



A grassroots campaign taking action against mammoth fuel bills and working towards an affordable, sustainable and democratic energy system

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Fuel Poverty Action response to Heat Networks Investment Project consultation

FPA is a grassroots organisation working to end fuel poverty and minimise climate change. Many of the questions in this consultation we are not qualified to comment on. In fact, we do not accept the premise on which the finance-related questions are based: that district heating in the UK must be developed in a market context, working towards independence from government and increasing reliance on private capital. Sixty eight per cent of the UK public believe that energy should be run not for profit but in the public sector, in line with its life and death importance to its customers. We agree.

However, we are very glad to see a consultation on heat networks, and we want to pass on the experience of some users we are working with, which has been far from the stated aims of heat network proponents. We believe district heating can be - and in some places is - very good for reducing both costs and carbon. We have in fact been working with one estate (Myatts Field South) where tenants have fought to keep a communal heating system that is now being decommissioned. But we're fearful that if developed for profit and without genuine accountability to users, heat networks could end up creating a PFI disaster comparable to what's happened in the NHS, where long and onerous contracts have contributed very substantially to making many hospitals unviable.

These are not only our own concerns but the strongly held views of many tenants and residents using heat networks, who are horrified at the long contracts, in most cases negotiated over their heads. The reality is that many heat network customers feel trapped, cheated, taken for granted, and deprived of rights which other people can freely exercise by switching. The "demand risk" to which your consultation refers can only be heightened by practices which threaten to make heat networks toxic in the public's mind.

We are therefore responding first to Q 32, with evidence on the cost and performance of heat networks in practice. Our experience is based primarily on what we have been told by residents on Myatts Field North estate in South London, a regenerated social housing estate, now including private and shared ownership leaseholders in the associated Oval Quarter and Notting Hill Housing developments. The heat network is E.ON's and the contract was negotiated with the local authority, Lambeth.

Together with Myatts Field North Residents Association and PFI Monitoring Board (MFN RAMB), we are currently working on gathering information on the incidence of problems. We are aware that some issues have been more or less resolved after an initial bedding-in period, but they are important in any case, having gone on for years, significantly disrupted people's lives (especially as part of the aftermath of a traumatic redevelopment which was swiftly followed by the deaths of several older customers), established a pattern of irresponsibility on the part of E.ON and the local authority, and, incidentally, shaped how many people feel about district heating. Moreover, we

have heard of many of these problems being replicated in other heat network developments. Here we first list the problems we have seen, then suggest some ways in which heat networks could possibly avoid them (a subject we are still very much exploring: we know we have much to learn from others), and finally turn to those of your questions we feel we can usefully respond to.

A. Problems have included:

A.1 Technical

Outages

Following the regeneration of Myatts Field, residents of all ages and states of health, never knew when they would or would not have heating or hot water. One particularly scandalous and devastating outage affecting families throughout the estate over the whole of Christmas day 2014 (imagine!). For at least the first two years outages were frequent and prolonged, sometimes over 24 hours. One customer, for example, experienced outages on 24 days during a three month period. A Lambeth council response to a Heating and Hot Water Petition, dated February 2015, acknowledges four estate wide outages in the previous six months; others affect only some parts of the estate. They are now less common but still happening, some customers have said every few weeks to months.

Water temperature

Water in kitchen and bathroom sinks is sometimes scalding, hot enough to burn. One elderly lady had water at 68 degrees, according to the plumber, who promised to come back the next day (but did not, for a week). Meanwhile, bath water is often tepid. Some customers routinely have to add kettles of hot water to their bath, and many have given up baths altogether. Temperatures also swing wildly from one moment to the next, which is a peril in the shower, and can be dangerous for children. The Regenter Consortium which developed Myatts Field North and continues to have a 50% interest in it, acknowledged the temperature problem in early 2015 and promised to solve it by March that year. This has not happened. We know of one tenant who is now talking to an OT about purchasing an electric shower.

Wait for hot water

For some customers, when they turn on the hot tap, the wait is extreme -- nothing like what you would experience with a combi boiler, for example. In addition to time and frustration, this wastes a lot of water, and customers who have water meters are also being penalised financially.

Heating controls

The basics have not been attended to: thermostatic radiator valves for each room, room temperature thermostatic controls that customers can understand and use, the correct instruction book for the control that is supplied. It can take a ridiculous amount of time and effort to get these corrected. Vulnerable customers, or those whose first language is not English, are most at risk, but we have heard that "no one understands how to use the controls, and the contractors do not, either".

These apparently peripheral problems, which have not been resolved because of poor customer service (see below), can leave customers cold in their homes. Some have bought their own electric or oil heaters and avoid using the heating at all, or turn it on only six or seven hours a week but still get high bills. The RAMB chair has brought people blankets to help them keep warm even in the daytime.

Heating Interface Units

Customers say these were badly designed and that the people who installed them were not properly trained or qualified, put them in wrongly, and resisted correction. There were also persistent teething problems due to incompatibility of three different kinds of HIU; now apparently resolved.

New blocks

Every time a new housing block comes online, the need to rebalance all existing blocks leaves residents' supply in chaos.

Variation by address

Temperatures of water, and of homes, seem to vary according to what floor you are on and whether you are near the end of a pipeline. In some blocks during the winter top floor flats can get very hot, and some residents report that they have to turn off their heating altogether and open windows, whilst the temperature in the corridors is stifling during both winter and summer. Customers are wondering where this heat is coming from and who is paying for it.

Remote access meters

The Automatic Meter Readers installed cannot communicate with base apparently because the steel structure of the building interferes with the signal. In addition, several customers have proved that their meters were running too fast. A 2015 report for MFN RAMB says four in 10 meters were delivering erroneous figures. And a December 2015 letter by E.ON's head of community energy, confirms: "We are . . . unable to guarantee one accurate bill a month". Over the years there have been numerous attempts to solve this and other problems with the meters, and a proportion of customers now do have functioning remote access meters (75%, according to E.ON).

We understand that poor radio and Wi-Fi signals are a common problem with smart (and similar) meters in housing blocks elsewhere. Customers supposedly benefit from a contractual guarantee that energy charges will be levied on the basis of actual use. This is not the reality. In addition, as you will be aware, there is huge suspicion of smart meters around the country on grounds of data protection, health risks, and the fear of being remotely disconnected with no need for a court warrant.

A.2 Customer service

We believe many of these problems would be dealt with if the supplier were not secure in their 40 year contract and able ignore the needs and complaints of their customers. The relevance of the examples below is that they are indicative of what happens when there is no such accountability.

On heating controls, at a "One-year-on celebration", one Higgins project director commented, in response to MFN RAMB complaints, that there was nothing wrong with their equipment, but customers "could not be bothered to learn how to use it." The resident liaison officer present concurred, saying she was "fed up" of going out all the time to show tenants how to do it. MFN RAMB raised concern about the disparaging comments, reminding the representatives that contractors had undergone various training programmes and acknowledged the system was too complex. Yet one elderly resident with a vulnerable disabled son waited nearly two years to get her controls changed to something simpler. Recently an adviser helped another lady try to get the correct instruction book, only to be given the wrong one again. A February 2015 letter from Lambeth, written in response to a petition from MFN RAMB over heating and hot water,

acknowledges that Heat Controllers are difficult to use, and speaks of a refurbishment programme.

On the insistence of MFN RAMB there were E.ON road shows, newsletters with instructions, more leaflets, and some resident training took place in 2015, but the problem remains. While new blocks are being fitted with better controls, we know of a two year delay in getting such a control for a vulnerable customer in an existing building. Can attempts to solve this problem be serious, when one road show took place without printed instructions available, and another was later claimed as a “success” even though it had been cancelled as no one had the key to the building?

When there is a break-down it can take a long time to get through to the provider. A specific call-out time slot cannot be provided and it appears that the complaint will not even be logged unless the customer can guarantee to be home all morning or afternoon. One customer with no hot water recently was told, "unless you're 80 years of age and have a serious medical condition, there's nothing we can do, you'll have to wait till Monday". A number of others were told the same, despite E.ON admitting this should never have been said. Customers have been told they can't even get a reference number, on evenings or weekends, as the report will not be logged. This is despite the official response time for out of hours break-downs being 12 hours.

The most common failure of customer service however has been the failure to meet the obligation to bill according to actual usage.

A.3 Estimated Bills

The technical problem of remote access meters has been massively compounded by what for many has turned into a nightmare of estimated bills. Problems here include estimates that have nothing to do with previous usage and are heart-stoppingly high, the fact that bills arrive monthly and E.ON have to date resisted all pleas for quarterly billing, difficulties getting through to E.ON by phone with meter readings (one customer bought a speaker phone so she could carry on with housework while waiting), and refusal to believe the readings offered. One lady got a bill for a thousand pounds; when she objected it was reduced to £500, then £300. An elderly gentleman receiving care in the community had a £1,000 bill reduced to £90, with the involvement of the local authority, but only after E.ON had threatened to take him to court for not paying the original sum. Some people are paying the estimated bills, intimidated by the threat of penalties for late payment. That is, they may be going into debt or going without food to pay bills they do not owe, and some are certainly going without heating (which may not even bring the bill down).

Recently the Chair of MFN RAMB told E.ON she would not pay her own estimated bill as she was entitled to a bill based on her actual usage; she says she mentioned Fuel Poverty Action. They sent her a real bill. She paid it, but told them she did not accept a penalty for late payment. They took the penalty anyway, from her payment card.

As with heating controls, there appears to be an assumption that the problems are caused by users: why can't they just read the meter and send in the readings once a month on line? In fact, internet access is a problem throughout this estate. Some residents have said it takes hours to get through to E.ON by phone, on their phone bill and on their time. The meters are not designed to be user friendly, lots of people cannot cope with the sequence of button pushing etc required to get the digital result. Some people are helping their neighbours with the reading and the phone call but it is a considerable job and they're not being paid for it. No one should have to be beholden to their neighbours for this service.

Non heat customers with gas or electric bills who are on the priority services register can get their meter read by the company under the standard licensing conditions for gas and electricity suppliers. **There is nothing corresponding to this in the Heat Trust Scheme Rules**, which E.ON were central in drawing up. What excuse can there be for this? Don't vulnerable heat network users have the same needs as vulnerable users of gas and electricity?

The failure of the remote access meters is not customers' responsibility. Until the technology can be made to function properly, any heat network provider should be obliged to send out meter readers as they do for vulnerable gas customers. They should also ensure that phones are answered promptly, and bills are quarterly not monthly if so requested, so that people who cannot be in for meter readers, and are able to read their own meters, can do so without undue trouble. Any estimates must be based on previous usage.

Billing according to actual usage - whatever the obstacles - should be a precondition for acceptance in the HNDU's pilot.

A.4 Prices

You note on p 35 of the consultation document that "Fair pricing is . . . critical to avoiding customer detriment and could be reflected in eligibility and scoring criteria. By way of example, this could include eligibility criteria that requires the heat price to be no more than the counterfactual, combined with scoring criteria that awards those networks delivering heat at a lower cost than the counterfactual. "

But what exactly does this mean? We are still struggling to understand the pricing at Myatts Field, but we do not think "the counterfactual" is as straightforward as it might appear.

E.ON heat network customers already supposedly benefit from a contractual guarantee that what they pay will always be equivalent to or less than those costs that would be incurred for energy consumed using a traditional gas fired condensing boiler solution.

A MFN District Heating Service FAQ provided by Regenter to the MFI North RAMB explains:

"The Gas Tariff is derived from the average gas tariffs of the six largest suppliers.

N.B. Heat generated through District Heating boilers is more efficient compared to a traditional gas boiler – which is typically run at 80% efficiency. The average gas price is therefore multiplied by 1.25 to account for the efficiency difference between the two different boiler types."

Customers are asking, does this mean that at EON get all the benefit of any extra efficiency and customers get none? And also, who gets the financial benefit of the electricity produced by the CHP boilers?

In a competitive market where everyone is being urged to investigate new, smaller companies and to switch provider as the solution to unfair prices and the non-competitive practices highlighted by Ofgem, people want to know why they should be tied for 40 years to the prices of the Big Six -- and to their standard variable rates, the most expensive on the market?

These are all questions that may well be relevant to Heat Networks generally, when considering the question of customer detriment.

Customers who are not council tenants are also charged standing charges of £33.01 per month, so high that they are one of the factors causing some leaseholders to consider moving house. There

have been many occasions when the cost of usage is lower than the standing charge. For council tenants, the Local Authority is paying the standing charge, at a different rate, no doubt passed on to council tax payers.

E.ON make great play of the fact that Heat Network customers are relieved of any worry about break-downs because repairs are included in the price, along with maintenance of and repairs to the network and plant equipment, and "we include traditional boiler cover and boiler replacement costs as part of our comparison". But this gives customers no choice. Many people on traditional systems do not purchase boiler cover - they cannot afford it. Moreover, experience at Myatts Field shows that it is not necessarily easy to access the service that has been paid for. Spare parts are not necessarily kept in stock and can take weeks or even months to arrive, even though these are new units, and should not be breaking down in the first place. Customers have been told that the cost of parts is not covered by the large monthly sums they pay. One leaseholder recently paid £250 for a part for her boiler. There also seems to be confusion about who has responsibility for repairing boilers and radiators, between E.ON, Rydon (maintenance contractors) or the customer.

Above all, there is no incentive for the provider to keep costs down or even to provide a good deal to their customers. Nor is there any regulation that would require them to do so.

A.5 Carbon emissions

A usual with heat networks, carbon saving was a large part of the basis on which E.ON's proposal for Myatts Field was put forward and accepted. Customers were promised an [80% reduction in carbon emissions](#). According to a written commitment, actual carbon savings are supposed to be reported to customers annually. Customers are not aware of any such reports to date; FPA asked for them but were only told that a new one was due this August or September. Having pursued this, MFN RAMB have just been told that annual reports were provided – to Regenter.

What residents do know is that solar panels were to be installed on the estate. There were to be "Photovoltaic Panels to be located on the roofs across the site to generate electricity to communal area lighting and Commercial spaces" for a saving of 19.29 tonnes of CO2 per annum, and savings from feed-in tariffs to the grid "[reflected back to the tenants](#)". The [mayor's planning report](#) says that no less than 372 sq m of solar PV were to be installed; residents were told to expect 168 panels. The only panels that they have seen were on the Higgins building, now removed. We have enquired about this but received no answer.

A.6 Lack of accountability and transparency

We expect that many applicants for HNIP funding will make promising statements like this below (still current at <http://www.regentermyattsfieldnorth.com/get-involved/resident/>).

"We are committed to putting residents at the heart of decision making. We need our residents to have a real say about the services they receive and, most importantly, we will make sure that every resident has the opportunity to get involved in a way and at a level they feel comfortable with."

The reality can be very far from this.

MFN RAMB is a monitoring board, monitoring the PFI regeneration contract between Lambeth Council and managing agent the Regenter Consortium. They are tenants and other residents, who work voluntarily and are not trained or paid for the huge amount of time and effort they put in to trying to sort out not only heating issues but all sorts of other problems following the regeneration of the estate. Even without regeneration, chairs and other officers of TRAs commonly donate

many hours a week to their communities. It is unreasonable to expect customers to produce accurate records of problems, with dates, outcomes, frequency, incidence etc - yet without hard data problems can be ignored and continue month after month. This is despite really concerted attempts by Myatts Field residents to get the problems sorted out, attempts including raising issues continually in MFN RAMB meetings, setting up surgeries, a protest march, a petition, a survey, a Member's Enquiry in the council, and repeated appeals and complaints to E.ON, to Pinnacle Housing Management, to local Vassall Ward councillors and to Lambeth local authority, attempting to hold E.ON to account.

From what we have observed the local authority has proved singularly ineffective in defending the interests of the residents for whom they contracted services. Worryingly, there have instead been repeated reports of residents having reason to fear that they will suffer discrimination, or even lose their homes if they are too outspoken.

Oval Quarter residents have taken up their problems with E.ON individually. A survey conducted by the Residents Association in January 2015 indicated that the greatest sources of dissatisfaction/complaints related to the high standing charge (86%), tariff (40%) and response time to call outs (22%).

There are persistent accounts of E.ON refusing or just failing to log customers' complaints. This means that any attempt to take problems further can be countered by simple denial.

Compensation is inadequate. For outages on Myatts Field, the payment is £30, and nothing at all is payable until after 24 hours, even for repeated "intermittent" cut-offs. This accords with Heat Trust rules. One elderly man was offered £50 compensation after 21 days of going to the gym for showers because of an "intermittent" fault.

Compensation is also arbitrary and unevenly applied, with customers never knowing why they get less than a neighbour for the same outage. Customers have to press for compensation, instead of getting it automatically.

The chair of the Oval Quarters Residents Association says, "In January 2015 after residents across the development had experienced severe problems and there was an outcry from individual residents, MFN RAMB and local councillors, E.ON did agree to pay compensation but their method for calculating payments was not transparent and individual payments ranged from £50 to £200, causing suspicion and resentment among residents. A private owner decided to sue E.ON for lack of service after his heat unit hadn't worked for a month. He was originally offered £50 compensation but after making a claim at the Small Claims Court he was offered £200 with a gagging order. He did not accept the offer and continued with his court action (cost £170). After further dialogue, E.ON paid over £500 which was what he initially demanded." Clearly, it should not be necessary for customers to go to court to achieve accountability.

Over time there have been improvements -- at a high personal cost -- and a lot of promises, which however usually need to be restated at the next meeting, and the next: the general unaccountability is not aided by constant changeover in E.ON representatives and personnel and their failure to pass on information.

A.7 A 40 year sentence

What most concerns customers is that they are locked into a contract not of their own making,

which they did not even sign, and which they believe is to their detriment. It seems the District Heating agreement with E.ON was originally set up for 25 years as part of the regeneration package, without users having any say over its terms; in 2012 the 25 years were extended to 40, without customers being asked, or even informed (they did not find out until 2015).

We understand that long contracts are standard in heat networks, in order to guarantee a return on a substantial initial investment. If the system proved to be uneconomical, technically faulty, carbon-intensive, or otherwise undesirable, and if there were no long contract, demand could fall. Investors do not want to take this risk, nor do local authorities. **But it appears that the normal solution to this problem -- not just in Myatts Field but generally -- is to pass this risk on to customers, very often social housing tenants.** They are the ones who take the hit if the scheme does not work well, through no fault of their own. They in fact become the guarantor of last resort, guaranteeing revenue for often very profitable private companies, even when they cannot afford to pay their bills and eat. This does not seem to us to be an acceptable or viable solution.

B. What can be done to end and prevent such problems?

B1. Regulation

If customers *are* bound to long contracts, **it is essential that the industry be regulated**, as it is in other countries. While heat networks may be young in the UK and in need of encouragement, the same cannot be said for either companies like E.ON nor local authorities, who are very well able to defend themselves. We heard at the UKERC conference on heat networks this spring that there is a rule - at least in London - that no contracts should be binding for over five years without regulation. We have been unable to find evidence of this rule, and it does not seem to be applied, but it seems only reasonable, if the aim is to protect the user as well as the supplier.

All customers must also have recourse to an effective, customer-friendly, outside body independent of the industry that is mandated and has the powers to protect their rights and their interests. The Heat Trust, while useful in some cases, does not fit these criteria.

B2. Effective penalties

Levels of compensation like those at Myatts Field are no deterrent. In February 2015 the Lambeth reply to residents' petition recorded 36 payments of compensation in three months (for outages or poor customer service). Customers presume it is financially advantageous to the company to accept that supply of heat and hot water will be unreliable, and pay compensation where necessary, rather than to ensure the steady supply of heat and hot water that people using other (counterfactual) systems take for granted. The level of resentment that this generates has to be seen to be believed. Instead, **compensation payments should be genuinely punitive**, both for outages and other infractions.

While customers are bound to a contract, the provider seems able to breach their side of the contract with impunity. **Repeated breaches should trigger intervention and the certainty of losing any future opportunities for publicly supported contracts. If this is not effective, customers, too, should be released from any contractual obligations.**

B3. Effective monitoring

While only the users themselves can be counted on to hold reluctant suppliers to account, this should not be dependent on their putting in hours of unpaid labour, for which their only thanks from those who are challenged is often disapproval, withdrawal of support and cooperation, or worse. **Monitoring boards should provide residents -- the end use customers -- with funds for**

independent administrative help, monitors, questionnaires, record keeping, and a way to log complaints themselves to ensure that they are logged -- and responded to -- by the heat network provider. There should be facilities and support for residents and tenants to meet in private as well as taking a leadership role in any "monitoring board", to encourage best practice and ensure that problems can be aired without inhibition.

At a recent conference on heat networks held by the Institute of Engineering and Technology, we heard engineers state that **designers should be present throughout the installation phase, to monitor what happens on the ground**. (They also said that design flaws are common, and that the way things are set up now, it is often only the provider who benefits from heat networks.) Trade unions can potentially play an important monitoring role from the earliest stages, not only in ensuring training and a safe, alert and positive working environment but in making sure work is done well and that problems, whether technical or administrative, are identified early. **A good relationship with relevant trade unions should be a condition of HNIP funding.**

B4. Decision-making

Especially since it is not well known in the UK, it can be hard for prospective customers to imagine exactly what a heat network could entail, let alone make decisions about design. Nevertheless, we believe it is important where possible (eg when the heat network will be retrofitted, or is part of a regeneration project) for users to be involved at the earliest stage, and have an opportunity to decide whether they want a heat network, and if so what heat source to use, if relevant where it will be sited, and make decisions about gas versus electricity (including for cookers), initial price versus quality (which means cost and carbon saving in the long term), controls, insulation, billing practices, etc. A genuine attempt to make this possible could include films, or even speakers, from previous heat network projects. This perhaps has already been piloted in areas where heat networks have been successful. **We believe it could and should be part of what is funded by the HNIP.**

B5. Ownership

We are aware that, of the measures suggested above, even regulation has been rejected by the government on the grounds that it may put companies off investing in heat networks, and the other suggestions above are likely to meet the same objection. But if companies will not invest in a way that protects the consumer, and if networks can really fulfil their promise in terms of both bills, customer satisfaction and carbon savings, then they should in our view be developed using public finance, as an infrastructure initiative under the control of the public, beginning with the users. In places where there is an existing or proposed publicly owned energy company, as pioneered for example in Nottingham and as is currently being sought in London, this could be a vehicle for public investment in heat networks.

We agree that money saved by public investment should benefit vulnerable or fuel poor customers, and/or the public purse: if it is not right to expect social housing tenants and other customers to act as guarantors, nor is it right for the government to guarantee schemes from which private companies then profit.

In the event of some sort of public ownership, heat networks would of course be weighed against other ways of saving costs and saving carbon, including other ways of harnessing renewable energy sources, and of course against energy saving including insulation -- a key to emissions reduction which may in fact suffer in a market context where guaranteeing demand for heat is important to an investor's bottom line.

If, on the other hand, heat networks are allowed to continue to develop along the lines of Myatts Field North, customer detriment could become endemic.

C. Consultation Questions

Q1. Do you agree that the proposed Pilot phase should be aimed at local authorities? Yes / No

Response: Yes, with the caveat that local authorities generally do not have the expertise to carry schemes through themselves, and unfortunately cannot be relied upon to get the best deal for their customers, to monitor development, or deal with later problems. Some do this very well, others do not.

Q2. Are there other public sector bodies that should be eligible to apply directly for support in the Pilot and if so, why?

Response: Yes, as should municipal companies such as Robin Hood Energy in Nottingham. The absence of a profit motive, some principles of accountability, and more experience of liaison with communities can make public sector bodies more suitable than private companies, and many, including some housing associations are more grounded in communities than local authorities are.

Q3. Do you agree that the following types of heat network sponsors and owner-operators should be able to apply for capital funding in the full scheme? - Local authorities, wider public sector, private sector, not-for-profit groups and community groups. Yes / No

Response: Yes to all, and including energy co-operatives. For the reasons above we do not believe that most private sector companies are suitable but would not necessarily rule this out in all cases.

Q7. Should the Heat Networks Investment Project provide funding for refurbishment of heating and hot water systems inside existing end user premises (including distribution in multitenanted properties) that are connected to a new or refurbished heat network supported by HNIP? This will exclude heating and hot water systems inside new-build properties. Yes / No

Response: Extreme caution is needed in introducing heat networks in existing buildings. If residents are not properly and genuinely consulted the result can be a serious detriment to them as buildings are not necessarily suitable. Customers of a concrete Hackney tower block, Lincoln Court, complain that pipes (which cannot be inserted in the walls, floors, etc) have become both an eyesore and an obstacle course, that their living space has been reduced, and that both there and in a neighbouring building residents' views were not taken into account in siting the new boilers.

Q22. Please indicate which factors below should be used in combination as the minimum eligibility threshold which all first stage applications must meet AND which should be competitive factors that should be used to assess, score and compare applications at the second stage of the application process.

Response: We agree with prioritising carbon savings and lack of customer detriment in relation to pricing and customer services, for both eligibility and comparison purposes. Please note comments above (A4) about the interpretation of "customer detriment". It is also important that "social value" factors like air quality should be taken into account when comparing proposals. If heat networks are genuinely to contribute to mitigating climate change, it is essential for decisions to be as forward looking as possible.

The HNIP is an opportunity to favour projects that open up or develop new and more climate-friendly ways of producing heat. This could be a major contribution. On the other hand, if most

funding goes to investments based on gas-fired Combined Heat and Power, with an expectation (as proposed) that these will be converted around 2030, then the whole project could compare unfavourably with other ways of cutting emissions, eg immediate investment in energy saving programmes and renewable energy. We are concerned that the test of profitability may trump the needs of human survival in decisions about which technologies to encourage. By all calculations, 2030 is very late in the trajectory of climate change. **The timing of carbon emission reduction is as important as its size.**

Carbon saving and cost reduction are too often seen as alternatives, using a blinkered assessment of costs. The human - and financial - costs of climate change to each of us go way beyond what can be seen in a bill. "Customer detriment" must also be acknowledged to include carbon emissions.

It also includes also poor air quality, for instance from [incinerating waste](#) without adequate protection for the lives and life quality of local residents, who are the customers.

Q26 (Proposed) minimum eligibility criteria and "best practice characteristics"

Responses:

g. Cooling networks and heat networks that provide cooling. Given the large numbers of deaths that occur during a heat wave, the increasingly chaotic climate, and the real danger that air conditioning will contribute heavily to carbon emissions in the future, cooling systems that are not carbon-intensive should be given far more priority than is happening at present.

n. Metering and billing systems and processes over and above Metering and Billing Regulation requirements, including customer interface innovation or smart heat meters. For customers, this area is crucial. Please see above (A1 (remote access meters) and A4) re technical and customer service issues that can determine whether metering and billing systems produce in practice what is promised in principle.

o. Local authority governance role in a majority private sector owned scheme. Important but it must be borne in mind that while some LAs do protect their customers' interests, this cannot be relied on. It needs people with both the will and the expertise, and a favourable political climate in the local authority.

p. Customer protection over and above Heat Trust equivalent standards. This could include heat prices lower than counterfactual, consumer advocacy including cooperatives/community shares/customers on Board or heat network supply competition. Definitely, all of the above, plus measures outlined in our section B above. Please note that "counterfactual" has not been defined in a way that is helpful to really finding out whether customers have suffered detriment (see A4 above).

Energy co-operatives and other community organisations, along with municipal bodies like that advocated by Switched on London, can embody or facilitate the user involvement proposed above (B.4)

Q28. If applicable, please indicate what should be monitored instead / as well.

Numerous sources in the field have confirmed the impression of Myatts Field North and other customers that there is a very serious skills deficit in design and installation of heat networks. **The development of appropriate skills for the future would therefore seem to be an important**

criterion when considering what to fund.

Similarly, for the reasons given above, accountability to, and involvement of, the end users of heat networks could be critical for how networks develop and whether they are acceptable to the public. It can also be important for immediate goals in reducing carbon emissions. For example, carbon and cost savings are dependent on effective insulation of pipes. It is people living in a block of flats who know when insulation is falling off.