Pioneering: Weather compensation, carbon flexing and demand diversification services

Case Study: Trellick Tower

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HeatSage, Connected Response's smart electric heating control technology, was developed to improve the heating experience and lower the bills of households reliant on electric storage heaters and hot water systems.

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The Challenges

- Improving the heating experience of the 30 leaseholders and 187 social housing tenants in the iconic, brutalist Trellick Tower designed by Hungarian architect, Ernö Goldfinger, the inspiration for Ian Fleming's gold smuggling villain of the same name
- Charging storage heating at times when grid carbon intensity is low
- Harnessing the flexibility of electric heating and hot water loads to benefit consumers and networks

The Solutions

Weather compensation

- **HeatSage** smart electric heating controls installed in Trellick Tower's 217 flats. **HeatSage** facilitated the dynamic charging of electric storage heaters and hot water systems; the result was a 35% reduction in energy consumption
- Heaters charged in line with tomorrow's local temperature forecast

Carbon flexing

- 30 Trellick Tower households volunteered to take participate in the UK's first real-world carbon flexing trial in March 2024. In the CarbonFlex project we heated the resident's storage heaters at times when the grid carbon intensity signal was low
- Carbon savings over the period of the trial were 15%. Residents reported no impact on their heating or hot water experience

Demand Diversification Services (DDS)

- Connected Response is collaborating on a major DDS test project with a Distribution Network Operator (DNO)
- The **HeatSage** technology platform, now installed in over 12,000 UK households, provides the DNO with access to a substantial load which can be dynamically controlled to help balance energy supply and demand

Temperature and humidity sensor

How does HeatSage work?

HeatSage analyses two variables to optimise the low-cost charging opportunities provided by a tariff. This radically enhances the heating experience for each tenant.

The variables are:

- The tenant's heating preferences
- Tomorrow's local average temperature

Installation of **HeatSage** is straightforward, with minimal disruption to tenants.

It consists of:

- A small **temperature and humidity sensor** in the tenant's living room
- A **smart electric heating control** on the tenant's meter board

Smart control

Next steps

Martin Rinvolucri and Felix Wight from Connected Response are ready to help you explore how HeatSage could benefit your tenants:

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