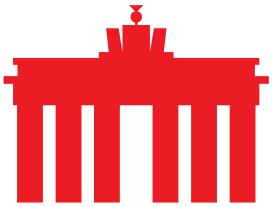

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Position Paper on the Energy Efficiency Directive (recast)

Berlin 05.12.2022

The proposed recast of the Energy Efficiency Directive (EED) was published by the EU Commission in July 2021 as part of the Fit for 55 package. Following the ordinary legislative procedure, the European Parliament (EP) concluded its first reading of the EU Commission proposal and, on 14.09.2022, published its commentary, including several amendments. The Directive is expected to enter into force in the second half of 2023.

The overarching goal of the EED recast is to radically increase energy efficiency across the EU in order to contribute to the achievement of a 55% reduction of Green House Gas (GHG) emissions by 2030, and ultimately the carbon neutrality of the EU by 2050. The EU Commission has identified that the current sum of energy efficiency measures illustrated within the National Energy and Climate Plans (NECP) fall short of achieving a 32.5% reduction of energy consumption. With the recast EED, the EU Commission aims to establish Energy Efficiency First (EEF) as a guiding principle across all industries. Moreover, the ICT sector, and especially data centres, are identified as a key sector with a significant potential for energy efficiency improvements. The recast EED promotes the utilisation of waste heat produced by data centres, provides a basis for the assessment of energy efficiency of data centres based on a common framework and, finally, leads to the creation of harmonised energy efficiency standards for data centres. eco agrees that additional policy measures promoting the efficiency-oriented and demand-driven expansion of data centres are needed.

- **Defining the term ‘data centre’**

The term ‘data centre’ is to be understood as an umbrella term encompassing several types of business models which are characterised by a varying set of performance requirements. This includes cloud, co-location, edge and hyperscale models. A one-size-fits-all approach is not reflective of the inherent differences between various types of data centres. Therefore, a regulatory definition of the data centre term should be conducive to a differentiated approach to energy efficiency improvements in data centres. The definition included in Article 2 of the EED is generally fitting. However, the need for differentiation should be strengthened throughout the Directive. In particular, measures included to promote the utilisation of waste heat and energy performance reporting requirements should take better account of the need for differentiation.

- **Waste heat utilisation**

The recast EED draft in its current form foresees an obligation to assess the potential to utilise waste heat for data centres with an energy input of 100 kW or more. However, exemptions for the mandatory feasibility assessment of waste heat exist in cases where there is no granted economic and technical feasibility of such applications. In addition, a cost-benefit analysis for waste heat utilisation in newly installed or substantially refurbished data centres above 100kW is to be carried out.

The utilisation of waste heat produced by data centres thus represents a largely untapped potential for energy efficiency improvements. The promotion of waste heat utilisation would lead to significant energy efficiency improvements and could represent a significant contribution for the decarbonisation of the data centre industry. Moreover, harnessing waste heat potentials may also aid in the achievement of ambitious carbon neutrality and energy efficiency goals at the national and EU levels. However, at present, several barriers to waste heat utilisation still exist.

eco agrees that waste heat potentials should be exploited where possible and granted economic and technical feasibility. However, the waste heat of some data centres is below the temperature required to feed into heating and cooling networks. To feed waste heat produced by data centres into heating and cooling networks, additional processing technology is required. This technology must be purchased and installed, and requires additional electricity, creating a significant financial and operative burden on data centre operators. As such, waste heat utilisation can be uneconomical in the absence of attractive framework conditions.

Furthermore, the Directive places a responsibility on data centre operators to assess the feasibility of waste heat utilisation. eco welcomes the fact that the EP's amendments to the draft Directive take the investment cycles of data centre operators into account by not extending the requirement for a feasibility assessment to already existing data centres, unless they are being substantially refurbished. However, following the EP amendments, the requirement would apply to planned data centres and data centres undergoing refurbishment, with a rated energy input as low as 100 kW. The required assessment mandated by Art. 24 (4) (d), with an applicability threshold of 100kW, can be considered an undue burden for data centre operators with an SME character, given the energy intensity even of small-scale data centres. Any threshold equal to or below 1MW would run the risk of creating disproportionate disadvantages. In addition, given a positive feasibility assessment, the data centre operators' intention to utilise waste heat must be mirrored by a requirement for operators of district heating and

cooling networks to make available the required network capacity and to provide sufficient connection points. In addition, many data centre operators are already able and willing to offer waste heat. A purchase obligation for waste heat should be placed on operators of district heating and cooling networks.

- **Energy performance data and European energy efficiency performance standards**

The EED foresees an obligation for all data centres with a rated power input of at least 100kW to make energy performance data available. The energy performance data is to be collected by the respective Member State and reported to the EU Commission with the aim to establish a publicly accessible database. Also in this instance, eco criticises the exceedingly low threshold which will increase the administrative burden, especially for small-scale data centres. Moreover, the actual added value of the reporting requirement in terms of actual energy efficiency gains has to be put into question. Aside from ‘naming and shaming’ less efficient data centres, the mechanism is likely to have little potential to facilitate and promote overall energy efficiency increases. Moreover, the added administrative burden should in particular be taken into account when assessing the efficacy for such a reporting requirement, and this must be proportional to the expected added value in terms of energy saving.

Additionally, it has to be taken into consideration that information related to the energy consumption and performance of data centres may fall under the protection of intellectual property or may be considered as trade secrets. Moreover, instead of a Member State level approach, eco advocates for a communal solution based on harmonised EU assessment criteria.

eco supports the establishment of common European standards for the energy-efficient and climate-neutral operation of data centres. Common standards across the EU are necessary to ensure the continued improvement of energy efficiency in data centres while maintaining a level playing field for the operation of data centres. The competitiveness of data centres should not be compromised through the creation of unfair (dis)advantages arising as by-products of undifferentiated performance standards. Prospective performance standards should differentiate between various types of data centres to avoid regulation-induced market distortions.

- **Attractive framework conditions for energy efficiency**

Given that power consumption is the most significant cost factor for data centres, it is in the data centre operators’ own best interests to promote energy efficiency optimisation wherever possible, including the exploitation of

waste heat potentials. Data centre operators recognise this, and much is already being accomplished in terms of self-regulation – e.g., via the Climate Neutral Data Centre Pact (CNDCP). Regulatory efforts at the EU level should aim to promote attractive framework conditions which enable and incentivise further energy efficiency improvements. This also includes the removal of barriers related to administrative processes and approval procedures for the construction and renovation of data centres. The current EED framework does not yet sufficiently reflect this need.

Conclusion

eco welcomes the efficiency-oriented transformation of the data centre industry. However, the utilisation of waste heat should be promoted only in instances where it is technically feasible and economically viable to do so. To this end, eco agrees with the approach to encourage waste heat utilisation based on cost-benefit analyses. However, the threshold for a mandate to perform such assessments should take into consideration the energy intensity of SME data centres, who should not be unduly disadvantaged by administrative hurdles. Moreover, eco welcomes the establishment of EU-wide energy efficiency criteria. However, these standards should be enforced based on harmonised mechanisms so as to ensure the cross-border competitiveness, and their necessity should also be assessed by taking the added administrative burden into account. Moreover, it must be borne in mind that there can be no ‘one-size-fits-all’ solution given the diversity of business models enveloped by the term ‘data centre’. Lastly, regulatory efforts should always aim to create attractive framework conditions for energy efficiency. Data centres are a crucial component of the digital energy transition, and regulatory efforts should not unduly inhibit the growth of this sector. Hence, a greater focus should be put on the removal of administrative barriers related to planning and authorisation of energetically efficient data centres.

About eco

With more than 1,100 member companies, eco is the largest Internet industry association in Europe. Since 1995 eco has been highly instrumental in shaping the Internet, fostering new technologies, forming framework conditions, and representing the interests of members in politics and international committees. The focal points of the association are the reliability and strengthening of digital infrastructure, IT security, trust and ethically oriented digitalisation. That is why eco advocates for a free, technology-neutral and high-performance Internet.