



**David Auty**  
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December 2011

**Commercial – Strictly Confidential**

# **Gas-fired adsorption heat pumps**

**High Efficiency**

**air-source products**

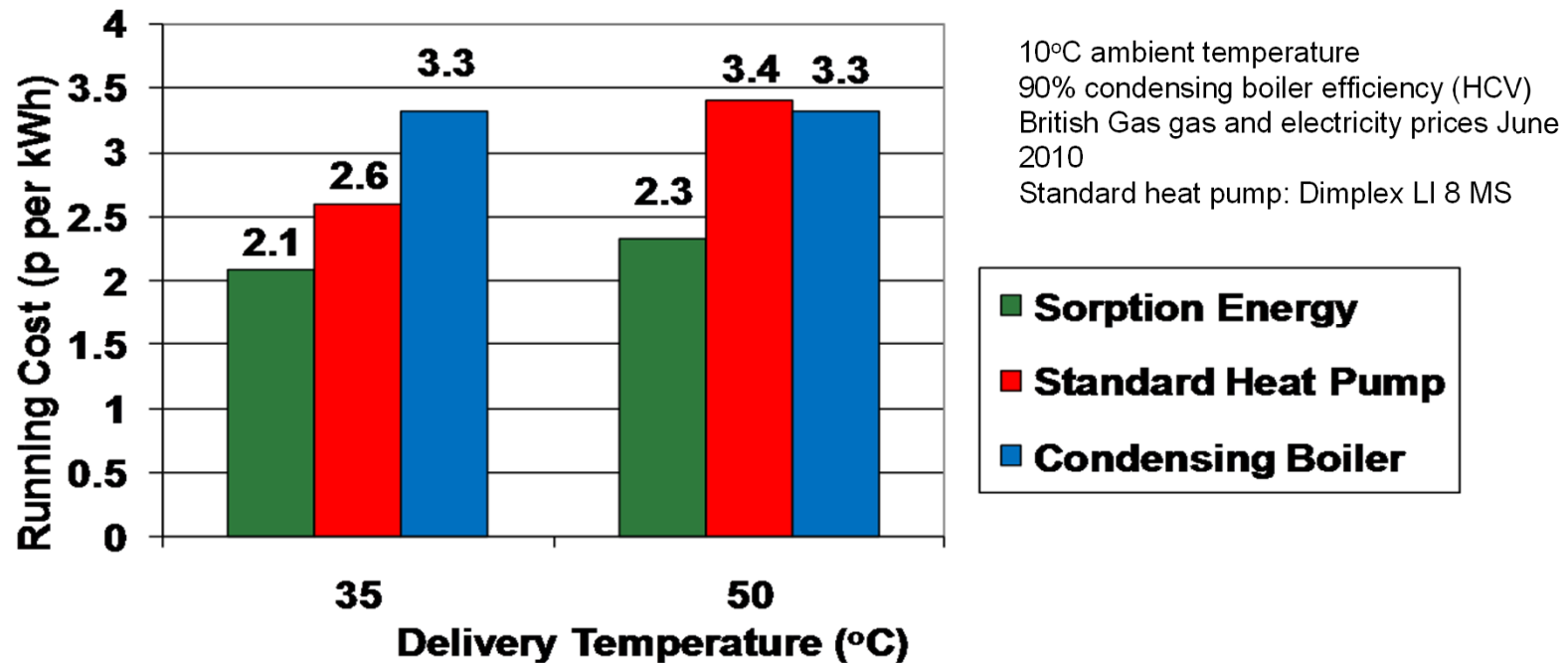
**for domestic heating and hot water**



**30% annual fuel savings proven by prototype testing.**

**38% achievable from identified developments in short and medium term**

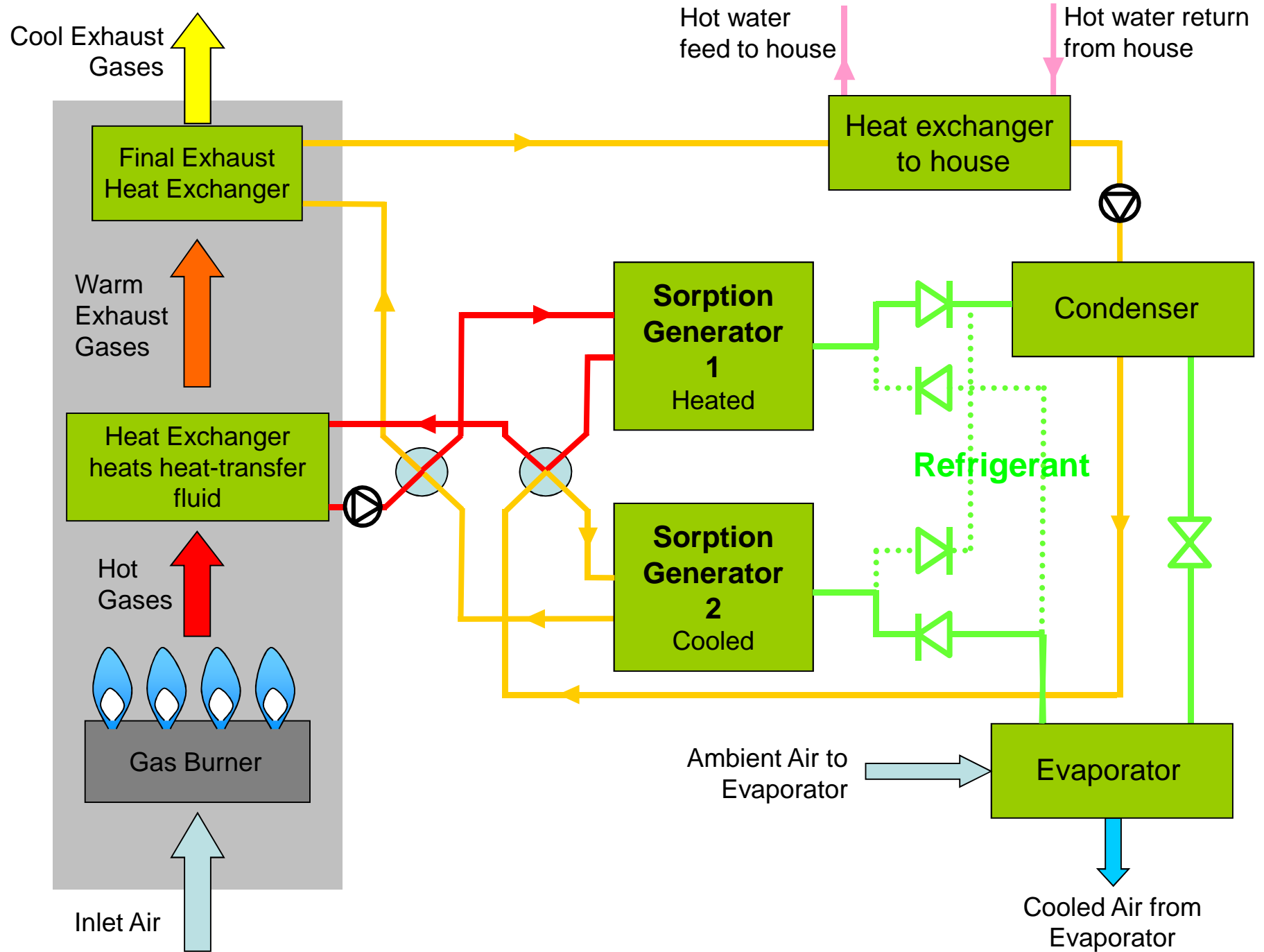
# Comparison of Heating Costs

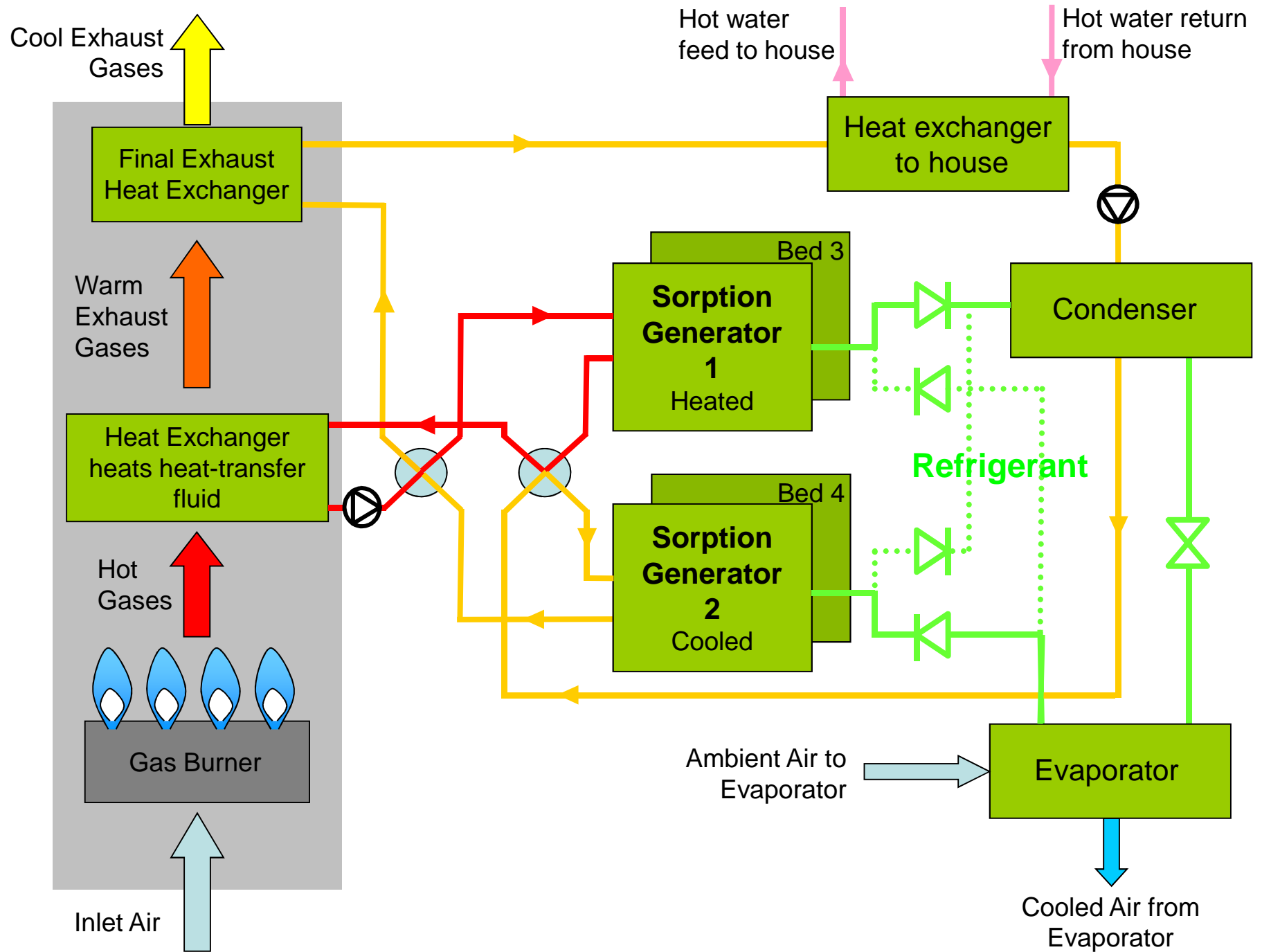


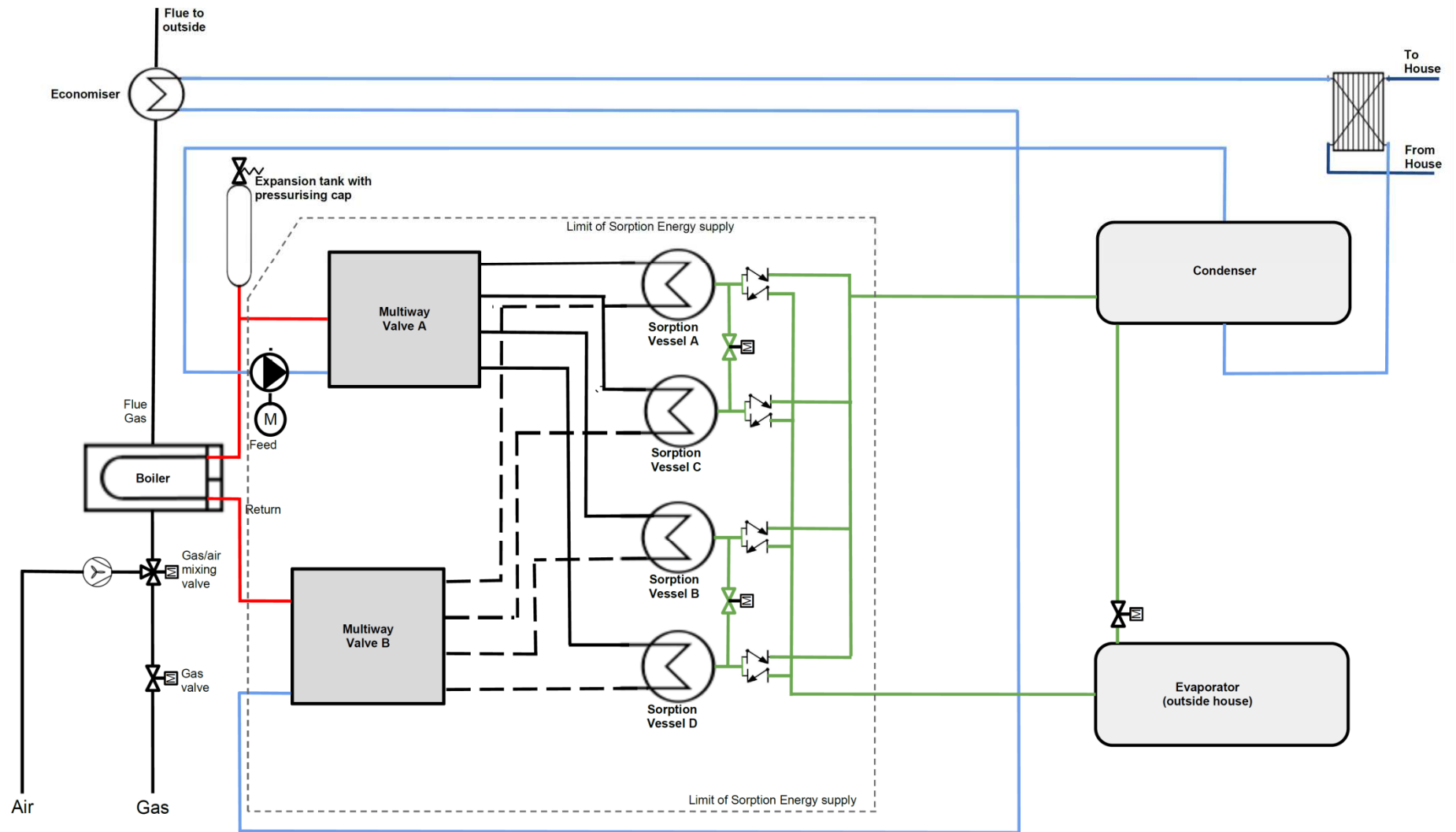
## Fits into standard wall-mounted casing



- Box-for-box replacement of old boiler
- Retrofit market >90% of annual sales







**PRELIMINARY**

**SORPTION ENERGY**

Process Flow Diagram  
Mark 2 - Full System

Drawn: DHA  
Design: DHA  
Checked:  
Date: 15/11/11

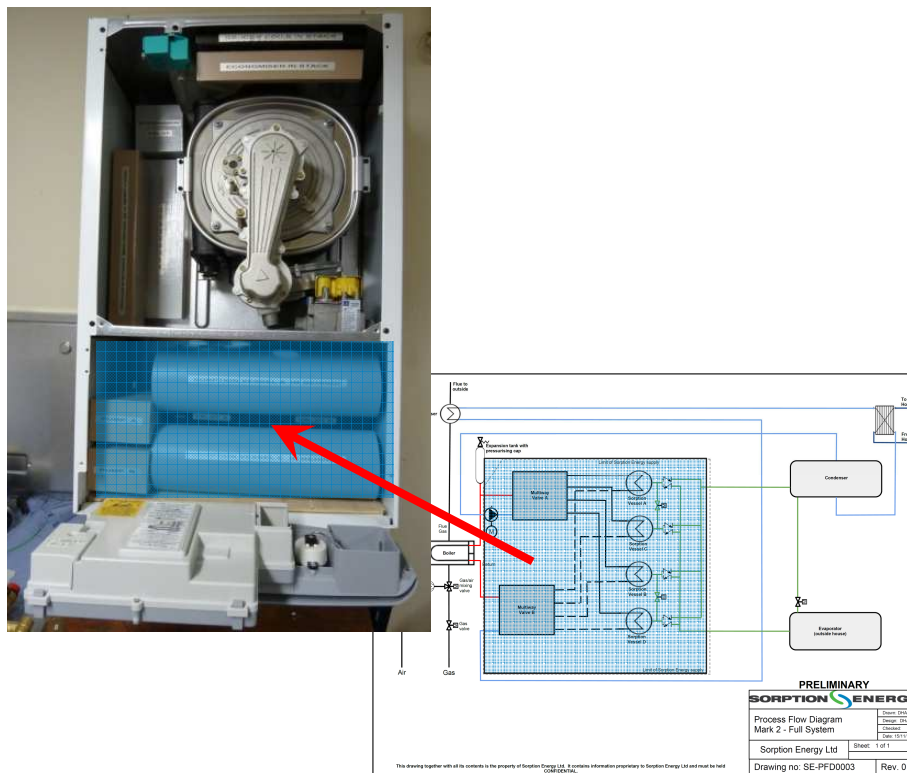
Sorption Energy Ltd

Sheet: 1 of 1

Drawing no: SE-PFD0003

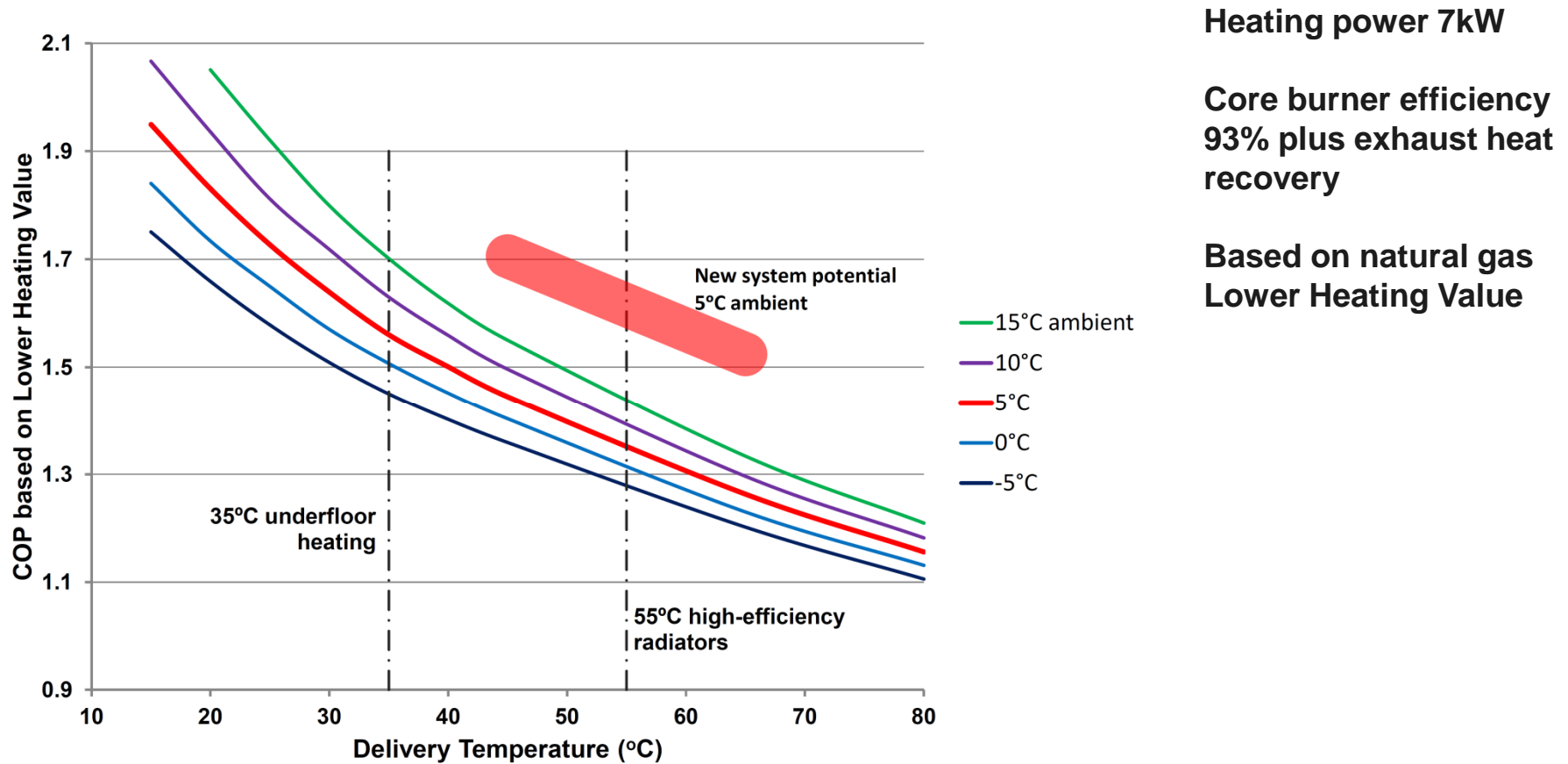
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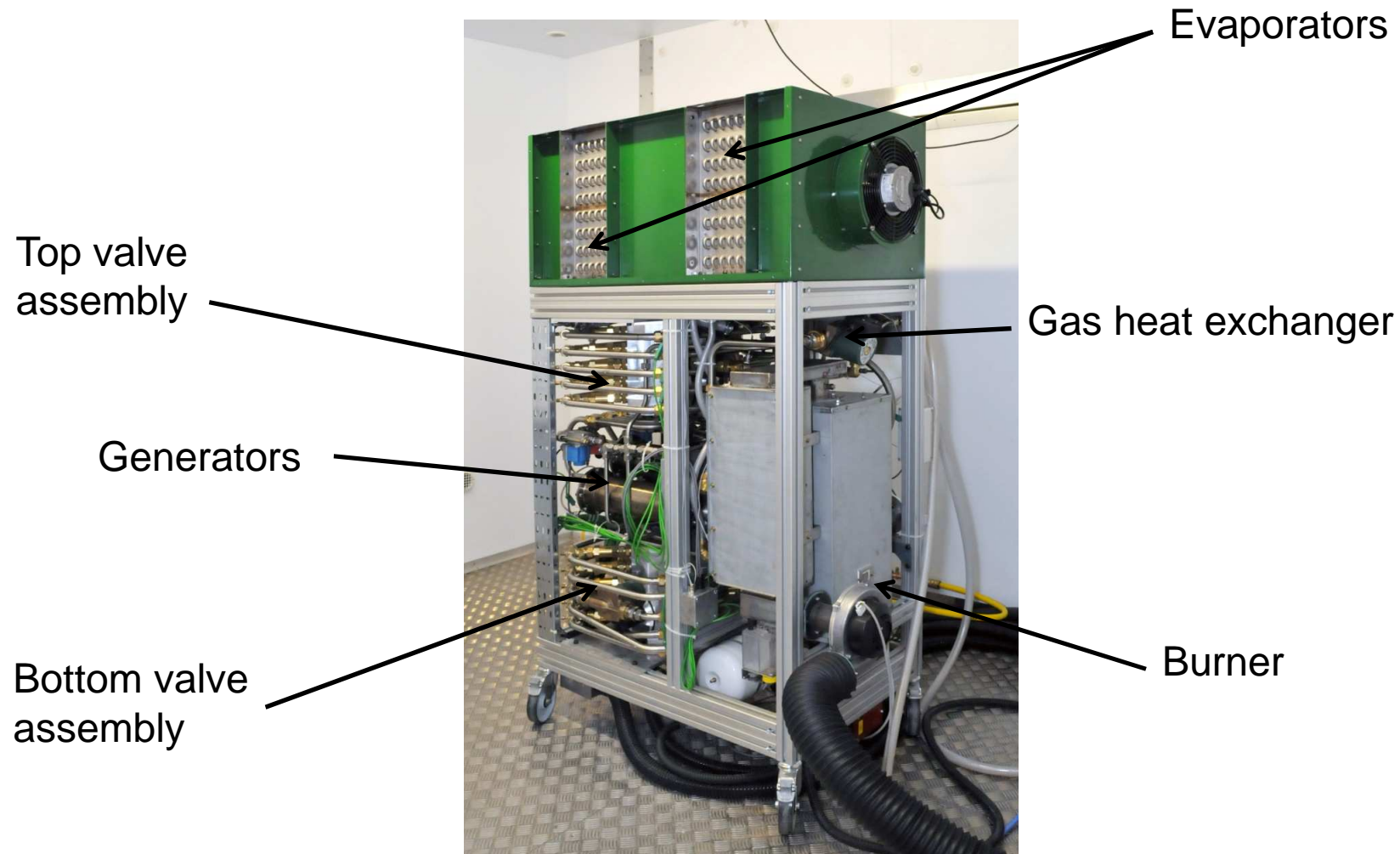
# Technology and component supplier to OEM



- Aiming to partner with global boiler OEMs
- We supply sorption technology and sub-assembly
- OEMs build and sell consumer products under their brands

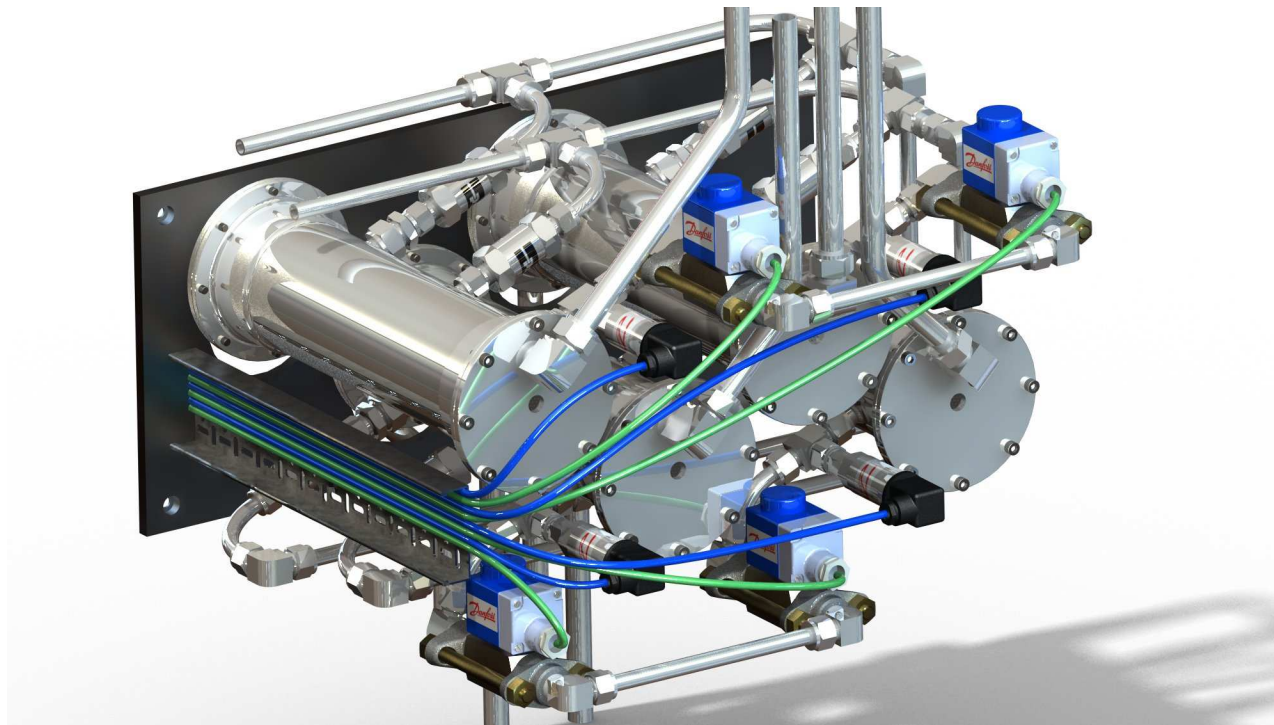
# Overall performance prediction





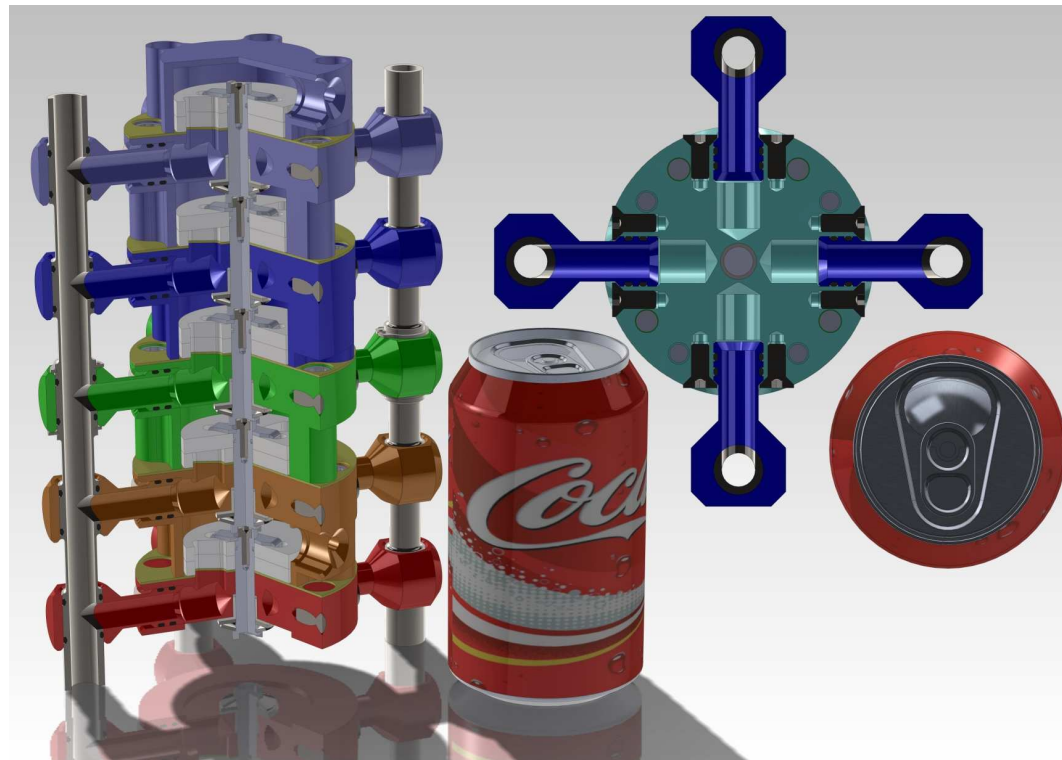
# Generator assembly

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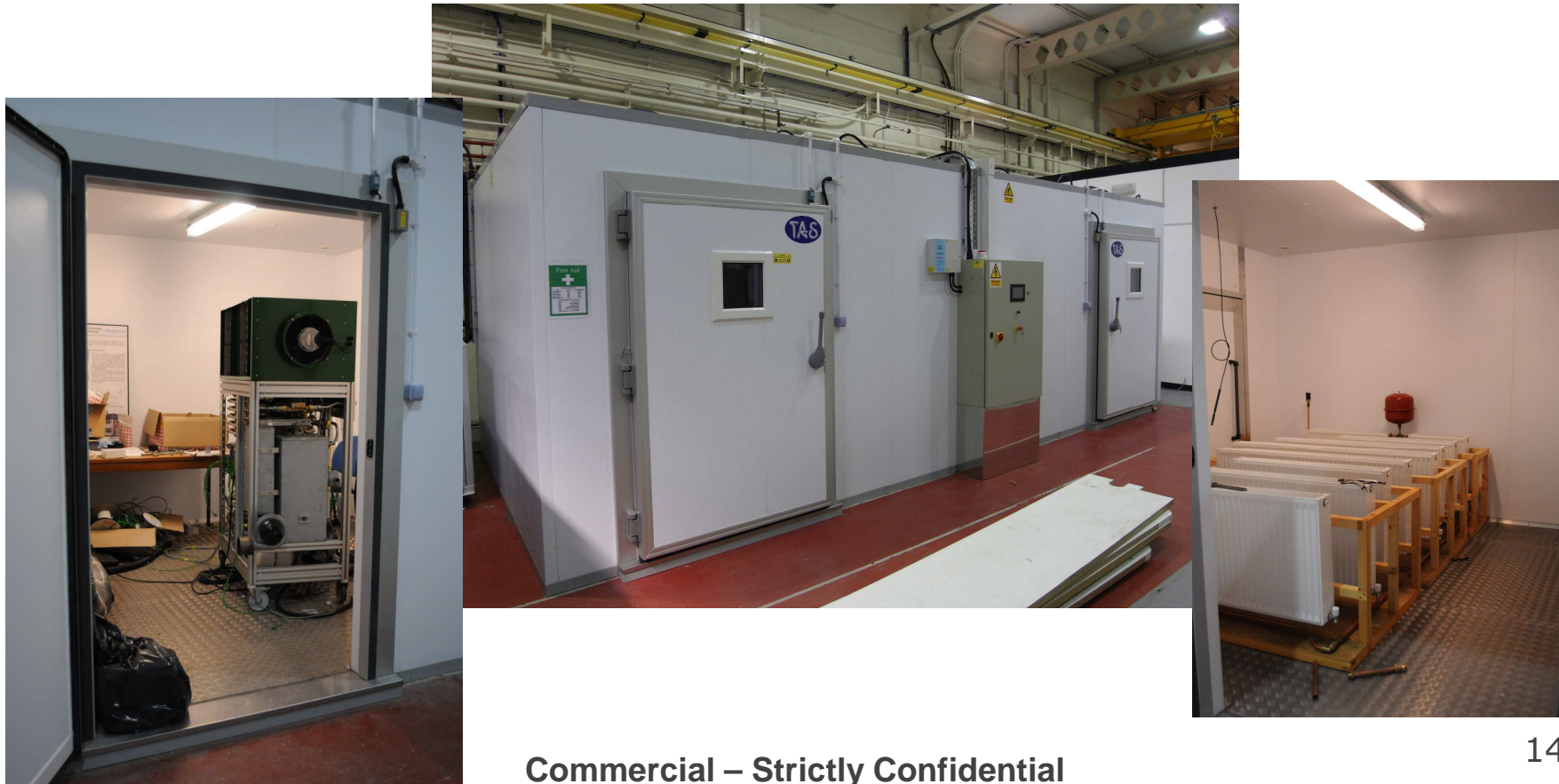
# Valve modelling

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# Environmental test chambers

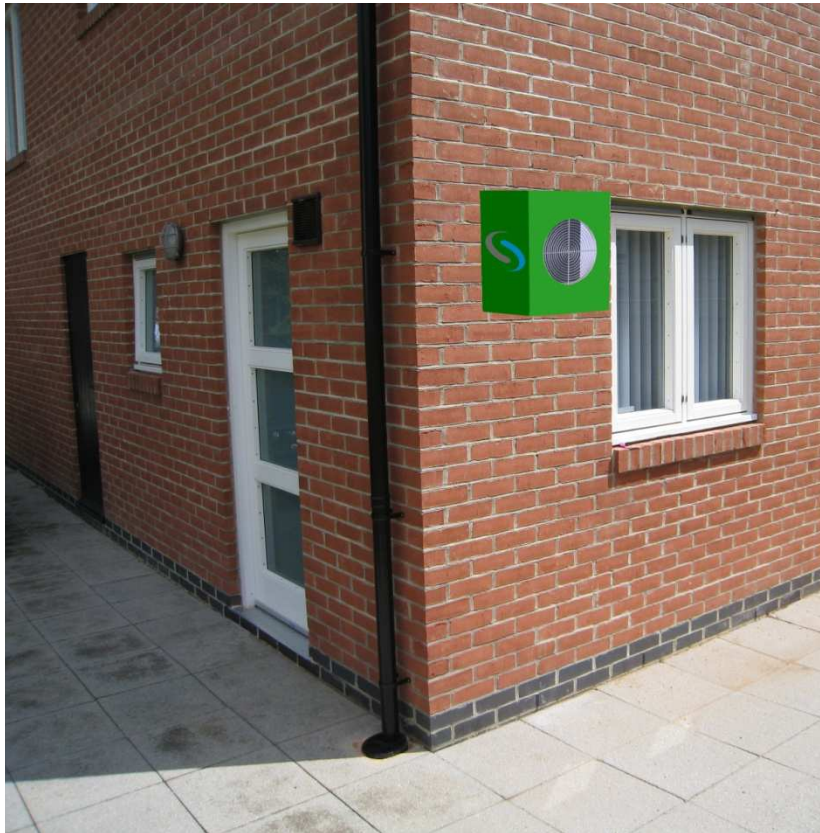
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## **Payback within 2 years from fuel savings**

- About twice cost of condensing boiler
- Similar installation costs inside house
  - But have to mount evaporator on outside wall
- Use existing boiler installers with same trade skills
  - No refrigeration skills necessary
- Fuel savings give pay-back in ~24 months
  - As low as 12 months for our newest technology
- Even more attractive with Government incentives

## In summary



- **30% fuel savings with more on the way**
- **Fits within standard wall-mounted unit**
- **Retrofit market using existing installers**
- **Payback in about 2 years, possibly much less**
- **Selling technology & components to boiler OEMs**



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[www.sorptionenergy.com](http://www.sorptionenergy.com)

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