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Waste heat: The Datacentres' warm embrace

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BCS chief executive officer James Hart provides his thoughts on using the waste heat from datacentres in the drive to reduce carbon emissions.

The industry remains highly concerned about the enduring challenge of sourcing affordable and renewable power as the drive for Net Zero continues, with an increasing number now assessing the utilisation of waste heat energy generated by data centres.

This is according to the latest independent industry survey, which captures the views of over 3000 senior datacentre professionals across Europe, including owners, operators, developers, consultants and end users.

Approximately 81% of survey respondents expect consumption levels to rise over the next 3 years and 88% expect a rise in the cost of power to increase the demand for power efficient data centre space. One recurring topic is the reuse of waste heat, with the survey showing that the concerns around economic viability of this are diminishing with a 15% decrease of respondents claiming this was an issue.

This is a positive start. Planning and permitting processes are increasingly requiring that more is done to utilise waste heat from data centres to support sustainable development and foster community resilience. Typically, excess heat is expelled into the atmosphere, contributing to urban heat islands and overall energy inefficiency. By capturing and repurposing this waste heat, data centre operators can significantly reduce their environmental impact while providing tangible benefits to nearby communities.

One practical application of waste heat from data centres is to integrate it into district heating systems, which are common in northern Europe. It can also provide a year-round consistent supply of waste heat for

greenhouse cultivation and urban farming, contributing to local food production and reducing the carbon footprint associated with long-distance transportation of produce. It is also suitable for various industrial applications, reducing reliance on fossil fuel-based heating systems, leading to lower energy costs and decreased environmental impact.

Fundamentally, to effectively harness waste heat from data centres, collaboration between data centre operators, local governments, and community stakeholders is crucial. It represents a valuable resource that, if properly harnessed, can benefit local communities in numerous ways

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