techUK

EcoDesign Directive: Lot9 on servers and data storage

Quick review of the legislation process
Summary of industry concerns

February 2017

1 Quick review of the legislation process

Context
The EcoDesign Directive is a long running policy instrument to improve the environmental performance of a broad range of products at the design stage. It is broken down into product specific areas, known as Lots. Lot9 covers servers and enterprise data storage.

During 2016 a major study was conducted on existing standards relevant to the environmental performance of these products. The objective was to assist the Commission in its decision making regarding the kind of regulatory requirements that might be appropriate for this group of products.

The study was challenged by industry because of shortcomings in its calculations and methodology, most particularly regarding metrics for calculating server efficiency. After a protracted tussle and the production of a huge dossier by various saintly techsperts, the Commission agreed to use the metric proposed by industry.

The study was finally published at the end of 2016, identifying and evaluating industry standards that could be adopted, deployed or referred to. The study is available here: http://www.server-standards.eu/project-documents/

Recent developments
All this spadework was done just in case the Commission should in future be minded to propose regulations relating to these products. The Commission rarely misses an opportunity for regulation so, as night follows day, the regulatory proposals have been published and there is a consultation forum (meeting) scheduled for 17th February in Brussels. It is open to representatives from the Commission including JRC, from Member States, industry, consumers and NGOs.

Timelines
After the meeting there will a four week period for comments on the proposals before they are revised. An impact assessment will be conducted and the proposals will go through Interservice consultation and thence to WTO. Finally the regulatory Commission will go through the proposals and vote. The proposals could be adopted as early as Autumn 2017 and the in force date is stated as 1st January 2019. New servers on the market on the date the regulation comes into force (irrespective of when manufactured) will need to comply.

Issues
A cursory review of the proposals reveals a number of issues, some technical, some process-related. A summary of issues and concerns is provided below and further explanatory detail on the technical points is provided in a separate document.

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2 Summary of issues and concerns

Technical issues include:

- **Disassembly requirements:** the proposals are over-prescriptive and refer to gluing and welding. Ease of disassembly should be stated as the requirement, not how it is to be achieved.
- **ASHRAE:** Manufacturers accept that servers should be certified above ASHRAE A2 but the impact of ASHRAE on efficiency /PUE is significantly overestimated. This should be corrected.
- **Idle power limit:** Idle running limits have been proposed without adjustments for processor capacity, performance capability or active efficiency threshold.
- **HPC:** the proposals have serious implications for High Performance Computing (HPC) and could exclude these important products from the market, distributing tasks across multiple lower performance devices, reducing efficiency, increasing embodied energy costs, requiring additional facilities and pushing up energy use. HPC should be excluded from this requirement.
- **Power supply efficiency:** Requirements need to be adjusted to accommodate single output and multi-output power supplies.
- **Storage product definition:** this needs to be clarified.
- **Data deletion:** The requirement for inbuilt software to delete all data so that machines can be reused is contentious and likely to be impractical.
- **Measuring server efficiency:** The proposed industry metric has been adopted but the proposals are not specific on how this metric can be accessed.
- **Mineral products reporting:** the proposals are of limited use and very costly.
- **In force date of 1 January 2019:** this is too early for such complex products.

Process issues include:

- **Testing**: Methodologies, configurations and requirements are unclear.
- **An overly technical and prescriptive approach.** The proposals should be drafted in terms of principle and outcome.
- **Technical expertise:** This is a highly complex, technical, and fast changing area. Desk officers cannot be expected to understand all the detail. This is problematic when there are differences of opinion between consultants and industry. Better routes to resolution are needed.
- **Evidence:** Legislative proposals are being made without evidence as to the feasibility of implementing them, or even whether they will meet policy objectives. Statements and proposals requiring more transparency and/or an evidence base include, but are not limited to:
    - **Assumptions that regulating one part of a complex system will work:** A data centre is a system. Installing the most efficient servers will not necessarily make that facility more efficient. That is why industry tools developed by experts in the Green Grid, by the EU Code of Conduct and by CENELEC (50600 series) all address the data centre system.
    - **Assumptions that the policy will deliver rather than BAU:** the proposals assume that the policy will deliver reductions in multiple TWh. How will this be differentiated from BAU savings (around seven orders of magnitude over the last 30 years)?
    - **Lack of evidence:** Statements made on the estimated energy consumption of servers and projected savings need supporting evidence, stated assumptions and methodology.
    - **Assumptions regarding "myopic purchasing":** The statement that low cost servers are purchased in preference to efficient models needs to be evidenced.
- **Barking up the wrong tree:** Utilisation is a greater driver of energy efficiency in data centres than server efficiency ratings. Higher performance servers with higher idle power offer the greatest ability to virtualize and reduce data centre energy consumption.