Comments on two BEIS Consultations:

- **Future Support for Low Carbon Heat**
- **Non-domestic Renewable Heat Incentive: ensuring a sustainable scheme**

A Joint Response by ReEnergise Projects Ltd and the Independent Schools Bursars Association

This paper gives our comments on the two consultations noted above. We are replying on both consultations at once because for our sector of the market it would be wrong to consider the two in isolation.

This response has been drafted by ReEnergise but has the formal backing of the Independent Schools Bursars Association (ISBA), which is the professional body representing the bursars, business managers and Chief Operating Officers of the UK's independent schools. Precise data on the independent education sector's energy usage does not exist, but the total low-carbon heat installation project capacity required is in the order of 1,000MWs (well over 1000 schools at an average installation capacity of about 900kW). About 20% of this capacity is off the gas grid and therefore continues to burn oil and LPG for heating, as well as some direct electric heating for smaller buildings.

Within the state sector schools there is not such a high proportion of off-grid school estates, although the sector as a whole represents a far greater conversion challenge in terms of scale.

ReEnergise is an independent consultancy working in the education sector. The company's role is to develop and deliver decarbonisation projects for schools around the UK. We have recently set up a campaign called Zero-Carbon Schools which is aimed specifically at encouraging schools to become zero-carbon and support them in doing so. Although the company is a commercial organisation it also provides regular pro bono technical and policy guidance to ISBA, as ISBA has no technical expertise within its own staff – hence the relationship with ReEnergise. Although this paper has been drafted by ReEnergise, the thrust of the arguments presented is endorsed by ISBA. We share a joint concern that once the NDRHI has closed there will be no appropriate support for schools seeking to decarbonise their estates.

This company's main experience lies in the independent sector but the arguments could be applied equally to the state sector: all school estates have similar energy requirements although the scale of the decarbonisation challenge of course varies from school to school.

The Nub of the Issue

The general thesis below is offered as a summary of our concerns about the proposed policy for future support. I can provide evidence in detail if required to support these arguments.

A typical school estate will require a total capacity varying in scale from as little as 100kW up to over 3MW. It will have anything from one building to as much as 40 or 50, each building requiring anything

ReEnergise Projects Ltd.
20 Headley Road, Grayshott,
Surrey, GU26 6LB
T: 01428 608 462

www.reenergisegroup.com

Company No. 07438611
Registered office: Ashcombe Court, Woolsack Way, Godalming, GU7 1LQ

from as little as 10kW of installed capacity up to over 100kW (or equivalent via a heat network). School estates are often suitable sites for a heat network solely for the school's use, by dint of their size. The preferred low-carbon heat technology is most commonly GSHP or WSHP. ASHP is not so often the right technical solution for the bulk of the school buildings on account of its relative inefficiency compared to ground and water source. The majority of school estates also face power grid capacity challenges, meaning that in order to get heat pumps installed at the required capacity, grid upgrades are often required, adding to the capital outlay entailed in conversion projects. Many of these estates have original old and listed buildings with poor thermal efficiency. Sometimes their more challenging heating requirements can be met by high temperature heat pumps; sometimes the appropriate solution has to be biomass. It is also true that sometimes in the past the construct of the NDRHI will have favoured a particular technology in commercial terms which was not necessarily the most appropriate engineering solution. However, this is probably inevitable in any policy framework which is seeking to cater for a nationwide requirement.

The NDRHI has provided suitable support and has generally worked as intended for those schools prepared to take the plunge since it was introduced 9 years ago. Unfortunately until recently far too many schools have been put off conversion projects on account of the capital outlay and also because school governors are inherently (and understandably) risk averse. Very few schools have the capital required to pay for an estate-level conversion themselves, meaning that 3rd party financing is usually the only route available to them. However, school governors carry a heavy burden in safeguarding the school's future and have in general proved disinclined to take on the levels of debt that would be incurred, meaning that several technically viable projects have not proceeded. Governors have understood the point that the NDRHI will in time recover the debt but have not wanted to take the risk of committing to 3rd party finance.

That situation changed in late 2018. Between October 2018 and March 2020 this company witnessed a 40-fold increase in the desire to convert, measured in MWs of capacity either under contract or about to be. This was partly driven by the publication of the watershed UN report on climate change published in October 2018 and partly by the Greta Thunberg effect, which has appealed to schoolchildren and hence has had a knock-on impact on school staff and governors. The rise in interest has also, ironically, been driven by the impending closure of the NDRHI. Prior to March 2020, when the impact of COVID-19 started to be felt, it was clear that the sector was about to experience a sea-change in the intention to convert to low-carbon heat. In the event, the change of heart would have proved too late to catch the end of the NDRHI, but the point to understand is that a sea-change in conversion momentum was in progress.

The impact of COVID-19 has meant that virtually all school projects have now been put on hold. In some cases this will be a temporary halt whilst schools take stock and reassess their future and their appetite for risk. In other cases large schools have already decided that it is now too risky to proceed and projects have been cancelled outright. Each time a large school project is cancelled that represents between 1.5 and 3MWs of lost low-carbon heat capacity.

The extension of the NDRHI deadline under TG3, whilst welcome, will not be enough to put the trajectory of conversion back where it was pre COVID-19. For at least the next year, while the sector works to recover from the impact of COVID-19, most schools will not invest in conversion. They will be too worried about the future and their financial prognosis; and their administrative staff will simply not have time to focus on anything other than immediate survival. In time they will regain their confidence, but by then the NDRHI will be closed – including the extension granted by TG3.

Schools will then be seeking to convert in the post-RHI era, but there is currently nothing on the policy horizon that is appropriate for them. On the one hand the flat rate grant scheme will address conversion up to 45kW in scale (or whatever the eventual level turns out to be), but this will not cater for the majority of school buildings: it is intended to be suitable for domestic and small business installations, which does not include schools. On the other hand the HNIP, and its future development, is intended to address the large-scale installation requirement, so that would suggest it is where schools should be looking for support for estate level conversions. However, in our experience of trying to access the HNIP to date, it is aimed at installations that are larger than all but the largest schools in the UK. Furthermore, it is difficult to access for schools and tends to be taken up by council bids and one or two very large-scale investors.

Our recommendation is that schools - by virtue of the nature of their estates and operating circumstances - need a specific solution in terms of support and incentivisation. Without that it is clear what will happen in schools. The flat rate grant scheme will do nothing for them, whilst the HNIP (or similar schemes at that scale) will remain inaccessible and in any case will fail to cover the ground between 100kW to 2 or 3MWs in capacity, which is where most school estates sit. Schools on the gas grid will simply sit and wait to be incorporated in the large urban schemes that will eventually come along. Those off the gas grid will note the forthcoming legislation to phase out the installation of high-carbon fossil fuels this decade and seize the opportunity to replace all their fossil fuel plant before it is too late. The unintended consequence of the legislation will therefore be that high-carbon fossil fuel burning will actually continue for longer than it is going to do at the moment, because there will be thousands of recently installed oil boilers that will last for at least the next two decades.

Schools need a policy of carrot and stick, rather than carrot for a while and then stick. It takes several years to generate momentum in this sector and we have seen signs that a corner was about to be turned. The closure of the NDRHI is about to stop that progress within the sector and unfortunately TG3, whilst welcome, will not achieve the intended effect of counteracting the sudden pause caused by COVID-19. Nor will anything in the consultation Future Support for Low-Carbon Heat plug the gap.

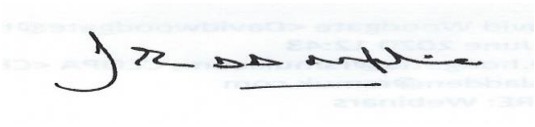
By way of illustration, Lord Callanan, speaking in the House of Lords recently, said:

> *"Heat pump technology is requiring of support and, in line with achieving net zero carbon emissions, we do take the role that heat pumps can play in driving down emissions extremely importantly. This includes large-scale heat pumps. We have the Clean Heat Grant which has been designed as part of a wider package of measures to support the decarbonisation of heat. The focus*

of this scheme is on supporting the supply chains that will be needed to phase out the installation of high carbon fossil fuels in heating and take it off the gas grid".

The juxtaposition of the recognition that large-scale heat pumps are important and the reference to the Clean Heat Grant suggest that Lord Callanan has been briefed that the Clean Heat Grant will address the issue. It will not do so. The Clean Heat Grant may well be suitable for the domestic and SME market but it will do nothing for schools or any other sites requiring capacity at the scale between 100kWs to 2 or 3MWs. This gap in policy needs to be addressed, in order to recover the momentum recently generated in our sector of the market.

It is not clear what the detailed mechanics of a solution suitable for schools would need to look like. It would take time to sort this out, but we would be keen to assist – given our practical experience in the sector.



Nigel Aylwin-Foster
Director Zero-Carbon Schools
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John Murphie
Chief Operating Officer ISBA