The Price of Heat

Thomas Briault
Arup Energy Consulting
Agenda

Domestic Heat Prices

Non-Domestic Heat Prices

The Role of Regulation
Domestic heat prices

Consider total heat bill for a New Build flat CfSH L4
Domestic heat prices

Standing Charge for gas connection

<table>
<thead>
<tr>
<th>Typical Property Size</th>
<th>Studio Flat</th>
<th>1 Bed</th>
<th>2 Bed</th>
<th>3 Bed</th>
<th>4 Bed</th>
<th>4+ Bed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southern Research Centre</td>
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</tbody>
</table>
Domestic heat prices

Maintenance costs for parts and servicing of boiler

(zero excess)
Domestic heat prices

Replacement cost for boiler at end of life

<table>
<thead>
<tr>
<th>Total Heat Usage in Property [kWh/yr.]</th>
<th>1,000</th>
<th>2,000</th>
<th>3,000</th>
<th>4,000</th>
<th>5,000</th>
<th>6,000</th>
<th>7,000</th>
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</thead>
<tbody>
<tr>
<td>Studio Flat</td>
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<tr>
<td>1 Bed</td>
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<tr>
<td>2 Bed</td>
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<tr>
<td>3 Bed</td>
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<tr>
<td>4+ Bed</td>
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</tbody>
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Boiler Replacement [Avg. £153]
Boiler maintenance Contract [Avg. £228]
Standing Charge [Avg. £76]
Domestic heat prices

Fuel charges for gas over the year

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<th>Studio Flat</th>
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<th>2 Bed</th>
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<th>4 Bed</th>
<th>4+ Bed</th>
<th>Typical Property Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>£800</td>
<td>£700</td>
<td>£600</td>
<td>£500</td>
<td>£400</td>
<td>£300</td>
<td>New Build Flat to CfSH L4 Standard</td>
</tr>
</tbody>
</table>
Domestic heat prices

Average unit costs range from 27p/kWh to 12p/kWh over this range.
Domestic heat prices

Heat networks should offer a saving when compared to costs for gas boiler systems.
Domestic heat prices

Green Gas tariffs are expected to reach the market in the near future.
Domestic heat prices

Electrical Alternatives offer cheaper options for very low users, but come with more carbon emissions.
Domestic heat prices

Green Electrical tariffs come at higher cost, but offer a carbon saving
Domestic heat prices

Housing tenants cannot* be charged directly for the maintenance and replacement of heating systems

* Landlord and Tenant Act 1985
Non Domestic Heat Prices

Data is far harder to collect and varies with circumstance.
Non Domestic Heat Prices

Boiler maintenance likely to be an element of a larger maintenance contract
Non Domestic Heat Prices

Boiler replacement included in asset management plan and project capex schedule
Non Domestic Heat Prices

Fuel Costs makes up significant proportion of heating costs
Non Domestic Heat Prices

Heat networks should also be priced to offer a saving to non-domestic users when compared to costs for gas boiler systems.
• Consumers rarely consider total cost of heat
• Heat networks must offer a saving to customers
• Majority of cost to domestic is fixed cost
• Majority of cost to non-domestic is fuel cost
• Business cases for heat networks should be based on fixing the total heat revenues from customers and using the developer connection charges to provide the necessary return
Thank you

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