



**Department for Housing and Local
Communities**

**Futures Homes & Buildings Standard
Consultation**

Submission from CIBSE

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APPENDICES

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APPENDIX A: CURRENT HEAT NETWORKS IN THE UK

The below analysis is based on DESNZ *Heat Networks registered under the Heat Network (Metering and Billing) Regulations: January 2019-December 2022 (UK)*, issued 2023.

A1 – RECOMMENDATIONS FOR REPORTING ON NETWORKS, AGAINST THE CURRENT HEAT METERING & BILLING REGULATIONS REGISTER

Examples of information which the register currently requires	Important information which the register does NOT currently require, but should
Primary fuel e.g. “gas”, “electricity”	Annual fuel use, from all fuels e.g. “x MWh gas / year + x MWh electricity / year”
Annual heat generated, MWh/year	Together with the heat supplied (which is already provided), this would allow an estimate of: <ul style="list-style-type: none"> - Generation efficiency - Carbon emissions in any given year, and carbon content of heat
Annual heat supplied, MWh/year	
Heat / hot water generation capacity, MW	
Regional totals	<p>Information for each individual network.</p> <p>This would generate much more useful information to consumers, academia, industry and policy-makers. It would encourage competition for performance between networks. It would provide a single source of information, saving repeated enquiries and investigations, and ensuring much better consistency of data to be used in planning applications, building regulations, funding applications etc. It would also much more easily help spot blatant mis-reporting – as shown in Appendix A-2, there is clearly an error in the data reported for the North West region, but it is not possible to identify whether that relates to a single network or systematic error with data entry.</p> <p>This is available in other countries, for example France and Denmark.</p>

	<p>Sleeving details, if used by the network: plant capacity, heat associated to it, and connections benefited from it.</p> <p>This would prevent loopholes and double counting across various policies, so that low carbon capacity associated with sleeving is not also counted elsewhere for other reporting or regulatory purposes.</p>
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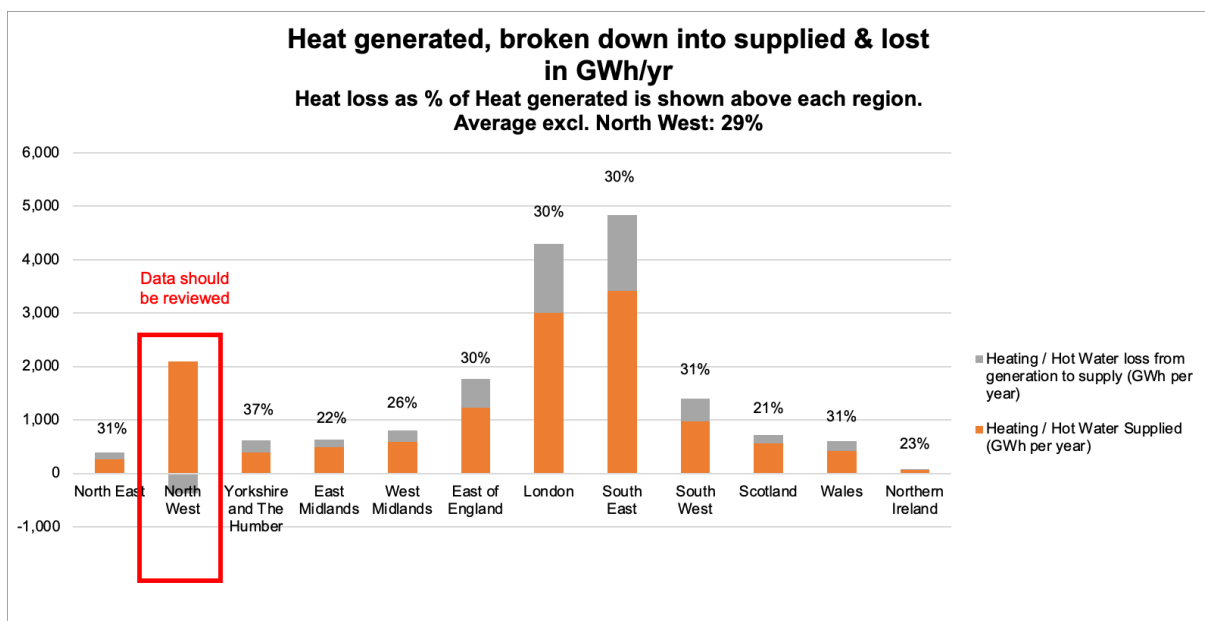
A2 – LOSSES BETWEEN HEAT GENERATED AND SUPPLIED

On average across all networks, excluding the North West: **29% of heat generated is lost, before being supplied.**

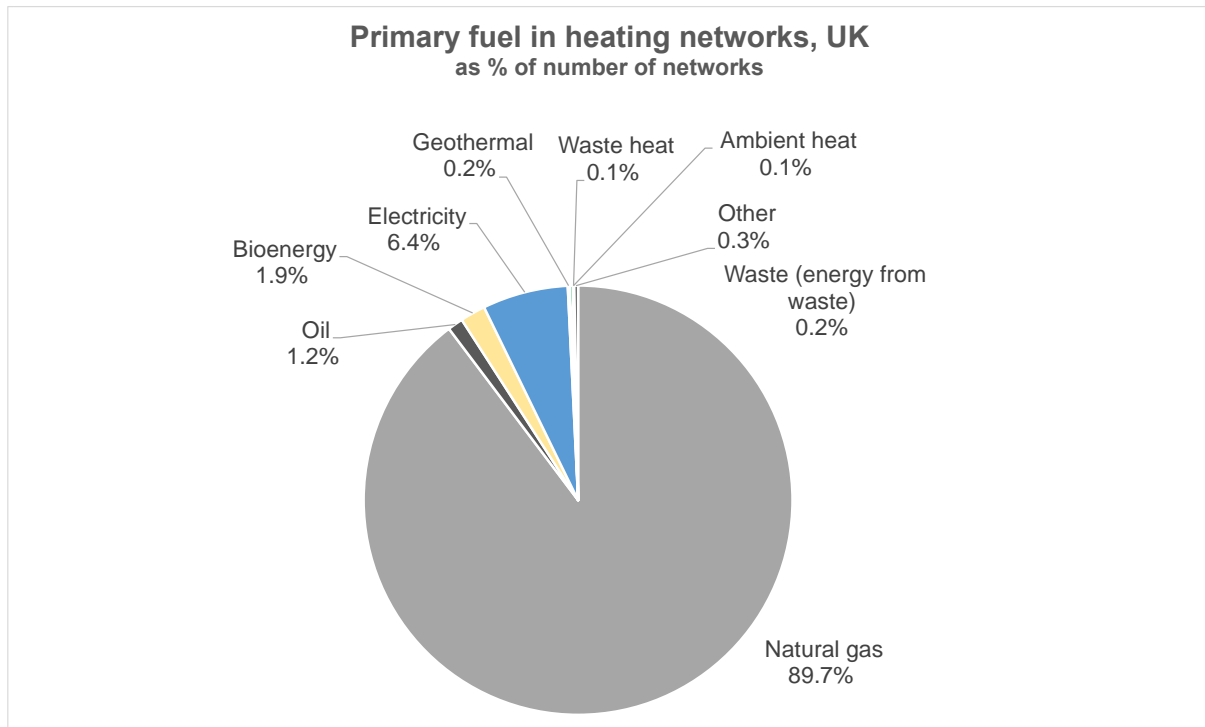
The 29% loss figure is the same when looking separately at district heating networks, and at communal networks.

This raises three important points:

- Are *district* heating networks really reporting heat supplied to the end consumers, or are some reporting heat supplied to the building, before its distribution to end users (i.e. not accounting for all secondary losses)? The register implies it is the former, but we recommend that this should be audited.
- Secondary losses i.e. the only ones in a communal networks, are large (29% on average). **Secondary losses must not be omitted** from the calculation of emissions from networks.
- **The data must be audited.** The register states that QA has been carried out, however it is clearly insufficient, since the data implies that for district heating networks in the North West, heat supplied is higher than heat generated. By the register’s own statement (Glossary Tab), “*Supply should always be less than generation due to heat losses within the system.*”

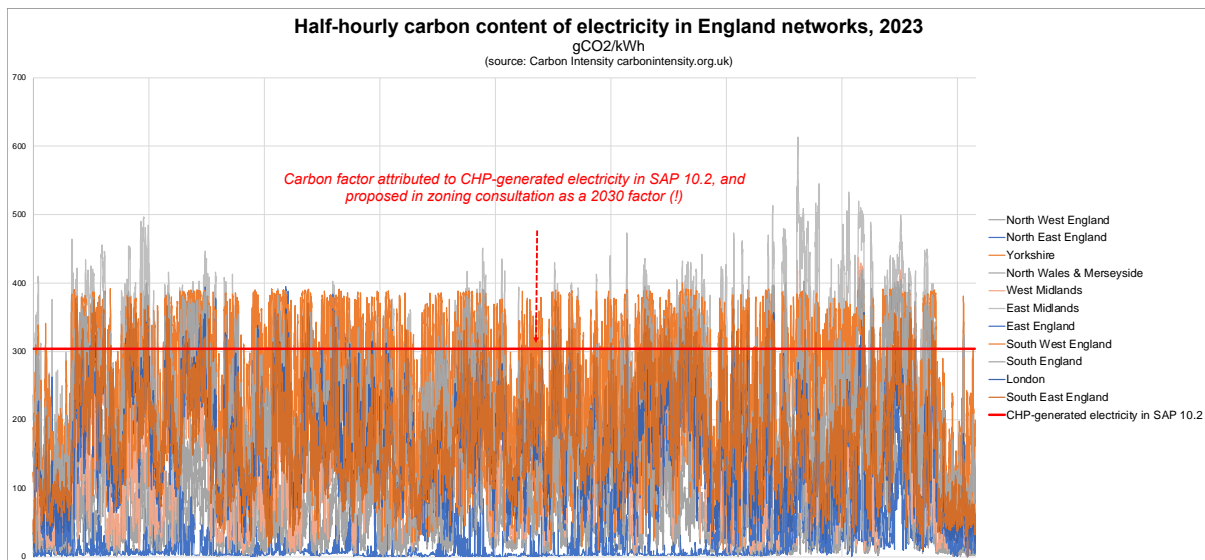
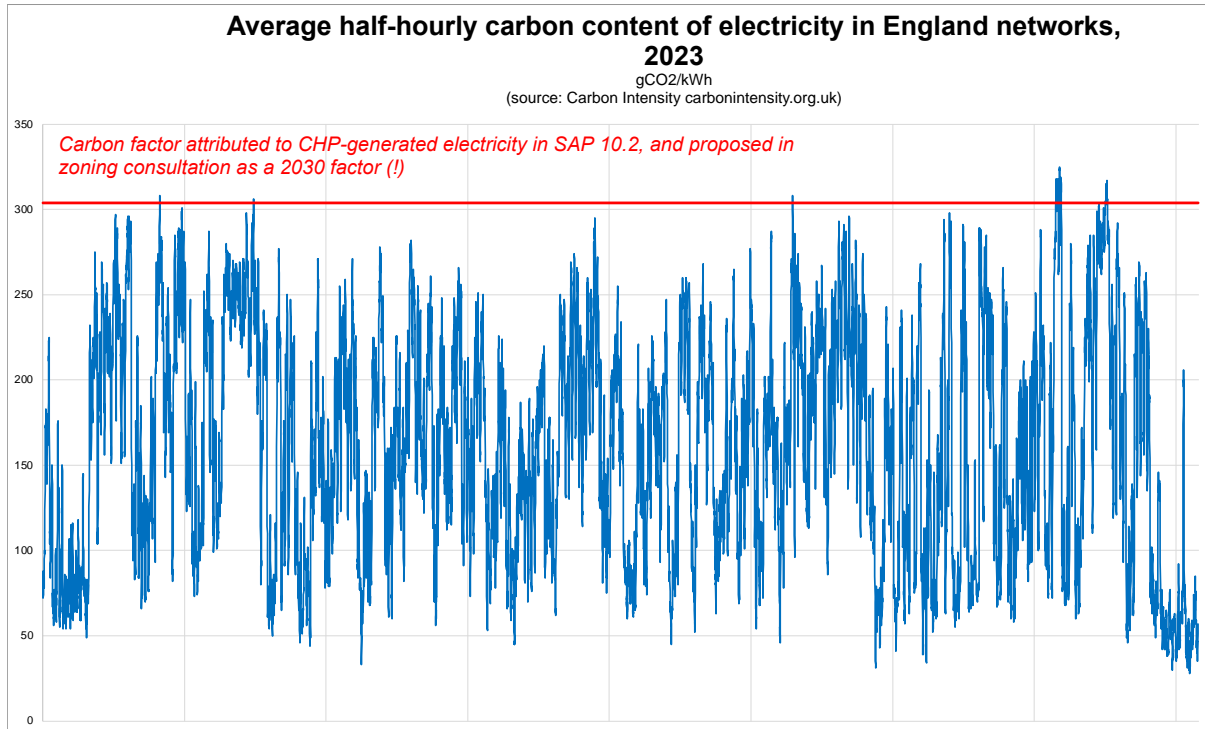


A3 – PRIMARY FUEL



APPENDIX B: 2023 CARBON CONTENT OF ELECTRICITY GRID NETWORKS

Reference: <https://carbonintensity.org.uk> 2023 data



PRIMARY FUEL	New		Expansion		Renovation		tbc		Total	TOTAL
	nb	%	nb	%	nb	%	nb	%	%	
Electric	677	78%	13	13%	24	60%	20	30%	734	68%
Gas	160	18%	76	75%	7	18%	39	58%	282	26%
Woodchip/Pellet	9	1%	2	2%	1	3%	3	4%	15	1%
Woodchip	10	1%	2	2%	2	5%	0	0%	14	1%
Wood Pellet	1	0%	0	0%	0	0%	0	0%	1	0%
Straw	3	0%	0	0%	4	10%	0	0%	7	1%
Biofuel	2	0%	0	0%	0	0%	0	0%	2	0%
Not Specified	8	1%	9	9%	2	5%	5	7%	24	2%
	870		102		40		67		1079	

