

→ 2nd stakeholder Meeting Minutes

Study for the review of the Commission Regulation
2019/424 Ecodesign of Servers and Data Storage Products



Date/ Time: 28/09/2023, 14:30–17:00 CET

Attendees – Project team

Davide Polverini (GROW; Study Policy Officer), Eirini Passia (ICF; Project Coordinator), Tom Lock (ICF, Project Director), John Clinger (ICF, Technical Lead), Laurent Petithuguenin (ICF, Technical Lead), Abhishek Jathar (ICF, Modeller), Todd Leddy (ICF, Researcher)

Minutes

Introductions

Introduction to the project and a round table of introductions from the study team and DG GROW. ICF covered the study progress.

Technical Analysis – Phase 1 – Review items a-t (split into themes): [see accompanying slide pack.](#)

ICF started by setting the scene that data usage has increased exponentially over the last few years with server active efficiency also increasing in this time. Due to this increase in energy efficiency, we have not experienced an increase in data centre energy consumption even though data consumption has increased.

Updating current Ecodesign requirements (Review of items a & b): ICF introduced the draft recommendations put forward. One of the key aspects is to consider the score for the typical server configuration to align with ENERGY STAR. Currently the Ecodesign regulation only considers a server family and will only consider the minimum and the maximum performance configurations for the active efficiency. ICF introduced the idle performance item of the review. There are concerns with this metric which are based around active efficiency including some idle metrics. As a result, the study team have not reached a conclusion on idle yet, due to a lack of data on utilisation rates with ICF requesting data on this. Tech Buyer responded that they would provide monitoring software or academic studies to help. **ACTION:** ICF to connect with Technyner. ICF shared that another recommendation for servers is to report their utilisation rate in real time.

ADEME agreed that most servers are 20–30% utilised. It was asked if utilisation will be measured at server level or system level. ICF replied that it will be for product level, however, for data that will be used in modelling, this can be provided at system level. DG GROW reiterated that the study team needs more evidence to help understanding the relevance of continuing to have idle requirements and that it would be preferable to have data at product specific level.

ECOS would favour retaining idle requirements and believe removing idle requirements could cause problems. ICF raised their concerns with idle being that for products to meet idle thresholds they must enable power management functions, however power management is easily disabled by users.

The Green Grid mentioned that there are a number of reasons outside of utilisation that mean regulating idle power is problematic. Active SERT metric already includes many instances of idle and lower load levels. Offered data on this. ICF called for data on how many servers operate at low utilisation rates compared to larger servers.

Regulation definitions and scope: (review of items c, e & f): ICF introduced the draft recommendations that have been put forward. ECOS raised that they are wary of the definition of hyperconverged and custom made servers, mentioning of potential scope to create loopholes for these definitions. Thus, definition must be written well to avoid some servers unintentionally into these definitions. ICF explained that they have considered alignment with ENERGY STAR.

Processor Power Management Function (review of item g): ICF introduced the recommendations that have been put forward. DG GROW mentioned that the recommendations should not be underestimated, and they can be equally important to the development of the regulation.

Standby-Readiness for Servers (review of item p): ICF introduced the recommendations that have been put forward. Total IT Global suggested that larger servers can be looked at in terms of sustainability standpoint.

Energy Label (review of items s): ICF introduced the recommendation to include an energy label or an information sheet for servers and stated that they would like to get in touch with procurers involved in the EU energy efficiency decisions. ICF request for any stakeholders who do procurement or know suitable procurers to get in touch.

ICF introduced the recommendation to keep the provision about the ASHRAE operating conditions on the information sheet because this will be useful for data centre operators.

Digital Europe asked whether this is an expansion of the information requirements that we already have or will this label be similar to what washing machines for example have. ICF explain that both have been considered, and if the energy label is put forward then this will be like what washing machines have. DG GROW echoed this point.

German Environment Agency asked which procurement professionals will be used regarding the energy label and what criteria will ICF focus on to decide which procurers to choose. DG GROW explained that as seen in the Task 3 report the SERT score will be used to provide the energy label for servers.

TechBuyer asked would the energy efficiency information be at configuration level or applicable to generic machines. ICF explained it would be asking for this information to be the typical server configuration.

Cisco stated that typically servers are sold as B2B product and a physical label would, therefore, not be useful. The information sheets may be useful in some cases. DG GROW explained that the reason for the label is to help the buyers understand the features of the device and explained that even though it may be a B2B transaction not all buyers will have prior knowledge of environmental feature of servers.

ECOS stated that it would be useful to have a means of interpreting efficiency values so that you can determine what the value of the efficiency would be for specific configuration. This would be useful for data centres keeping better inventories, this could be done via a QR code for example. ICF favour this approach raised by ECOS however, it would require the creation of an interpolation mechanism and they are not aware of a recognised standard that does that.

Material Efficiency (review of items d, j, l): ICF introduced the material efficiency recommendations.

Green Grid asked if there is a plan to develop a cross reference table for the skill level versus environment in which a repair must be made in.

EERA - European Electronics Recyclers Association explained that EN 50614 is a good model because it sets out OEM parts and how they can be used and tested for safety. This links to what would be needed in the product passport. This ensures all those downstream have the right information. EERA raised that the Electronic Recycling Association argue that EN 50614 should be mandatory. ICF can contact EERA to discuss this further.

Techbuyer suggested an open sourcing design for tools. This would allow repairers to potentially 3D print their own, saving on transport and reducing over production of tools. ICF, would be keen to hear suggestions on this and asked to provide more information post call on how this would benefit the repairer and what sort of parts could be replaced. **ACTION:** ICF to connect with Techbuyer.

ECOS provided positive feedback and supported the work on material efficiency in the published reports, raising a concern on the legitimacy of repair aspect. The aim is to must make sure that products are repaired as often as possible and used for as long as possible. It is important to ensure manufacturers are not given the ability to reject repairs. DG GROW requested data on which type of levels of minimum disassemble ability tools we should use and reiterated that the approach taken on material efficiency for this study mimics (in conceptual terms) the one done for smartphones, using the same horizontal standards from Mandate M/543. ECOS stated that they were a little disappointed with the wording of this regulation and feel that it has actually provided some barriers to repair. ECOS mentioned that they would be happy to make some recommendations to refine the language.

Intel Ireland Inc, raised that manufacturers would need to take into account EU Directive 2016/943 and Regulation 2021/ 821 which exposes sensitive information about their products. ICF explained that they expect this is happening to the product as a whole so don't see why this can't be done for spare parts.

EERA flagged that parts should also include the glue used in servers. The main complaints from recyclers are that the glue makes it too difficult to disassemble and recycle the product. ICF raised that the regulation already requires that the products to be disassembled, so not glued together. EERA mentioned that the glue should at least be disassembly friendly.

Digital Europe reminded that servers are not to be compared with mobile phones. LOT 9 products are designed to be maintained/repared while in operation.

Operating Conditions (Review of items h, k): ICF introduced the recommendations that have been put forward. Cisco raised a question on how long the ASHRAE classes will be adopted for? ICF responded that although recommendations suggest that we should have servers operating at a higher temperature than they often are, this should be at the higher end of the recommended range.

DG GROW raised that this is another part that feedback is welcome. A deeper understanding on the actual operational conditions of the serves is required. ICF follow up saying that one key consideration of servers that operate outside of recommended range will null and void their warranties. DG GROW reiterate the call for evidence here to allow an understanding of data centres that operate at lower temperatures.

Liquid Cooling Systems and Solutions (Review of item n): ICF introduced the recommendations that have been put forward and raised that SERT is not validated to be used on liquid cooled servers nor DC servers. Liquid cooled servers are a niche application and so have not been discussed in standards such as SERT testing. Which is the primary reason why this has not been included in the review study. The Green Grid confirmed that this is right.

DG GROW discussed that from previous engagement with stakeholders it is difficult to define liquid cooled products especially at product level. The solution may not actually be at product level it may be at rack or even server room level. In any case, DG GROW asked stakeholders (to the Green Grid and SPEC, in particular) to inform if there are solutions for testing/metrics at product specific level (such as the SERT metric) that could factor in parameters (such as temperatures) related to this type of solutions.

ECOS mentioned that we should not be held back with doing something in the regulation just because the SERT requirements have not caught up with this product group. So that we don't just discount these potential feasible areas.

ADEME disagreed that liquid cooling is usually only used for HPVC servers. One reason why it is necessary to include liquid cooling is because they are more efficient than normal servers. ICF raised that any data on this point would be useful in order to gain a better understanding of this.

The German Environment Agency raised that water cooling is the future, however, there is a lack of standards and asked if there has been any development in standards for liquid cooled.

ECOS suggested we have an information requirement for liquid cooling products. ICF raised that there are concerns with this as the parameters around how the tests are conducted aren't locked down, then there cannot be easily comparable data to analyse for liquid cooling products. Legrand raised that there is an IEC-International Electrotechnical Commission Subcommittee on housing of IT equipment which is looking at liquid cooling but there are no standards that have been developed yet. ICF raised that any comments added on liquid cooling please be accompanied with specifically the aspects of liquid cooling they are considering.

Direct Current Power Supply for Servers (Review of item q): ICF introduced the recommendations. The Green Grid raised concerns that ENERGY STAR is resolved around titanium power supplies and having titanium requirements for all power supply sizes means that small power supplies which can't get titanium levels of efficiency, waste energy because you need to put larger power supplies on these small servers.

Review of the following items has not raised questions or points: Items i, r, m, o

Other Topics: ICF introduced draft recommendations around aspects of other topics raised by stakeholders– no questions raised by attendees.

ADEME raised a point on utilisation suggesting that ETUSV should be used in the regulation. Can we specify for example, a minimum workload to activate a server? ICF responded explaining there are already systems in place that do this, however, ICF is happy to take these suggestions on minimum activation on board.

MEErP Tasks 1-4 – Phase 2:

ICF introduced the scope and aims of Phase 2 Tasks 1 – 4, with the draft reports having been published prior to the meeting.

Task 1: ICF & DG GROW request for comments on Task 1 which can be shared with the study team after the call. Digital Europe asked of the purpose of requesting the sensitive information. DG GROW provided an explanation on how and where the data will be used in the technical, economic, and environmental analysis that is done in Task 5.

Task 2: ICF requested information on the sales data on servers divided by the form factors, as well as information on sales data for data storage products and the four categories that are covered by the study. ICF ensured that this sensitive information will be dealt with appropriately. ICF requested information on installed base stock of servers and data storage products. In addition, ICF asked that manufacturers can confirm that the data the study team has presented in Task 2 is accurate.

Task 3: ECOS raised that the graphs are hard to interpret if we don't know the performance of servers that are being tested. ICF confirmed that the graphs reflect the typical configurations. ECOS mentioned that even with typical configuration this can cause a big difference in performance and recommended that this is done in three dimensions using; performance score, SERT score and idle power all together as a useful third axis. ICF raise that this may double count performance.

DG GROW mentioned that the database that is collected in Task 3 report will be used as the basis for the energy label classes if they are set. Therefore, any data provided is vitally important. Green Grid provided

positive feedback for the study and mentioned they are collating server data to add to the existing server database, and are happy to share. **ACTION:** ICF to connect with Green Grid on the newest data.

Task 4: ICF requests that the information that has been researched in task 4 can be sensed check and feedback provided via email. Techbuyer queried whether the Bill of Materials is for the latest generation or a range. ICF confirmed and mentioned that a range may be useful as the study team needs to develop a base case to determine the “average server” today. Techbuyer mentioned a study which has done a bill of materials for older servers. **ACTION:** ICF to contact Techbuyer to get contacts on this study.

EERA asked the study team what they are looking for in terms of the end-of-life aspects, if they could provide more information then EERA will share with their recycler members. **ACTION:** ICF agreed to provide feedback on this.

The closing slide summarises, the data that the study team requires and why the data required will help the study team.

AOB

The study team require the data from the stakeholders to help with the study’s recommendations. ICF explained that a new questionnaire will be released by the study team on the website and called manufacturers to provide data on this. ICF explained that feedback can be provided on the Phase 1 and Phase 2 (Task 1 to Task 4) reports. In addition, feedback on the data request from the presentation by the 24th October 2023.

Closing statement

DG GROW & ICF express their appreciation to attendees and close the meeting.

List of Attendees

Organisation
Danish Energy Agency
EPEE
Asetek
Danish Environmental Protection Agency
Amazon Web Services
Viegand Maagøe representing Danish Energy Agency
French Ministry of Energy
ECOS
Advanced Micro Devices (AMD)
Swiss Federal Office of Energy
www.techbuyer.com
R&D, product compliance center
Dell Technologies
BAM Bundesanstalt für Materialforschung und -prüfung
HPE
NetApp, Inc.
IBM
Panasonic Europe

Hanover Communications
Global Electronics Council
Bureau Brussels
Lenovo ISG
ECD Compliance
Dentons Global Advisors
Cisco
EERA – European Electronics Recyclers Association
Viegand Maagøe A/S
INTERTEK
EdgeConneX
ISG Server
Copeland Europe GmbH
German Environment Agency
Free ICT Europe Foundation
ADEME
Amazon
OvHcloud
Fujitsu Limited
NVIDIA
Intel Ireland Inc
Microsoft
Danish Energy Agency
Fujitsu Technology Solutions GmbH
Oracle
Legrand
Cefic