

Affordable running costs for the tenant



MAKING THE RIGHT CHOICE

What is fuel Poverty?



Fuel Poverty is the interaction between low income, expenditure prioritisation, fuel prices, high expenditure on uneconomic fuels, poor insulation, inefficient heating methods and low capital expenditure on the building.

Source: SEAI 2002

Legislation Market Drivers for Heating



Current Legislation is driving:

- Primary Energy Reduction
- Carbon Reduction

For social Housing this has some implications.

“Energy Efficiency improvements and Running cost reductions are not mutually exclusive”



Running cost and access to fuel must be an equal priority to energy efficiency for social housing



There is also an inequity between Rural and Urban in the fuel allowance.

Rural Vs Urban – Retrofit Situation

Rural – Kerosene Oil

New Install 90% Eff Oil boiler
Cost per Litre: €0.86
Cost per Kwh Delivered: 9.05 Cent

Assuming SPF 3:1 Saving
Day Rate Cost: €0.067 **30%**
Night Rate cost: €0.034 **64%**

58% Average Saving

Urban – Natural Gas

New Install 90% Eff Gas boiler
Cost per Kwh: €0.072
Cost per Kwh Delivered: €0.08

Assuming SPF 3:1 Saving
Day Rate Cost: €0.067 **17%**
Night Rate cost: €0.034 **57%**

37% Average Saving

Fuel Allowance



- Fuel allowance is paid for 26 weeks
 - Totalling €520 for the period
- With an efficient heating system this can be more than the yearly heating bill!

Providing a stable comfortable living environment 24/7

Running Cost Vs Other Fuel Types



Fuel Type	Efficiency	Cost kWh
Coal	60%	7.59
Oil	90%	8.89
LPG	90%	11.04
Natural Gas	90%	8.28
Electricity Day	100%	20.00
Electricity Night	100%	10.00
Heat Pump	300%	6.70
Heat Pump night	300%	3.35

Depending on Fuel type and efficiency savings can range from: 25% - 80% per Kwh delivered

What can a heat pump do?



A heat pump:

- Can reduce heating Costs
- Is an efficient heating system/Method.
- Can Insulate from fluctuations in Fuel Price

Thus a heat pump can reduce the need for income prioritisation by reducing fuel costs and reduce the “Heat or Eat” Dilemma.

Benefits of Electrical heating



- Access to small quantities of fuel is possible, no fuel can be purchased in smaller quantities.
- Electrical heating through heat pumps is cheaper than traditional fossil fuels
- Fuel subsidy can be administered through electrical allowance
- Reduction in service costs for some housing providers.
- No Onsite Carbon Monoxide production
- No travel required to access fuel
- Cleaner than a traditional oil system

What change is needed?



- Revaluation of the monetary amount for fuel allowance based on residential fuel type
- Running cost needs to be a key consideration when upgrades to social housing take place and put as equal to energy efficiency
- Proven technology such as heat pumps need to be utilised in social housing to make heating affordable
- Life cycle costs need to be taken into account, initial install is only one cost



Case Study Examples

Case Study – Three Bed Council House



Installed in 2011

Replacement of Storage Heating and Open Fire

Equipment: 8.5Kw Ecodan & 180Ltr Cylinder

Result: Total Fuel Bill reduced by 65%

Carbon Dioxide emission reduced

From 9 tonnes to six tonnes.

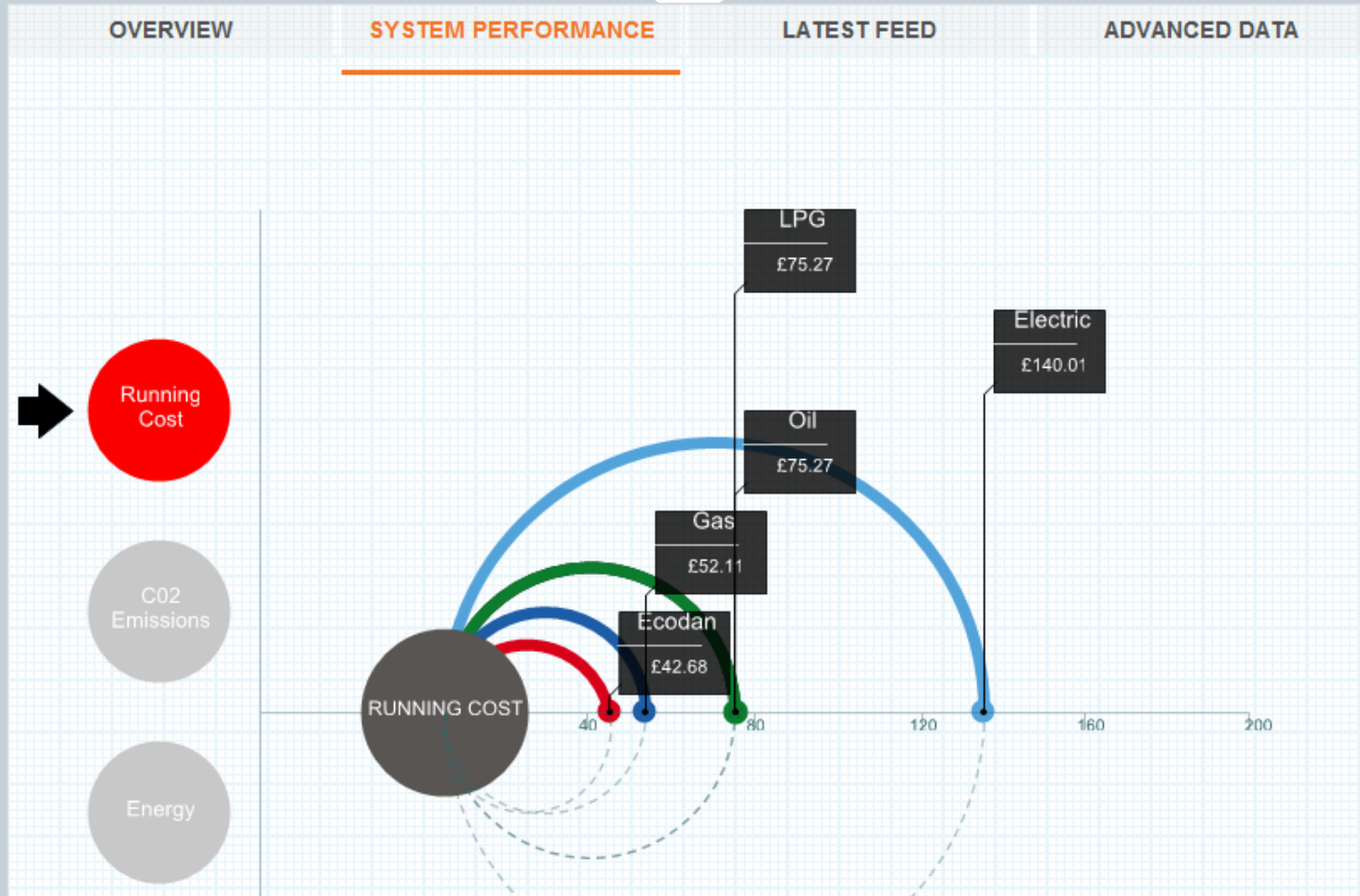


Overview of Test House

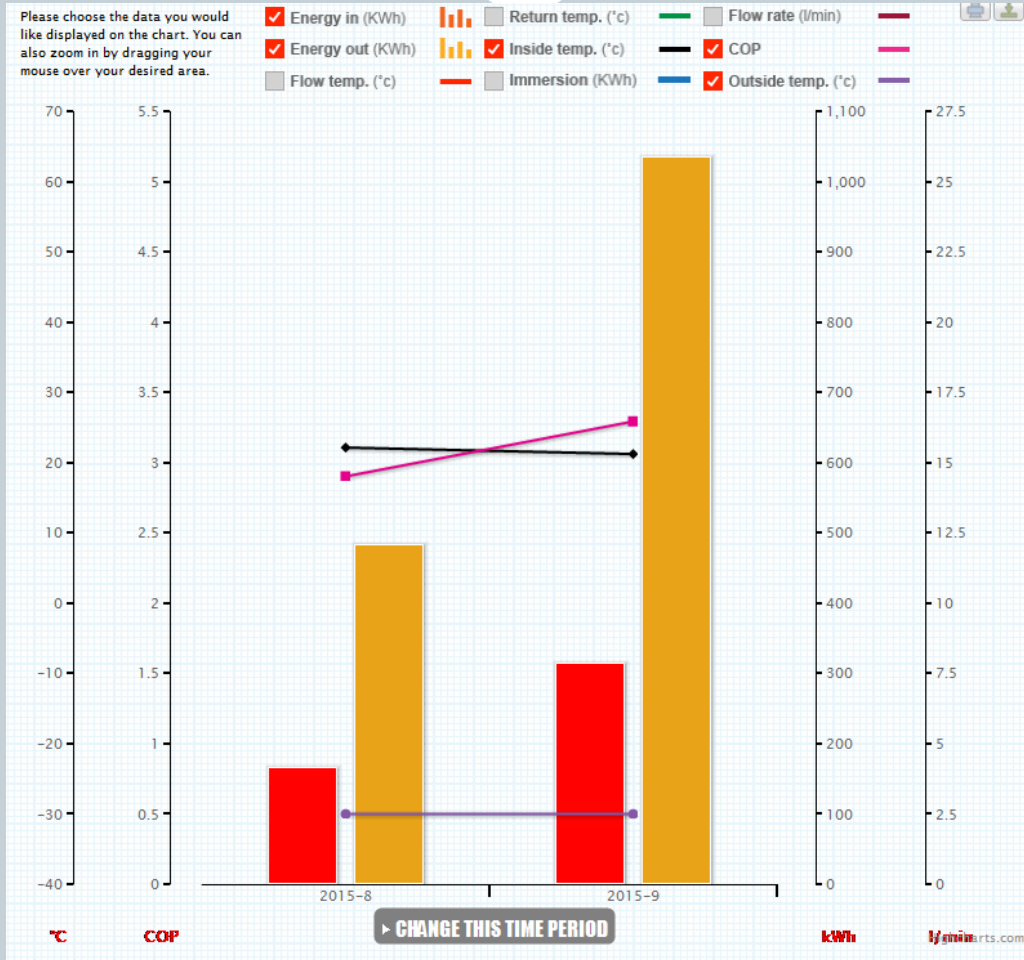


3 Bedroom/3 Bathroom 125M2 detached Bungalow
Solid Wall Construction
Original Heating System – LPG Boiler/Steel Radiators
New System – Ecodan Heat Pump and Steel Radiators

Running Cost Comparison 125m2 House - September 2015



COP/Int Temp/Ext Temp September 2015



Summary



- Access to affordable fuel must be a priority
- Stability of price is critical for low income families
- A life cycle view should be taken when choosing fuel types in social housing



Questions