

January 12, 2025

Mr. Davide Polverini  
Policy Officer  
DG GROW  
Avenue of Auderghem 45  
10140 Brussels, Belgium

Re: Your note of November 27, 2024

Mr. Polverini:

Thank you for your note of November 27, 2024. We have reviewed your request for a digitized version of our thermal guidelines and references for a couple data centers that are operating at a higher temperature than our ASHRAE TC9.9 recommended temperature.

Related to the first request, since the thermal guidelines are very detailed and are continuing to be updated to be in sync with the requirements of this fast-moving industry, we believe it is best to provide you access directly to the ASHRAE TC9.9 Datacom publications related to the operating environmental conditions of data centers. We think that with the importance of your organization to the data centers in the EU these publications with any updates ought to be readily available.

As I mentioned in my letter to you in July 2024, we stated that we have transitioned to an online subscription of all the ASHRAE datacom books and technical publications. Of course this includes our environmental guidelines for data centers. We would like to offer you a complimentary one-year subscription to the online datacom encyclopedia. This subscription would provide you our latest environmental guidelines. Let me know if this would be acceptable and if so, we can then have ASHRAE staff contact you to activate an account for you.

Also mentioned in my letter of July 8, 2024, two hyperscalers have raised their data center operating temperatures beyond our ASHRAE recommended temperature of 27°C (80.6°F). Here are two references of which there are probably more available.

- Facebook data center: Video “Facebook Data center” reported that they are operating their data centers at 85°F (29.4°C)
- Microsoft Tech Article: “Microsoft aims to slash data center water usage by 95% in 3 years” reported that their operating temperature at their Dublin data center was set to 95°F (35° C).

These two data centers are examples of operating at a higher temperature than the recommended temperature published in our ASHRAE datacom publications. However, as

outlined in section 2.3 of the Thermal Guidelines a higher operating temperature may be acceptable. These cautionary words are provided in section 2.3:

“Data center optimization is a complex, multivariable problem and requires a detailed engineering evaluation for any significant changes to be successful. An alternative operating envelope should be considered only after appropriate data are collected and interactions with the data center are understood. Each parameter’s current and planned stats could lead to a different endpoint for the data center optimization path.” We would not encourage a blanket change to a higher recommended temperature for all data centers but to follow the process that is outlined in section 2.3 for a specific data center.

We hope the information outlined in my letter will answer your questions. If you have more questions/comments, please feel free to contact me. And please let me know if you want a complimentary one-year subscription to our ASHRAE TC9.9 online datacom encyclopedia.

Sincerely,

A handwritten signature in black ink that reads "Matt Koukl". The signature is written in a cursive, flowing style.

Matt Koukl  
Chair, ASHRAE TC9.9