

Scrutiny Review

13th July

Communal Heating Systems



Introduction

- Overview
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- Disadvantages with communal heating systems
- New Build & communal heating
- Lifetime cost benefit analysis case study
- Risk management
- Forward plan
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- Conclusion

Overview

- Circa 4700 homes connected to communal heating system
- Preference by the council for retaining or replacing communal heating
- Opportunity to utilise energy from existing CHP plant / energy centre.
- i.e. Bunhill “Energy Centre” Combined Heat and Power Plant
- Heat generated from CHP pumped to local housing estates connected to Communal Heating Systems
- Help address targets set in the Energy Conservation Act 2000 to eradicate fuel poverty
- Help reduce levels of greenhouse gas emissions (34% of 1990 levels by the year 2020 and 80% by 2050)

Communal Heating Benefits

- Helps support council's fairness commission objectives included in the current Islington corporate plan.
- i.e. Decent, suitable and affordable homes
- i.e. Making homes easier to keep warm and more affordable to heat through the installation of communal heating systems.
- i.e. Help break the cycle of fuel poverty where a household has to spend over 10% or more of its income on energy costs.
- Estimates indicate between 7 to 10% of people in Islington living in fuel poverty. (The Evidence Hub)
- GLA analysis complete in 2012 indicated six Islington wards were the worst quintile for fuel poverty in London.

Communal Heating Benefits

- Generally recognised that communal heating in conjunction with decentralised energy schemes will provide a more economical source of heating and hot water than individual boilers .
- Paying a flat rate means these tenants can budget more easily helping to address the impact of fuel poverty on vulnerable and low income residents.
- The worry of heating costs is managed
- i.e. Heating & hot water costs are included in monthly service charge spreading cost across the entire year as apposed to just the winter months when there is a increased demand for heating.
- Communal heating system consistently used less energy than an individual heating system by a range of 7.5% to 11%.

Communal Heating Benefits

- Reduced risk of illnesses associated to condensation or dampness
- ie Condensation and dampness can have significant negative health impacts in particular for the very young, very old and those with long term health conditions.
- Consistent heating supply to properties on communal heating
- Opportunity to pass on savings obtained from bulk gas purchase to residents.



Disadvantages

- Significant up front capital investment costs.
- Potential to generate substantial bills for leaseholders living in the blocks where works are carried out.
- Difficult to provide a fair and equitable service where blocks vary considerably in terms of energy requirements.
- Balance to be achieved between service provided and energy costs and CO² emissions.
- Complex engineering projects leading to long lead in times
- Not the same level of individual control as there is with individual heating systems
- Can be subject to catastrophic failure creating hardship for residents connected to the communal system.
- Reaction times to breakdowns or failures can be slow due to the complexity of the infrastructure equipment

New Build

- LBI Planning Strategy –
- All new build developments are required to contribute to the development of decentralised energy schemes, including by connecting to current district heating networks where these exist within the proximity of the development.

Lifetime Cost Benefit Analysis Case Study

Communal V Individual Heating Systems

Despite communal heating systems requiring significantly higher up front capital investment their lifetime costs are lower than the option of installing individual heating systems.

Initial cost of installation, servicing and maintenance costs	Communal heating system		Individual heating system	
Year 0	£	1,094,311	£	605,000
Years 1-5	£	26,386	£	69,661
Years 6-10	£	30,146	£	79,587
Years 11-15	£	34,442	£	429,837
Years 16-20	£	193,400	£	216,854
Years 21-25	£	65,497	£	457,596
Years 26-30	£	71,902	£	135,598
Total	£	1,516,084	£	1,994,133
Cost per dwelling (110 flats)	£	13,783	£	18,128

Risk Management

- Maintenance & Capital Investment Programme
- Reactive and planned maintenance contract
- Boilers serviced and CP15 issued annually
- Monthly Planned Preventative Maintenance (PPM)
- Plant rooms connected to Building Management System (Trend System)
- Out of hours / Emergency team in place

Forward Plan

- 7 Year future programme of works
- Asset Management Plan - Process of prioritisation to identify future works.
- Joined up thinking with other programmes of work.
- Feasibility, condition assessment and lifespan criteria to identify need.
- Stakeholder involvement – future programmes

Asset Management & Communal Heating



ISLINGTON

- Benefits of asset management system
- Better inclusion from all stakeholders concerned
- Opportunity to avoid major breakdown failure
- Process to move work into capital programme
- Opportunity to review potential areas of risk with planned maintenance team

Conclusion

- Many advantages to communal heating systems
- i.e. Lower running costs,
- Help address commitment to CO₂ reductions
- Help address fuel poverty
- Help budget concerns for vulnerable & low income groups.
- Need to listen to resident groups and tailor service to meet resident requirements
- LBI communal heating policy to reflect resident requirements