

Heating Swaffham Prior

Village Meeting FAQs | Thursday 25th March 2021

1. Who does the Heat Trust represent?

The Heat Trust represents customers and guidance for heat supply. It is an independent not for profit. <https://heattrust.org/>

2. How does the Heat Trust enforce the regulations it proposes?

When a heat supplier registers their heat network(s) with Heat Trust, it agrees to abide by the Scheme Rules and Byelaws.

3. Is the cost of the installation works not prohibitive? I understand the groundworks are extensive.

The cost of the heat network is not insubstantial as you suggest but when costed against individual air source heat pumps for homes and oil boilers comes out as a better proposition for customers overall in the long term.

4. Your slide says the guarantee is of a Maximum of 72 degC at zero, not a minimum. Which is it?

A minimum of 72degC is guaranteed at 0degC

5. What if the air temp is below zero? will 72 DegC still be met?

Yes. The air source heat pump can still achieve 75DegC flow at 0DegC air temperature, the ground-source heat pumps would take the lead at temperatures below 0 DegC. The performance of this plant is less affected by air temperature.

6. My existing boiler is a combi, hence no heated water tank. How would this be addressed?

The Heat Interface Unit to be installed in each home is similar to a combi boiler in that it also has a small water tank inside and can deliver instant hot water.

7. Does the standing charge mean that units are replaced and serviced at no additional cost when they wear out?

Yes, servicing of the Heat Interface Unit and replacement when required is covered within the tariff costs.

8. There must be a minimum number of homes signed up to make the scheme viable to start. How close to that figure would we be if all 90 surveyed homes signed up?

Our business case is looking for 160 homes to sign up during the first year and that this will increase over time as residents oil boilers come to end of life. We are also in discussion with Sanctuary Homes and the school to connect to the system.

9. If an oil boiler is 85% efficient, what is the efficiency of the HIU?

This can't really be compared in the same way, as we're not converting energy, just exchanging it. The heat lost in the exchange process is negligible and thus, from the end customer's perspective, it's 100% efficient.

10. I'm puzzled by the transfer to electricity pricing.

For the first 5 years of the project, the variable energy price (unit price per kWh) will vary in line with oil price changes. Between years 5 and 10, there will be a gradual change from adjusting our prices in line with oil price changes to adjusting it in line with electricity price changes. After year 10 our prices will vary in line only with electricity prices.

Our price will be tracked against oil/electricity price changes in the Consumer Price Index, meaning that the energy price will go up or down in line with the price inflation or deflation of oil/electricity. Put simply, it is the price changes that will be tracked, not a match on the unit price of electricity (see also answer to Q. 15).

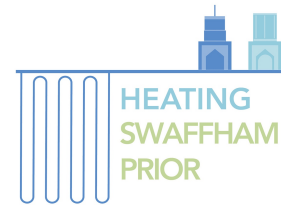
11. Surely the comparison to electricity prices would need to be at the most half the unit price of electricity, as the alternative heating system is air source heat pump which will provide 2 - 3 units of heat energy for every single unit of electricity used?

The starting tariff should be comparable with oil, as this is the fuel relevant to most households within the village. Government is looking to stop fossil fuel heating of homes to cut greenhouse gas emissions and deliver its climate change commitments and targets. Government forecasts that off-gas communities (such as Swaffham Prior) will be heated by electricity mainly through heat pumps such as this scheme. The reason for shifting to electricity over time is that the carbon footprint of the electricity system is rapidly reducing with the expansion of renewable electricity generation. Eventually the project will follow the price changes of electricity (as explained in Q. 10 above).

12. What would the unit price be now, if it was based on electricity instead of oil?

Electricity prices vary considerably depending on the type of tariff, time of day and supplier chosen. However, current unit rates for a standard domestic tariff would be in the region of 18-20p/kWh, including VAT. This is considerably greater than the unit rate for the heat network (5.15p/kWh). Please note: If a house was solely heated by electricity without a heat pump, it would be expensive. With heat pumps, less electricity is needed as the heat pump produces 2-3 kWh of heat from every 1 kWh of electricity.

13. As part of the infrastructure building works, can/will fibre be installed to enable the village to benefit from fast broadband?



The aim is to install fibre ducting into the trenches of the heat main to allow a fibre broadband supplier to offer households fibre connectivity for those that connect to the heat network. The viability of this business case is still subject to discussion.

14. We urgently have a condemned boiler and need to have a new one before next year costing us a lot of money. Can we recoup this money by selling the system that we have installed this April?

Households will be given the option to retain their disconnected boiler and oil tank to sell on the secondhand market to recoup any residual value. It is the homeowner's choice whether to keep their oil boiler and tank and, if they do so, it is their responsibility to organise the sale and collection.

15. On electricity price - please can you advise how the price we pay is calculated from CPI?

As noted in the response to Q10, the unit price for heat will vary in line with future changes in CPI (initially the liquid fuels component of that and then later the electricity component). Thus, if the CPI component increased by 5%, the unit price for heat would also increase by 5%. This means there will never be a convergence of the actual prices, i.e., the unit price of heat will always remain much cheaper than the unit price of electricity.

16. Can the Heat Interface Unit be installed outside?

We are aware from early surveys completed in some properties two summers ago that there are some homes in the village with external boilers. Unfortunately, we have not been able to source a manufacturer that makes heat interface units suitable for external use. However, as the heat interface unit will be smaller than many of these boilers, there may be other locations that are suitable within the home.

17. Can the existing boiler be retained as a back-up, presumably with the necessary valves to allow switching, in case of heat supply issues?

Households will be given the option to retain their disconnected boiler and oil tank if desired. There are lots of performance guarantees present in the customer contract so heat supply should not be an issue once the system is fully commissioned, but if it is there is appropriate support available.

18. How much damage will be done to property during installation eg: pulling up our drive, kitchen floor?

Every home will require a pre-construction survey to assess what works will be required in detail. A works agreement as part of the customer contract that sets out all works and making good.

19. Like most people, we have a hot water cylinder tank at present which stores our hot water. Will this need to be removed?

No – we have two options available, one which replaces ‘combi’ type boilers, the other that replaces ‘system’ type boilers. The latter would be used in your case, unless it was apparent that conversion to a ‘combi’ type arrangement would be cost effective (and acceptable to you). Our general preference is to deploy ‘combi’ type HIUs, as it is more efficient and provides better controllability of the network. However, we recognise that conversion may, in some cases, be cost prohibitive, or simply unacceptable to the end customer.

20. How future proof is the heat network technology you are using and what will you do when better options are available in the next 5-10 years. What options would you do to invest in the better technology.

The system has three major components. The energy centre with the heat pumps, the heat network with the buried insulated pipes and the heat interface unit installed in the home.

Heat pumps are a proven (not new) technology which have been getting incrementally better and more efficient in recent decades. However, if heat pump technology improved exponentially, one of the benefits of this system is that existing equipment will be replaced as part of its lifecycle. Should a better technology emerge than heat pumps the same would apply. The heat network itself, is also a mature technology, comprising of insulated pipes. It is unlikely that this will be superseded by something new in the foreseeable future. For the Heat Interface Unit, these are scheduled to be replaced more regularly and any technological improvements will come through the lifecycle replacement process.

21. For people who rent their homes where the landlord is responsible for maintenance and replacement of the boiler, is the standing charge going to be an additional expense for them if it is to be paid by the tenant?

The apportionment of charges is subject to agreement between the landlord and tenant. The Council will enter into an agreement with a landlord to connect their building(s) to the communal heat network. Separately, the Council shall enter into a heat supply agreement with the landlord’s tenants. Unless otherwise agreed between the landlord, tenant and the Council, the tenant shall be liable for the Standing and Variable Charges under the heat supply agreement. It is therefore up to each tenant to consult their tenancy agreements and discuss with their landlord what the arrangements will be for responsibility of the Standing Charge.

22. With an input temperature of 62C, is this sufficient to keep the hot water tank temperature above the recommended 60C?

For those who wish to retain their indirect hot water tank (instead of converting to the combi-type), a risk assessment will be conducted to assess whether or not safe storage temperatures can be achieved based on the above minimum inlet temperature. If there is any doubt, we would advise on switching to a combi-type HIU.

There is much debate currently on whether the traditional 60DegC is required in domestic properties and whether this may be reduced to 50DegC. We have chosen to align to CIBSE CP1, which indicates 55DegC as the safe domestic hot water temperature.

23. Does the performance you can expect from the system depend on your position in the network?

Your location on the network will not affect the temperature delivered. The performance guarantees made in the customer contract include the temperature delivered to your home.

24. What is the estimated life of the network of pipes?

60 years, though we expect some level of insulation degradation.

25. I would not wish to sign a contract until I fully understand the work required at my house. Can the physical assessment hence be done before contact signature?

Yes. we will want to come and physically assess your home if you are happy for a visit especially if you think it will be challenging.

26. What is the situation regarding listed buildings? What application is required?

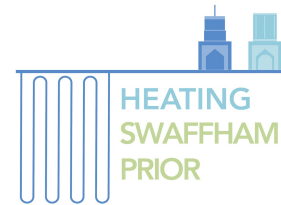
Details on listed building requirements will be provided in the Offer Pack to be issued to each home. Generally, no application should be required, but some homes may need to give East Cambs notice via listed building consent.

27. Will Paths, driveways, garden lawns, patios etc, be put back to the way it was after the heating is put in.

To connect your home to the network, a works agreement will require signature. This sets out that works are to be made good.

28. You mention that Sanctuary Housing have been approached, have you also approached Cambridge Housing Society and if so are they on board?

Yes, we have, if you happen to know residents of these properties and they are interested in the project, please encourage them to speak with CHS or ourselves!



29. Is a hot water cylinder still useful?

Not particularly, though as indicated above, there is equally no problem with having one.

30. I have a solar water array that contributes to my hot water via that cylinder, I wouldn't want to lose that.

Absolutely agree, this can be retained alongside connection to the heat network.

31. You have stated that you are prepared to go ahead with a contract with builders before you have a definite number of people as a required minimum to sign up to the scheme, that is outrageous!

Government has invested in the development of this project as it must deliver international and national climate change targets and cut emissions from fossil fuels. Homes are a key target for emissions reductions and to come off fossil fuels. The Covid-19 pandemic has been a major health crisis and a catalyst to build back greener and support the transition to a greener economy. Government has invested development budget and grant into the project as a step towards its targets and a greener future. Your community has demonstrated a level of interest to sign up to the project over time which has been recognised at a national and local level from politicians and why they are willing to fund the construction of this project.

Cambridgeshire has more than 10,000 homes dependent on oil mainly in rural areas. Local politicians have been concerned that decarbonising heating for homes has focussed on urban areas and that rural communities would get left behind and end up paying more for their heating – potentially creating greater fuel poverty, an issue that Cambridgeshire County Council is keen to prevent. The Council is taking risk on this project by making this heating offer available to as many homes as possible to ensure that rural communities do not get left behind. This is a level of risk that must be taken to demonstrate the value of this type of project for a greener future and the start of shifting the further 10,000 homes in our County dependent on oil onto greener heating systems.