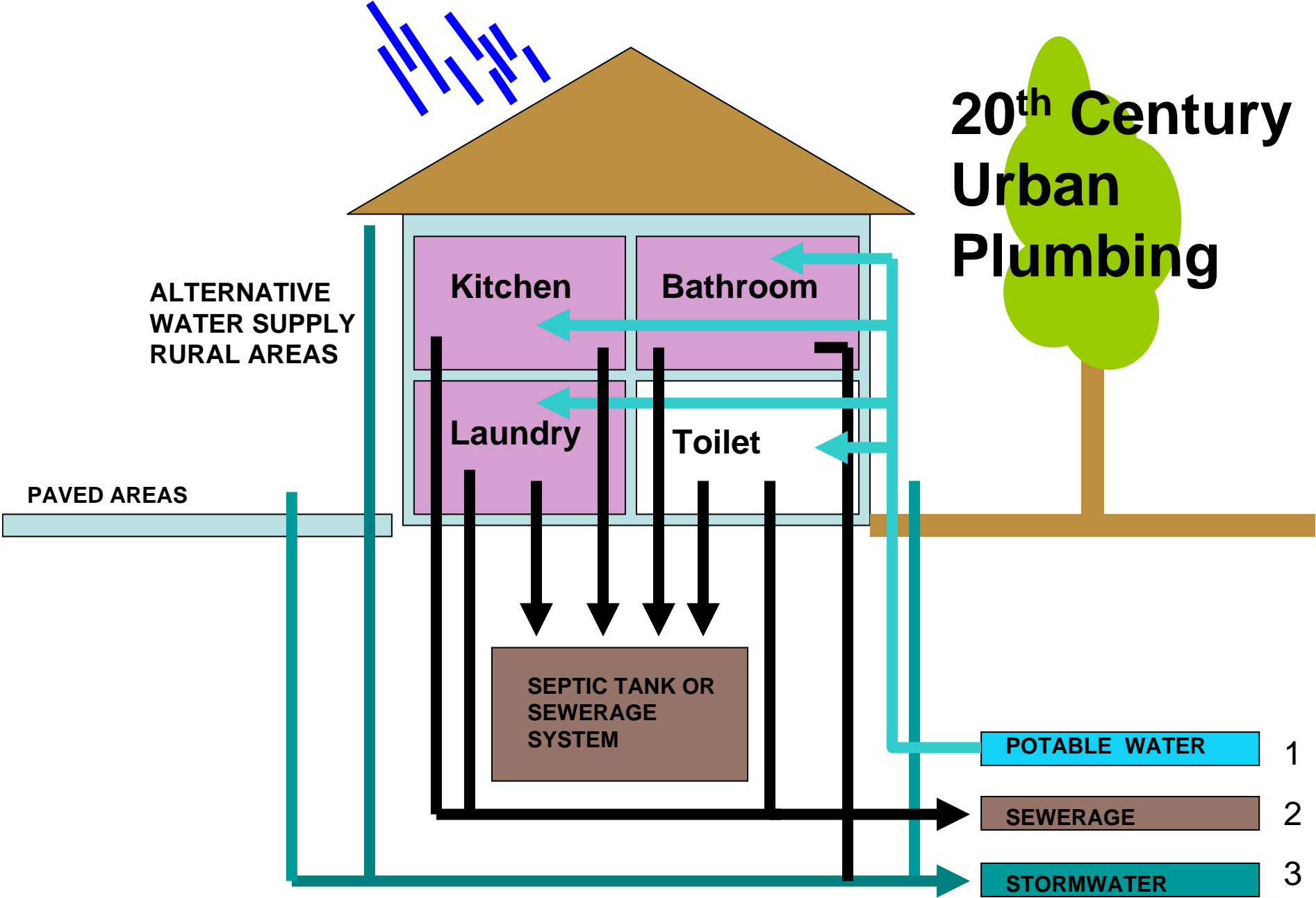
(Average Cool climate Household)

## Water Consumption

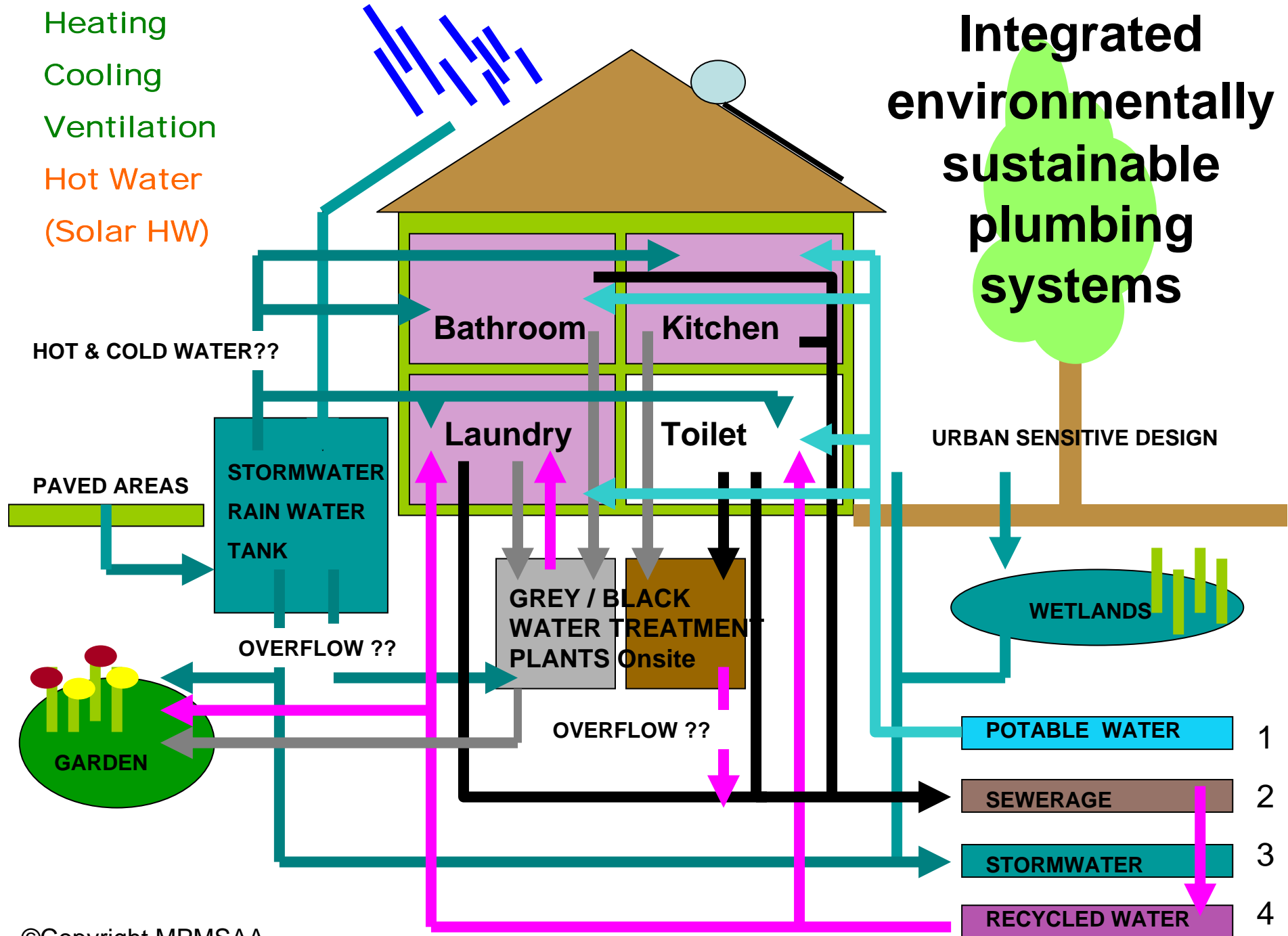
### Average Family Home Consumption



# 20<sup>th</sup> Century Urban Plumbing



# Integrated environmentally sustainable plumbing systems





## Future Green Plumbing Technologies

- **Geo thermal**
- **Solar Hot Water (incl. heat pumps)**
- **Gas Co generation**
- **Waste Water Treatment and Reuse**
- **Rainwater Harvesting**
- **Chiller Beams**
- **New products / materials and installation techniques**
- **Carbon Management and Reporting**

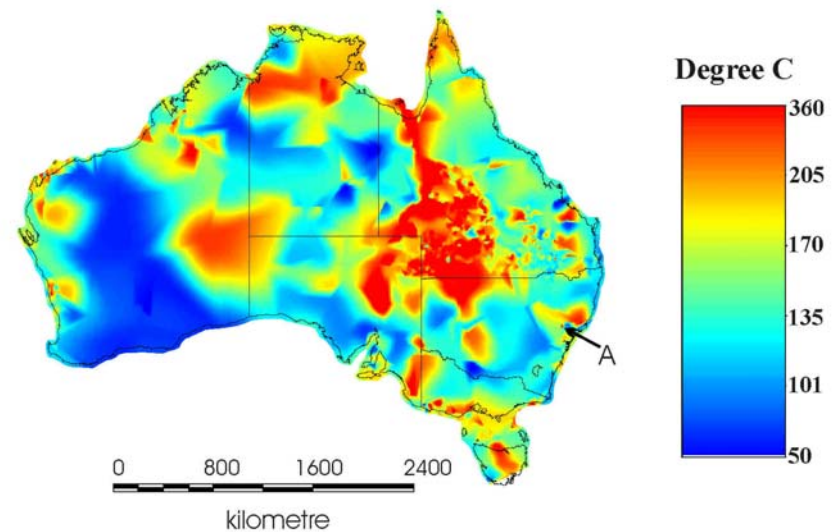
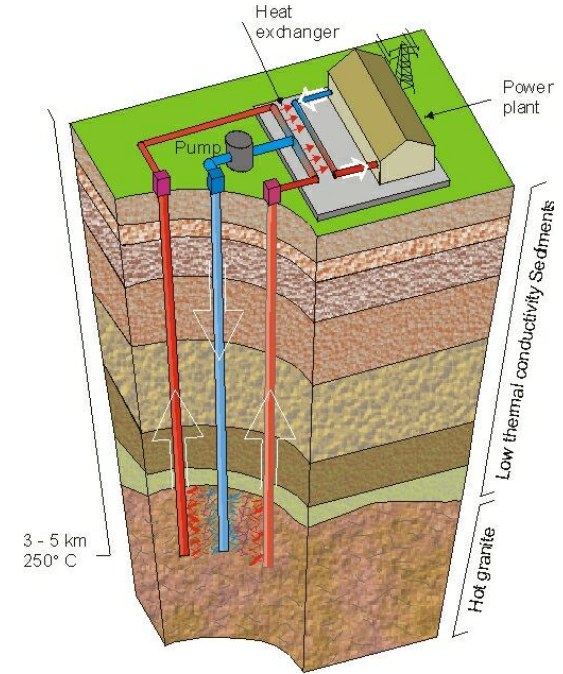
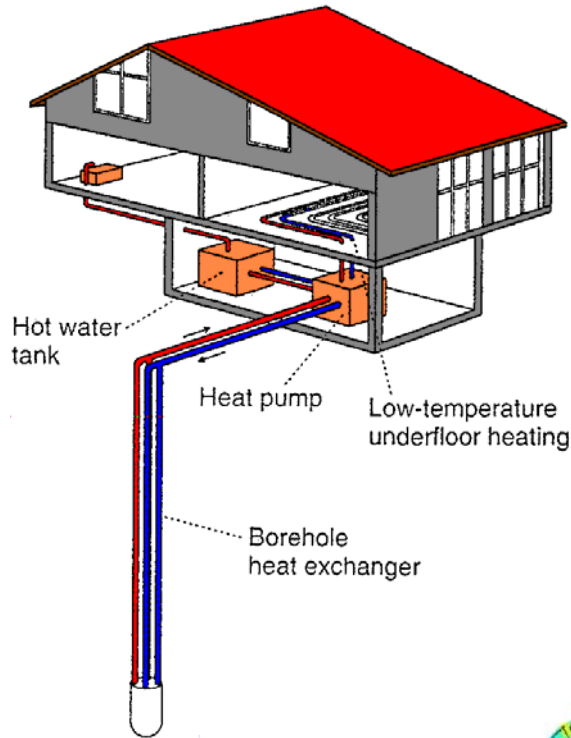


# Geo thermal

Popular in New Zealand and parts of Europe

Australia has a large potential for low heat transfer systems / heat pumps in populated areas

High heat opportunities in some regional areas.



# Gas Co generation

Utilising our natural gas resources and infrastructure

1 unit of gas =

1 unit of electricity generation + 3 units of heat

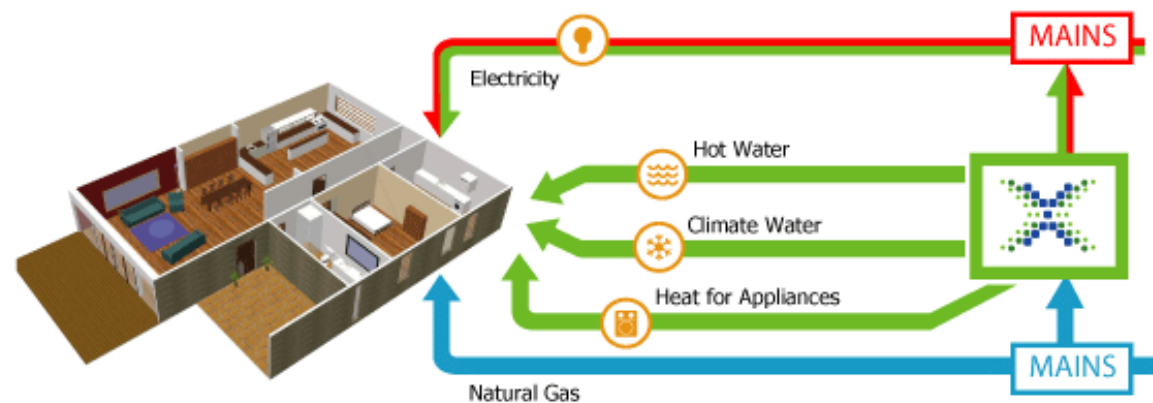
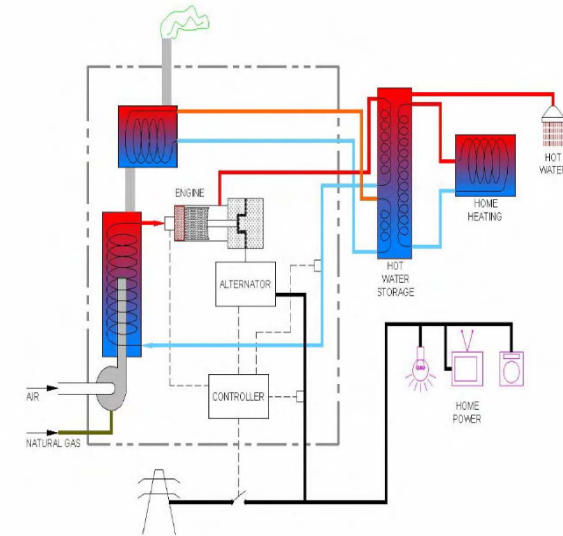
The heat can be used with and absorption chiller to transform into cold air/water.

Heating

Hot water

Air conditioning

Electricity generation



Again popular in Europe –  
Further incentives are required in  
Australia to become viable.

# Alternative water sources

Decentralised water sources “fit for purpose”

Toilet flushing (19%)

Garden irrigation (35%)

Wash down activities

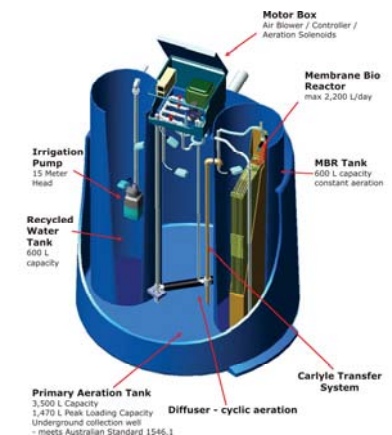
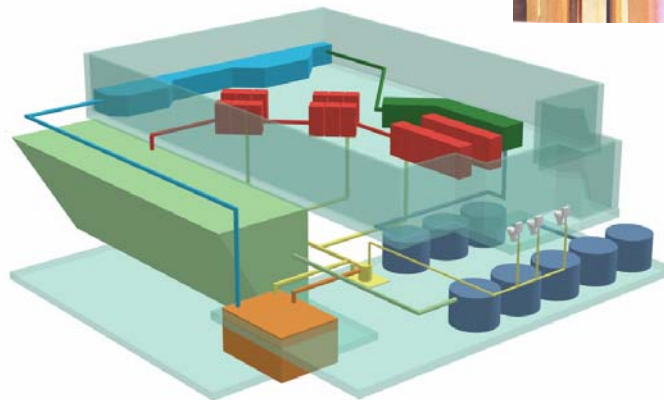
Rainwater

Greywater

Treated / recycled water

The cost of drinking water is the barrier to greater uptake.

Government water infrastructure projects are improving the ROI for decentralised alternative water projects



# Chiller Beams

Passive and active systems

“chilled water” delivered through ceiling mounted systems

If you have designed a system which generates excessive heat - through an absorption chiller can assist in optimising the cooling load

Coupled with SHW or Cogeneration.





## New Training facilities

Opened in April 2009

306 Albert Street Brunswick



## Future Plumbing Regulations & Government assistance



- **Nationally consistent plumbing regulations  
scale of economy (product and installation)**

*(New housing regs, rebate programs, water restrictions , govt' installation programs)*

*Short term programs do not assist industry, and they result in poor performance and community dissatisfaction, which harms the long term viability of emerging industry sectors.*

- **Nationally coordinated government support programs that will assist in establishing a long term industry**
- **Development of export opportunities**
- **increased support for training to keep up with changes in technology and regulations**



**Thank you for  
your time**

**Further Information**

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