

Heat Pumps- the future

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Bill Johnson- Heat Pump Technical Manager

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Heat Pumps- the future

Ground and Air Source Heat Pumps

- Heat emitter **works with low temperature** – Energy use is proportional to delivery temperature
- Minimal zone temperature control in insulated buildings – allow weather compensation to work
- Use experienced and competent installer to design, install, complete the system and commission.
- Take some time to optimise the settings post commissioning – “Extended Hand Over” “Soft Landing”
- Installer remote access to the controls enables full optimisation.



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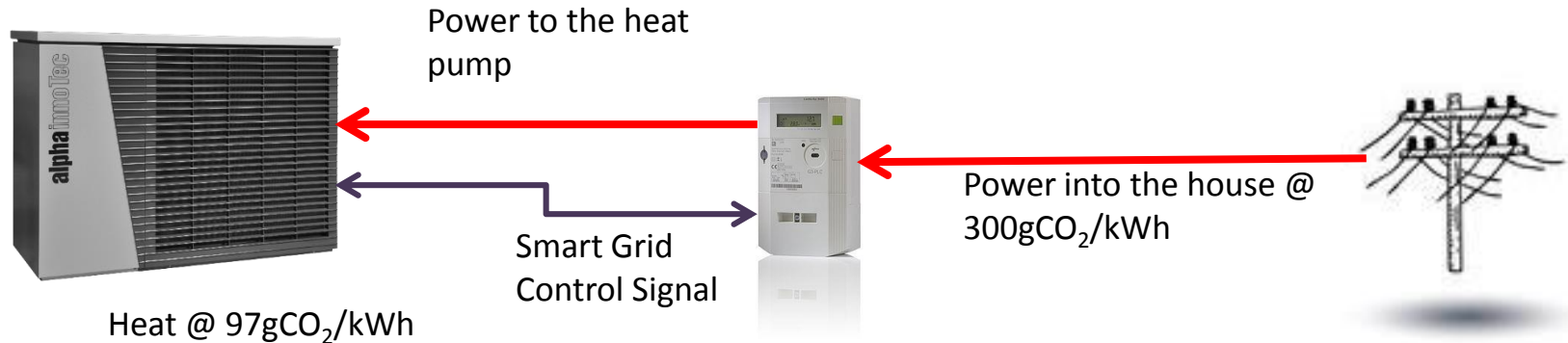


UNDERFLOOR HEATING HEAT PUMPS VENTILATION & RECOVERY CONTROLS

Heat Pumps- the future

Demand Side Reduction/Management

Smart Grid Ready Heat Pump



Options

- Standard Tariff – The heat pump operates in normal mode – the default setting
- High Tariff a – Compressor and back-up heater inhibited, pumps and controls operate - uses stored energy
- High Tariff b – Lower temperature setting – reduce cost and CO₂ but maintain comfort
- Low Tariff – Higher temperature setting – short term storage
- Free Tariff - Maximum temperature limit to store energy in thermal store – long term storage

Versatility is important to accommodate different tariff schemes

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Summary

- Up skilling of the heating trades is vital to be able to implement the necessary change
- Heating will change over to heat pumps powered by low carbon electricity
- The RHI and planning requirements are the current financial incentive to move the “Off Gas Grid” areas this will change to preferential “Time of Use Tariffs” with adoption of the “Smart Grid”
- Heat pumps through Demand Side Reduction/Management will be instrumental in load balancing
- Heat pumps optimise intermittent renewable electricity generation
- The balance of low running cost over high capital cost wins

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