

**Wood Heat 2020 – Bullet Points for:
Session 3: Ensuring Quality – Improving Standards in Biomass Heat Wednesday
21st October 10.30 – 12.00
Virginia Graham, REAL**

Overall positive point to make is that Biomass is overlooked in the drive to decarbonise UK heating despite the fact that *Biomass heat is the largest contributor to renewable heat today.*

- The REA's *Bioenergy Strategy (2019)* identified the contribution from bioenergy alone could sustainably increase by a factor of 2.3 by 2032 to 20% of UK heating needs. Biomass heat, utilising efficient biomass boilers burning wood chip or pellet, could sustainably deliver 42 TWh of this by 2030, making a sizable contribution to UK heat decarbonisation.
- RECC fully endorses this.
- RECC would also endorse: REA's recent comments on UK Energy Research Centre's (UKERC) '*Pathway to net zero heating in the UK*' report on how heating might practically be decarbonised in the future with detail on possible pathways over the next five to 10 years.
- Dr Nina Skorupska, chief executive of the Association of Renewable Energy and Clean Technology (REA) said: "*We fully support the call to action to see the rapid roll-out of ready-to-deploy renewable heat technologies, supported by a step-change in heat policy from the Government.*"
- **But:** "*Disappointingly though, the report does not consider the full range of technologies available. In particular, the role of bioenergy is ignored.*"

Poor practice and standards as a barrier to potential

- The REA's *Bioenergy Strategy (2019)* identified a range of challenges to the ambition of bioenergy playing its full potential. The bioenergy strategy phase 1 stated that an objective of the overall report was:
 - To identify the barriers, including those related to policy and regulation, which are holding back more rapid deployment
- The REA's *Bioenergy Strategy (2019)* goes on to say that opportunities for use of biomass heat in the UK are constrained by a number of factors. These include:
 - Concerns about air pollution linked to use of biomass for heating, associated primarily with open fireplaces and inefficient stoves.
 - Poor quality standards in project design and execution.
- Elsewhere the strategy also said that barriers to bio-heat included quality standards under the RHI leading to 'badly designed systems (capacity too high) and poor quality of installation operation give poor reputation and waste support funds.'
- On biomass heat specifically, phase three of the *Bioenergy Strategy (2019)* identifies: issues, current government approaches to those issues; and, proposed actions. Among those it states:
 - Set technology neutral performance standards for emissions from biomass heating and power generation systems rather than unnecessarily banning projects on air quality grounds
 - **Government and industry to establish and rollout a Biomass Quality Management scheme to improve installation standards and best practice**

From RECC's perspective the problem of poor standards and practice is clear and urgent and RECC has been working on these issues through the MCS Biomass Technical Working Group:

- Complaints registered by technology as a % of all domestic installations in 2019 for biomass: 20%. Some of those are legacy complaints but that total is unsustainable given the potential for expansion along the lines hoped for. It is no exaggeration to say that disputes could emerge as the most important barrier to growth.

Clues are provided in the recently published research carried out by Kiwa and funded by BEIS. That field trial on the in-situ performance of nearly 70 boilers found:

- A substantial gap in performance between the claimed efficiencies and the in-situ efficiencies, very high particulate emissions in some situations most often caused by rapid cycling. Most often the rapid cycling was caused by over-sizing.
- The issues identified by the Kiwa research are not new. They have been highlighted for many years – not least by Neil Harrison in previous research funded by the Government.
- There is a need to grasp the nettle and formulate a 'standards strategy'. RECC would prefer to see a **multi-stakeholder approach** to work with MCS and the Biomass Technical Working Group to learn the lessons from the Kiwa field trial.
- The recent attempt to formulate a maintenance standard fell short of what was required because it did not address the issues raised in the Kiwa report – such as rapid cycling.

In relation to biomass emissions specifically: REA's Bioenergy Strategy (2019) stated:

Emissions Most biomass used for heating in the UK is in the domestic sector and in open fires and stoves. These mostly operate at low efficiency and have poor emission performance, especially when low quality or wet wood is used as fuel. Modern, well-designed devices, using well-specified fuels such as wood pellets are much more efficient and can meet stringent emission performance standards even at small scale. At larger scale (such as boilers used for industry or heat network applications) can also meet stringent standards. The use of gaseous biomass fuels also avoids emission problems. Proposals to limit the use of biomass fuels in urban areas would close off some of the most cost effective low GHG heating options unnecessarily. Biomass systems (like all others) should have to meet stringent but technology neutral emissions regulations.

RECC Annual Report 2019. Please see here: <https://www.recc.org.uk/pdf/annual-report-2019.pdf?t=202010211208> . Section 6 highlights disputes, including detailed statistics on the technologies and nature of complaints. This illustrates the points above about biomass complaints, reinforced by the other (excellent) speakers this morning, about the need to optimise design, installation and performance in domestic systems.