



TIME TO HEAT



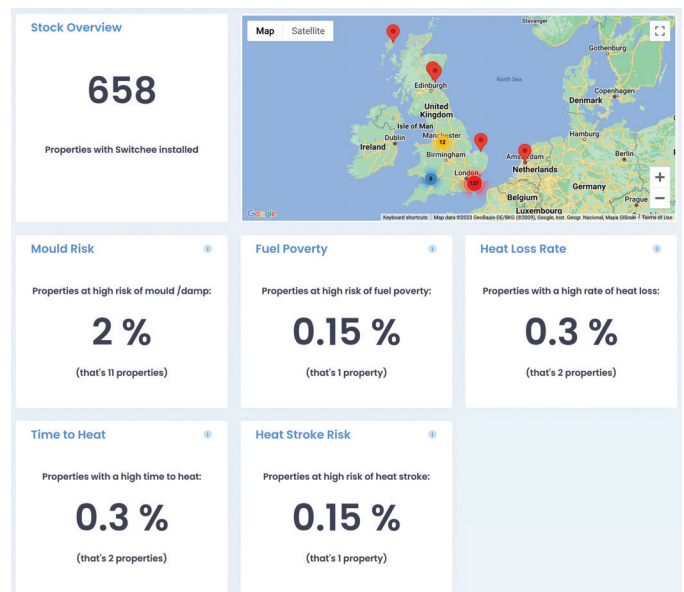
WHAT IS TIME TO HEAT?

Time to Heat (TTH) is the time taken for a property to gain 1°C of internal air temperature, when the heating is turned on.

It is a measure of the actual thermal performance of the property. It indicates the effectiveness of the heating system and suitability to the property in which it is installed, based on actual measured data.

An average home may have a Time to Heat of 1.25 hours to gain 1°C, whereas a really inefficient home can take 4 hours to gain that same 1°C.

Switchee uses our smart device data to measure the rate at which each property warms whenever the heating comes on. We calculate an average over the most recent 40 days of data.



HOW IS TIME TO HEAT MEASURED?

A long time period to gain 1°C, is considered a high Time to Heat and a short time period is considered a low Time to Heat. The quicker it takes to gain 1°C, the better for the property.

High Time to Heat: These properties gain heat the slowest, taking more than 2 hours 30 minutes to gain 1°C of room temperature. This category corresponds to the worst-performing 20% of properties.

Medium Time to Heat: These properties take between 1 hour and 2 hours 30 minutes to gain 1°C of room temperature. They correspond with the 55% of properties that performed closest to the Switchee average.

Low Time to Heat: These properties gain heat the quickest, taking less than 1 hour to gain 1°C of room temperature. This group corresponds with the best-performing 25% of properties.

WHY IS MEASURING TIME TO HEAT FOR YOUR PROPERTIES IMPORTANT?

Highlight properties with under-performing heating systems

By identifying those properties with the worst (high) Time to Heat, we can identify if a heating system is not performing. This will help inform your servicing scheduling for boilers, radiators and heat pumps.

Highlight properties most in need of retrofit improvements

The Switchee dashboard will highlight those properties with the worst (high) Time to Heat, suggesting the fabric of the home or heating system may not be performing well. This will simplify your prioritisation process by informing you which properties and residents are in most need.

Assess the impact of retrofit projects and disrepair improvements

By measuring Time to Heat before and after property improvements are made, you can clearly see the impact they have had on the potential for the home to gain heat.

Compare properties in your housing stock

You can compare and group properties in your portfolio to learn what it is that these have in common. It could be the archetype, orientation the property is facing, weather in the local area, location within the UK.

HOW DO WE CALCULATE TIME TO HEAT?



We take internal temperature, external temperature and heating usage into account, to assess the performance of each home. Our analysis minimises the impact of changing weather patterns, solar gain and day-to-day changes in occupancy patterns.

Time to Heat is influenced by:

- Differences in the type of heat source installed. e.g. gas boilers are able to deliver heat more quickly than heat pumps.
- The design and maintenance of the heating system. The size and position of radiators, whether radiators have been bled, if radiator valves are sticking or closed and the build-up of “sludge” in radiators.
- How suitable a particular heating system is to the property in which it is installed (larger properties need heating systems with a larger capacity, heat pumps will typically need larger radiators).
- Differences in insulation.
- The ventilation of properties, including the blocking of radiators with furniture.
- Other sources of heating in use.
- The location of the thermostat within the property. e.g. directly above a radiator, or far from any source of heat.

WHAT IS YOUR HOUSING STOCK'S TIME TO HEAT?

Get in touch with your Switchee today to review the Time to Heat of your housing stock.

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For more information on time to heat, contact our team today.