

Heat as a service: what and why

Heat as a service – HaaS – provides consumers with thermal comfort rather than just kilowatt-hours of energy. The energy supplier also brings expertise in improving the energy efficiency of homes, heat production, energy generation and storage.

HaaS offers a viable solution in a fragmented market where:

- Homeowners don't have the knowledge, skills and initial capital to make energy efficiency improvements.
- They want to be affordably warm but are agnostic about the energy source.
- The HaaS proposition is that consumers buy 'comfort' rather than 'energy' from a single source service provider who understands energy wastage and efficiency, can design and deliver effective measures, and takes responsibility for the building's performance for a set/controlled cost.

HaaS at a glance

Major energy and cost savings, fast

- Comprehensive efficiency assessment and targeted improvements to deliver a step change in performance

Easy and affordable access

- Integrated 'total' service, provided by contracted HaaS companies: all required energy efficiency expertise and skills provided by a single supplier – building fabric (draft exclusion, insulation, double glazing), boilers, heat pumps, radiators, controls, solar photovoltaic generation and energy storage
- Up-front capital cost covered by the supplier and repaid over the lifetime of the customer contract

A route to low carbon heating at scale

- Enabling the shift from fossil fuels to renewables while reducing overall energy demand

90%

of customers involved in the 2019 Bristol HaaS trial continue to use it¹

85%

of people signed up to a HaaS heat plan will consider replacing their existing heating system with a better alternative²

50%

of all homeowners offered HaaS tried it out³

23%

cost saving: smart storage heaters can cut annual energy bills by nearly a quarter⁴

What HaaS could do for:

Consumers

- Making low carbon heating simple and accessible
- Improved control over cost and comfort, eg through fixed prices and warmth guarantees
- Addressing fuel poverty and social inequality by reducing the cost of heating, defraying the up-front costs over the contract lifetime, and targeting help (subsidies) for those struggling to pay
- Incentives and support to adopt energy-saving behaviours

Industry

- Responsibility for energy efficiency sits with specialist HaaS providers able to manage all aspects of performance
- Providers benefit from savings
- Opportunity for energy trading within a flexible market
- Potential for government support
- Rapid cycle of learning, improvement and efficiencies as providers gain experience, informed by energy use data
- Opportunity for existing utility providers to innovate and diversify, and for new HaaS specialists to enter the energy market
- New commercial models, incentives and rewards

The environment

- Accelerated uptake of energy efficiency opportunities and reduced use of primary energy
- Accelerated shift in the balance of supply towards low carbon fuels, assisting the transition towards net-zero

Potential barriers

- Many housing types are hard to retrofit
- Energy market instability or price inflation
- Uncertainty about up-front costs and finance mechanisms
- Introduction of future unforeseen government regulations
- Climate risks such as anomalously cold winters or hot summers
- Customers' concerns about the long term strength and security of HaaS and their protection rights in the event of supplier, technology or market failures
- Customers' potential unwillingness to enter long term contracts in which the provider has total control

1. es.catapult.org.uk/case-study/bristol-energy-heat-plan-trial
2. es.catapult.org.uk/case-study/bristol-energy-heat-plan-trial
3. es.catapult.org.uk/report/the-potential-of-heat-as-a-service-as-a-route-to-decarbonisation-for-scotland/
4. www.iottechexpo.com