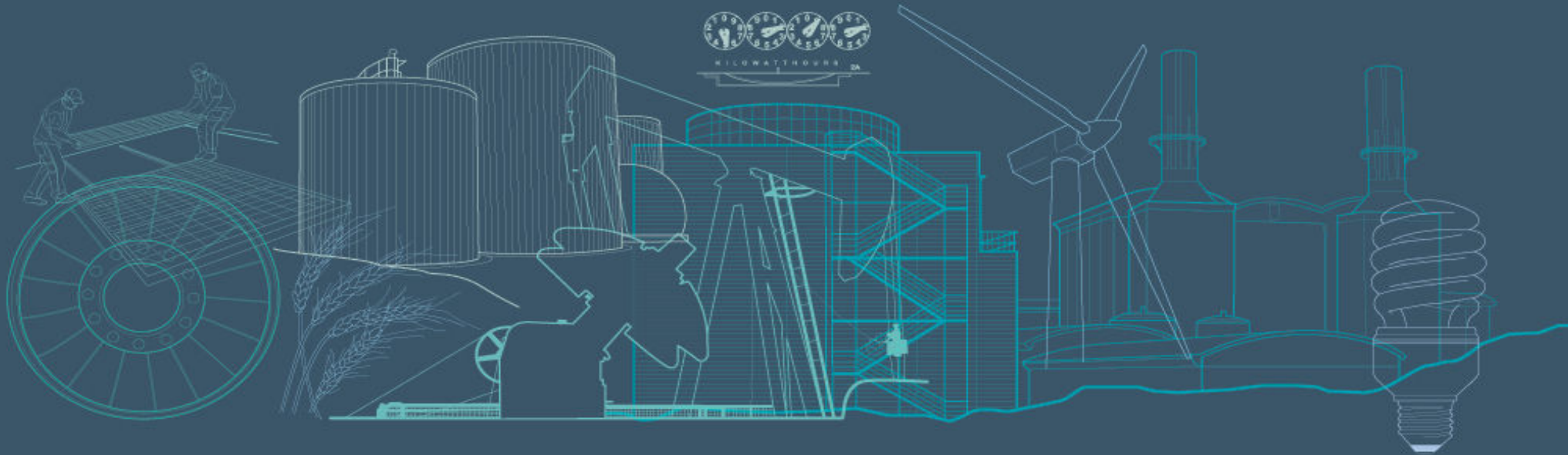


# Heat Networks An End User Perspective

**Savills Energy<sup>+</sup>**  
Our services



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# Heat Network Metering & Billing Regulations 2014

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The Savills logo consists of a yellow square above the word "savills" in a red, lowercase, sans-serif font.

savills

**A presentation to provide an overview of –  
The Heat Network (Metering and Billing) Regulations 2014**

# Heat Network Metering & Billing Regulations 2014

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- Savills manage on behalf of landlords both Communal and District Heat Networks
- WE KNOW WE HAVE CLIENTS WHO ARE IN BUT.....
- We manage over 3,000 buildings
- No one source of information to establish who was in and who was out
- Not one source of information that enabled us to fill in registration.....
- We are also managing the process for other 3<sup>rd</sup> parties.....

# Heat Metering & Billing – Initial Issues

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- Landlords did not know how many of their buildings are subject to the regulations
- Landlords wanted an flat rate estimation of costs
- The portfolios are constantly changing, stock bought and disposed of on a regular basis
- Landlords want solutions not issues

# C/O Obligations of Heat Supplier

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## Registration Process, how to Filter Down the 3,000 starting point....

- Look at those that have FM contracts
- Work with the Surveyors and the Regional Facilities Managers
- Filtered list of 500 sites
  - Looks like 252 Commercial Communal Heat Networks
  - Looks like 46 Residential Communal Heat Networks
  - Looks like 11 District Heat Networks

# C/O Obligations of Heat Supplier

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## The Questions around registration

- What happens if we know a building is in, register it, but don't have EVERY Question answered.....
- What happens if we “inherit” a building in December 2015 that is subject to the regulations?
- What happens if we “inherit” a building in January 2016 that was not registered?

# Obligations of Heat Supplier

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- To meet the obligations of the regulations the heat supplier must –
  1. Undertake Assessments (Communal heating 31<sup>st</sup> December 2016)
    - Assess the viability of heat metering to its final customers
  2. Install Metering (Communal heating 31<sup>st</sup> December 2016)
    - Meter heat network at the supply to each final customer
    - Ensure 'control devices' installed for final customer to vary consumption (i.e. thermostatic controller)
  3. If not viable then - Install Heat Cost Allocators
    - Install heat cost allocators, thermostatic radiator valves and a hot water meter
  4. If not viable then - Use Alternative Methods
    - Use metering to determine the energy use
    - Re-assess every 4 years to determine viability of metering and control

# Obligations of Heat Supplier

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The assessment of viability is down to the determination of cost effectiveness and technical feasibility –

## Deemed Cost Effective if -

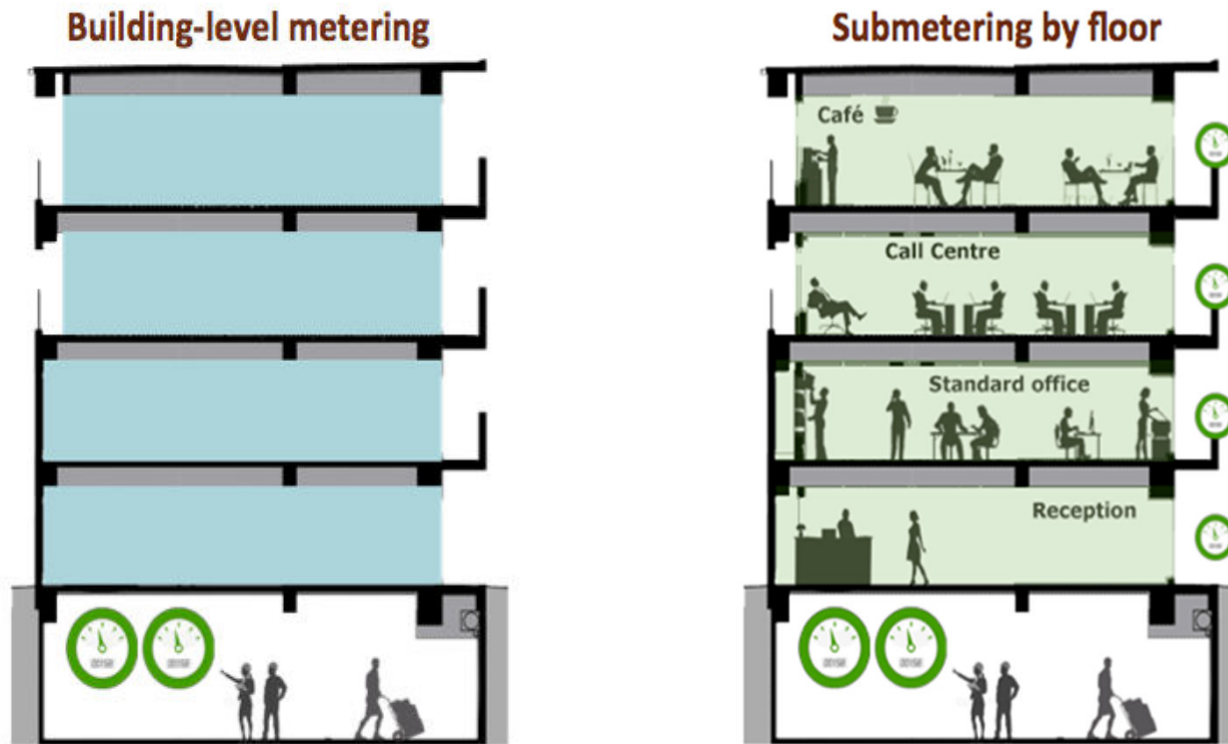
- the saving over 10 years are greater than the upfront cost (NPV @ 9% discount rate)
- Saving estimate >10% heat energy demand benchmark set out by DECC (based on but not quite TM46)

## Deemed not to be Technically Feasible if -

- Heat distributed by means other than hot water
- **More than 1 entry point of services to final customer????**
- Cooling distributed by fluid which is not water
- **The viability points above vary if the building mainly consists of dwellings.**



# Simplistic view of the Regulations



# Minimum Sizes

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- Minimum size of office = 1,360m<sup>2</sup> @ Gas price 3p/kWh, 1,000m<sup>2</sup> @ Gas price 4p/kWh
- Minimum size of retail = 960m<sup>2</sup> @ Gas price 3p/kWh, 720m<sup>2</sup> @ Gas price 4p/kWh
  - In reality you will need to have a feasibility study to assess if you are close to benchmarks....
  - Minimum floor area + 10% for South East, -10% for Scotland
  - It will also vary for occupancy....

## Assumptions

- Heating System Efficiency 80%, No Gas price inflation, 10% savings off benchmark,
- 9% Interest rate for NPV

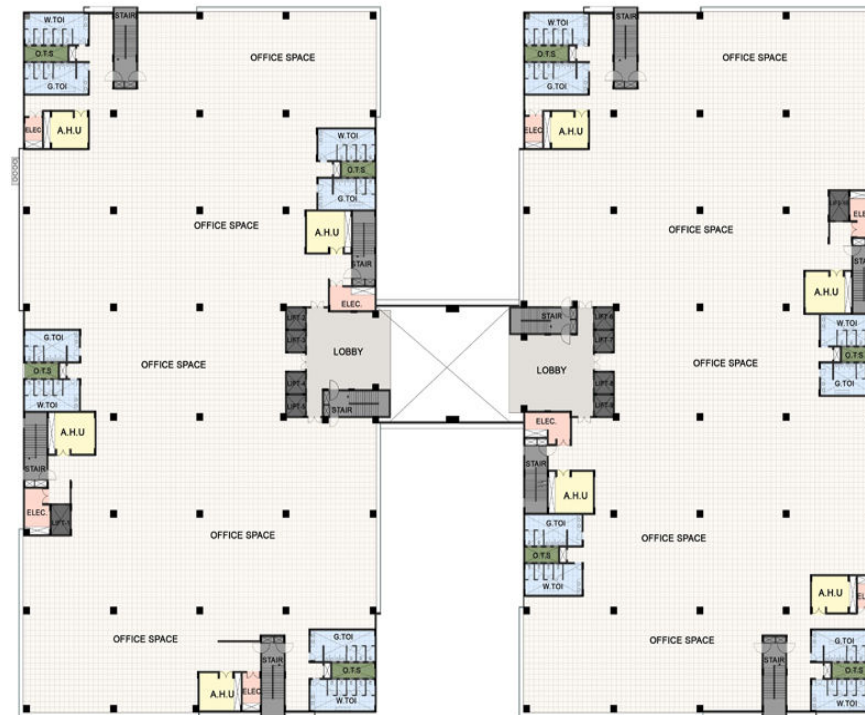
# Test Case – 2 floors, 1 tenant



## The Heat Network (Metering and Billing) Regulations DON'T APPLY

- The main gas meter would be used to provide billing

# Test Case – 2 floors, 2 tenants



## The Heat Network (Metering and Billing) Regulations DO APPLY

- Heating and cooling meters fitted to entry point in risers

# Test Case – 2 floors, multi tenants



## The Heat Network (Metering and Billing) Regulations MAY APPLY

- Heating and cooling meters fitted to Individual AHUs, depending on the size of the office

# Heat Allocators and TRVs



- Measures heat, and time, not flow rates
- Can end up as an expensive option for commercial offices
- Heat Allocators have issues,
  - They cannot be calibrated
  - They are non linear, you may undercharge at low heat outputs
  - They may be better to apportion billing

# C/O Obligations of Heat Supplier

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## **The questions around Meter Installation and Feasibility Study**

- What happens if there are more than two entry points to an end user (such as heat delivered to two separate risers on the same floor – say one on the North side, one on the South of an office building?)
- What happens if the heat is distributed to the final user as water, to an AHU, and the economic feasibility test is not met? How do we install a heat cost allocator?
- What happens to the lost (in distribution) heat? Who pays and how?
- Do Landlords and or tenants want sophisticated billing, based on time (i.e. if one tenant demands heat 24 hours a day, do they pay more for that availability, given that base load costs increase, if not delivered heat?)

# How Can Savills Energy Help?

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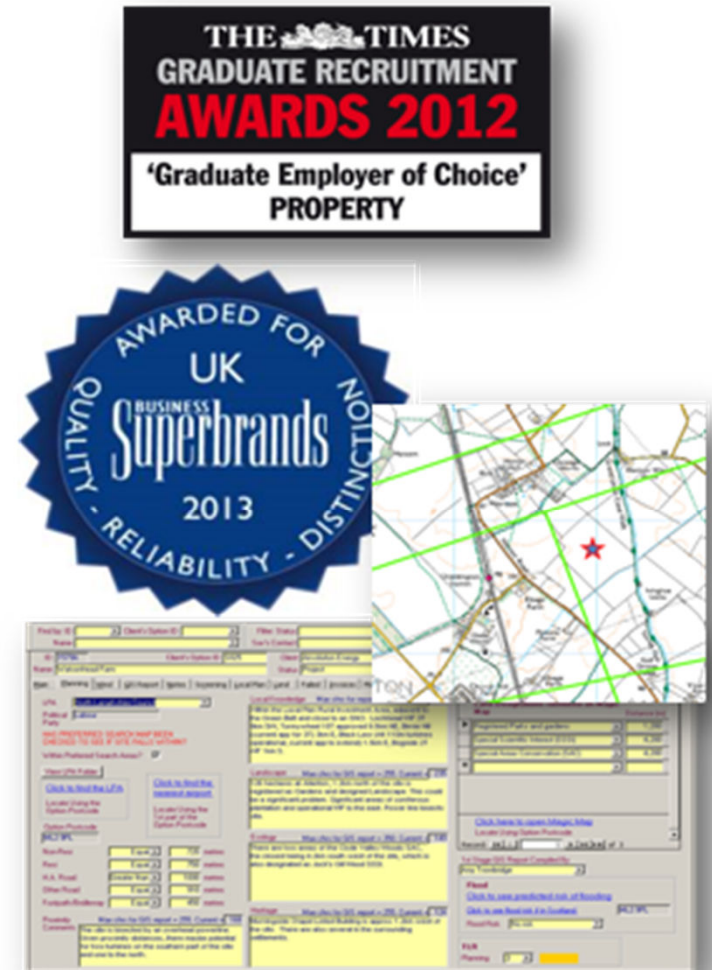
- Savills Energy Services can offer –
  - Initial scoping to assess the validity of the regulations to you
  - Full Assessments of obligations as a Heat Supplier
  - Full report detailing route to compliance
  - Support solutions to compliance delivery
  - Sensible advice on billing routes



# How Can Savills Energy Help?

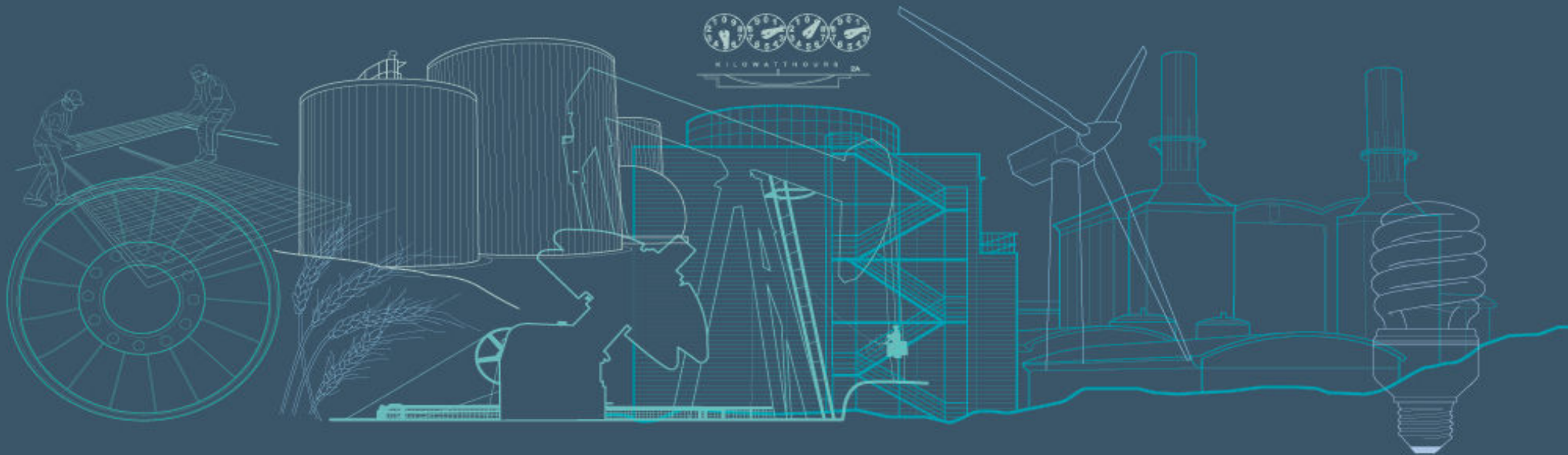
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- Leading brand
- Dedicated Energy professionals with over 20 years experience
- 94 offices throughout the UK, 500 globally
- 85 acquisition agents / 25 Project Managers
- Over 2 Million acres of land under management in the UK
- Over 950 Commercial Properties under management in the UK
- Powerful network of contacts
- Highly experienced, specialist, multi-disciplinary team
- Excellent GIS / database project management system



# Questions???

Savills Energy<sup>+</sup>  
Our services



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