

## Identifying the Fair Share: Billing for District Heating

## Research Summary

**This research explored the experiences of social housing district heating schemes from both landlords' and residents' perspectives. Focusing on metering, billing and resident engagement, it highlighted very mixed experiences. Recommendations are provided for social landlords regarding new and existing schemes including how to manage and meter schemes, and advice on billing and engaging residents.**

### Background

District heating offers a solution to improve the energy efficiency of UK homes and contribute towards tackling fuel poverty and climate change. It can also help social landlords meet housing standards. However, managing schemes can be challenging and complicated, and central to a scheme's success is how residents are billed for the heat they use.

Social landlords must choose and implement an approach that ensures residents pay an affordable price for heat, whilst also ensuring the scheme is practical and financially viable to manage. To date, landlords have taken various approaches to billing tenants (and private owners). The most commonly used billing methods are: 'fixed fee' approaches – where residents are charged a flat fee, or 'variable rate' approaches – where residents are charged based on their heat consumption.

This research explored the experiences of social housing schemes with regards to billing and user interaction to identify lessons for other and future district heating schemes. The findings are particularly pertinent given new requirements placed on district heating

scheme owners by the Heat Network (Metering and Billing) Regulations 2014.

### Aims

The aim of this research was to explore the real and perceived challenges associated with the roll-out of district heating schemes in social housing that are centred around billing and user interaction with the technology.

The project also aimed to address these barriers through a series of recommendations and considerations for social landlords.



## Methodology

The research was carried out through:

- A literature review;
- A survey and interviews with social landlords;
- Interviews with metering and billing companies;
- A survey and interviews with residents of social housing district heating schemes;
- Data analysis of real versus modelled heat consumption in social housing district heating schemes.

## Research findings

### *Overall experience*

Social landlords and the residents of their schemes have had mixed experiences of district heating. The complexities of schemes meant that managing them was often challenging for landlords and in some cases, problematic. A minority of landlords had such negative experiences they stated they would not install district heating again. Most, however, had overcome challenges and it was generally felt that district heating was successful in providing residents with affordable heating once issues were resolved.

Challenges landlords experienced with district heating were related to technical faults, financial issues, user interaction, metering, billing approaches and overall management. A particular challenge highlighted was that one problem, particularly a technical fault, could have significant consequences. For example, a technical breakdown could lead to heat supply disruption and hundreds of resident complaints.

Most residents were satisfied with district heating. Three quarters preferred it to their old heating system, although in part this was likely

to be influenced by dissatisfaction of other heating systems such as electric storage heaters. 59% of residents thought their home was easy or very easy to keep warm with district heating and only 11% wanted to put their heating on for longer periods. However, these findings will have been influenced by the energy efficiency of their homes as well as the effectiveness of district heating.

Three quarters of residents estimated their annual bills to be between £201 and £800, which is relatively low compared to national averages. However, it was also acknowledged through the landlord research that some schemes on fixed fee were not sourcing sufficient income from residents and therefore prices may have been artificially low. Furthermore, only a third of residents considered their bills to be 'low' or 'very low'.

### *Billing and payment options*

Landlords had taken different approaches to billing and there was no consensus on whether a fixed fee or variable rate approach was optimal; landlords had experienced successes and difficulties with both. Fixed fee approaches were favoured for ensuring residents received an adequate level of heat and minimising concern about heating bills; variable rate approaches were favoured for helping residents save heat and pay only for what they use. Despite the different approaches taken to billing, similar challenges were often faced by landlords with both approaches including: difficulty setting prices, managing debt and disconnection, and high administration costs.

The research identified that residents had different preferences in terms of billing methods. Those on fixed fee billing were more likely to find their home easy to keep warm and their heating bills affordable than those on variable rate billing. However, this is perhaps not surprising due to the low prices of heat in some fixed fee schemes (as stated above).

Heating patterns did not necessarily follow that expected; for example, a higher proportion of residents on variable rate billing had their heating on all of the time compared to those on fixed fee. Overall there was insufficient evidence to identify whether the choice of billing method (fixed fee or variable rate) influenced heating pattern behaviour.

Residents' preferences of how they paid for their heat (e.g. prepayment, direct debit, credit billing and heat with rent) also varied. Prepayment was the option with highest dissatisfaction rates, but in contrast some residents preferred it as it allowed them to budget. Similarly, some of those on heat with rent payments disliked the fact they had to pay for heating over the summer months and would have preferred a prepayment method. Overall, the most successful approach is likely to be where residents were provided with multiple options, since preferences vary.

### **Heat meters**

Heat meters are required in district heating schemes to monitor heat use and in some cases, to bill residents. Overall, meters were considered useful although landlords had not always utilised the data available to monitor schemes. Furthermore, many had experienced problems with the meters including: transmission difficulties, residents tampering with them and high installation or maintenance costs. These challenges are particularly acute given metering requirements through the Heat Network (Metering and Billing) Regulations 2014. However, it is also expected that the new regulations may prompt the market to develop, ensuring better choice and quality of meters.

### **Management**

Social landlords had also taken different approaches to managing the billing of schemes: managing in-house or by a third party. Mixed experiences were evident across

both approaches. Some of those who managed billing in-house felt they had lacked expertise, capacity or a joined-up approach. The learning curve some landlords experienced as a result of managing projects had meant most problems were later rectified and future schemes may be easier to manage. Those who outsourced management were largely reliant on the quality of the contractor which reportedly varied, and some struggled to find a suitably experienced organisation.

### **Resident understanding, advice and engagement**

Throughout the research it was evident that many residents had a poor understanding of district heating; for example, residents did not always understand how the billing was set up or how to use the heating controls effectively. Some residents on fixed fee were unaware of how this worked and some on variable rate billing did not understand why unit prices were higher in district heating schemes compared to gas central heating. Most residents had received advice and whilst it was usually considered to be useful, many felt that it could have been easier to understand or more practical. This lack of understanding is likely to hamper the success of schemes.

A minority of landlords had consulted residents during the design and set up their schemes. For example, gathering resident preferences to inform the billing approach taken. These landlords felt consultation was successful in gaining buy-in for the scheme and in designing a scheme that would work.

## Recommendations

The following recommendations and considerations are made to social landlords in respect to future and current district heating schemes. These are intended to be flexible in recognition that schemes vary considerably (for example in their technical design, type of residents served, etc.).

1. Overall experience:
  - a. At the design stage, seek advice from a suitably qualified and experienced contractor to ensure the system is correctly sized. Set up a project team internally and identify clear lines of communication with external contractors. Draw on experience from other landlords and where possible carry out small pilots to trial equipment (such as meters or heating controls).
  - b. Set up appropriate repair and maintenance processes that ensure residents can report problems and faults, and that they are dealt with in an effective and timely manner.
2. Billing approach:
  - a. If using a fixed fee approach, minimise any negative effects of this method by discouraging over-use and providing advice on efficient energy use.
  - b. If a variable rate approach is used, set up processes on debt/disconnection and sign up to the [Heat Trust](#) customer protection scheme.
  - c. For price setting, seek advice from experienced landlords or contractors, review prices regularly and do not set standing charges too high.
3. Provide residents with as many payment options as is possible and the ability to switch payment options (e.g. prepayment to monthly).
4. Install good quality heat meters and ensure the installer is experienced and reputable.

Ensure the contractor repairing meters is familiar with the technology.

5. Choose whether to manage the billing schemes in-house or outsource based on organisational capacity, strengths and ethos, and details of the scheme such as billing method and size of scheme.
  - a. Those choosing to manage schemes in-house should ensure sufficient expertise and resources are available, and set up joined-up working across departments as soon as possible.
  - b. Those choosing to outsource the management should choose companies based on experience and credentials, and specify communication channels.
6. Resident advice is critical in district heating schemes. Advice should be accessible, easy-to-understand and where possible provided in practical formats. Advice should relate to the efficient use of heating, billing and payments.
  - a. Landlords should seek to carry out resident consultation wherever possible.
  - b. User friendly heating controls and meters should also be specified.

## Project information

Download the full report and appendices at: [changeworks.org.uk/resources/identifying-the-fair-share-billing-for-district-heating-report](http://changeworks.org.uk/resources/identifying-the-fair-share-billing-for-district-heating-report) and [changeworks.org.uk/resources/identifying-the-fair-share-billing-for-district-heating-appendices](http://changeworks.org.uk/resources/identifying-the-fair-share-billing-for-district-heating-appendices). Also available via: [eagacharitabletrust.org/index.php/projects/item/identifying-the-fair-share-billing-for-district-heating-in-hard-to-treat-properties](http://eagacharitabletrust.org/index.php/projects/item/identifying-the-fair-share-billing-for-district-heating-in-hard-to-treat-properties)

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