Working together towards climate-neutral data centres: DIGITALEUROPE's views on the Energy Efficiency Directive

DIGITALEUROPE welcomes the European Commission's "Fit for 55" legislative package, published on 14 July 2021. Digital plays a key role in enabling the green transition and achieving the ambitious climate goals. Studies show that carbon emissions of traditional sectors e.g., construction, manufacturing, energy, transport, or agriculture can be cut by a fifth by 2030 through digitalisation.[1] This is ten times more than what the ICT industry produces. Hence, we welcome the opportunity to comment on the proposal for the Energy Efficiency Directive (EED), in particular on data centres.

DIGITALEUROPE supports efforts to better measure the progress of the data centre sector towards climate neutrality. We also recognise the importance of monitoring and tracking the progress of all sectors towards sustainability goals. Our industry supports the "energy efficiency first" principle, as we have been taking solid steps towards minimising our own energy consumption. We are ready to collaborate to identify suitable data and sustainability indicators that data centre operators have the capability to report on, and which can help track progress towards climate neutrality. In addition, ensuring a level playing field for the data centre industry in the European Union that captures facilities of all sizes is essential. Therefore, we are recommending a more inclusive scope for reporting that encompasses all data centres above 100 kW.

Further, we ask the Commission to recognise the sustainability leadership of the data centre industry. We seek a partnership with EU policy makers to communicate the strategic importance of data centres and their important contribution. Data centres are leading the transition to climate neutrality whilst enabling the decarbonisation of the European economy via digitalisation.

---

[1] GeSI, *The #Smarter2030 opportunity: ICT Solutions for 21st Century Challenges*, <https://smarter2030.gesi.org/>.

"Energy efficiency first" principle

▸▸ Article 3 of the EED proposal introduces the "energy efficiency first" principle as an obligation to consider energy efficiency solutions in policy and investment decisions in energy systems and non-energy sectors. The data centre sector supports this approach and its implementation in line with the Commission's Energy Efficiency First Principle Guidelines (Annex).[2] It is important that Member States implementing the energy efficiency first principle follow a coherent and balanced approach.

▸▸ Most data centre operators are undertaking unparalleled action to minimise their energy consumption. As a matter of fact, recent years have seen a remarkable decoupling between increasing data services and electricity consumption.[3] This is due to efficiency gains in computing and infrastructure as well as a shift towards greater use of purpose-built data centres at scale. The data centre industry has delivered significant energy efficiency improvements over the past decades, and it is now one of the most advanced sectors in terms of energy efficiency and decarbonisation. According to the International Energy Agency, "if current trends in the efficiency of hardware and infrastructure are maintained, global data centre energy demand can remain flat through 2022, despite a projected 60% increase in service demand".[4]

Energy performance of data centres

▸▸ DIGITALEUROPE supports the EU's efforts to better measure the energy and environmental footprint of the ICT industry. We welcome the proposals for greater transparency for the data centre industry in Article 11 and Annex VI of the EED. As leaders and pioneers in sustainable and energy efficient design and management of data centres, we believe that increasing the transparency ambition in the European Union will help support informed decision-making. It will also lead to greater awareness about our sustainability efforts and help citizens understand the positive outputs of the data centre industry.

▸▸ In order to ensure comparability and avoid undue administrative burden for data centre operators, we want to ensure that the data is reported consistently across all Member States and is clearly understandable for all stakeholders. Reporting requirements should be based on clear and

---

[2] European Commission 2021, *Annex: Energy Efficiency First Principle Guidelines*, <https://ec.europa.eu/energy/sites/default/files/eef_guidelines_ref_tbc.pdf>.

[3] International Energy Agency 2020, *Data Centres and Data Transmission Networks*, <https://www.iea.org/reports/data-centres-and-data-transmission-networks>.

[4] Ibid

standardised metrics, drawing on existing, well-established industry KPIs. Clear, harmonised definitions of each parameter set out in Annex VI are needed to ensure consistency.

▶▶ While we support transparency, two of the proposed reporting metrics included in Annex VI are of concern to our industry. We understand the importance of measuring the activity of a data centre. However, we urge careful consideration about requesting to report on "data stored and processed" and "data traffic". These proposed metrics are i) challenging or even impossible for data centre operators to collect, ii) commercially sensitive, which could create competition and security concerns and iii) do not actually measure the sustainability of the sector. These requirements are not drivers for energy and water usage.

▶▶ As indicated above, reporting on "data stored and processed" and "data traffic" is challenging or even impossible. Compiling this data is often out of the control of data centre operators because many facilities are used to host and process data on customer servers. Therefore, it is not possible for data centre collocation operators to accurately measure the total data traffic in and out of their facilities. Equally, our understanding of "data stored and processed" and "data traffic" being included in Annex VI is for the EU to better track improvements in IT equipment efficiency in data centres. If that is the case, we would recommend that the European Commission removes these two parameters and focuses on identifying a suitable KPI to measure IT efficiency within the Sustainability Indicator process. We emphasise once more that reporting on the raw "input data" is highly unfeasible as this is very challenging to collect. In this context, DIGITALEUROPE members stand ready to work with the Commission to identify a suitable indicator and define other data to report on their progress.

▶▶ In our view, a more inclusive scope that defines clear size thresholds for data centres is also essential. Therefore, we recommend a threshold of 100kW of installed IT power demand for data centres to be in the scope for transparency reporting. This will ensure a level playing field for the data centre industry in the European Union. At the same time, it will guarantee uniform reporting compliance across Member States.

Acknowledging Sustainability Leadership

▶▶ As emphasised above, we support increased transparency on the energy footprint of our industry. However, there is a risk that the energy data reported could be taken out of context or mischaracterised by those who do not fully understand the role that our industry plays in the digital economy. For instance, part of the growth in data centre demand in recent years comes about from businesses shifting their workloads to the cloud.

This allows them to retire less efficient servers and move onto highly efficient, centralised data centres. Thus, electricity demand previously accounted for under the commercial sectors in national energy balances is migrating to data centres. Hence, the energy efficiency savings are not often acknowledged.

▶▶ Energy efficiency benefits like this and other that data centres enable are oftentimes challenging for the industry to communicate to the public. This challenge could increase if reported energy data is misrepresented. As the data centre industry engages with the EU's new energy performance monitoring regime, we would greatly welcome the support from European policymakers in helping communicate these nuances. Such an approach would ensure that our industry is not unfairly maligned as an increasing share of business and public sector service demands move to larger, centralised data centres. To support this, we encourage the European Commission to work with DIGITALEUROPE to articulate the energy efficiency of large data centres so that stakeholders have a clear understanding of the energy savings from the industry.

Sustainability indicators

▶▶ We welcome the vision of the European Commission to introduce dedicated sustainability indicators. These efforts need to rely on existing international standards, established industry KPIs and data centre industry expertise. DIGITALEUROPE is ready to actively support this work.

▶▶ The data centre industry already follows existing voluntary industry and EU data centre sustainability standards e.g., the Climate Neutral Data Centre Pact (CNDCP), the European Code of Conduct for Data Centres, ISO 50001 and ASHRAE data centre standards. In addition, the European Green Digital Coalition has as its main aim the development of methodologies for evaluating the net climate impact of green digital solutions. We believe that the Commission should work to create standards that contribute to the goal of a level playing field and market competition for data centre providers. The balance of these factors is important while ensuring an efficient and effective methodology for measuring, auditing, and regulating impact. Having a harmonised EU level approach towards standards and methodologies will allow our sector to better leverage the internal market to achieve our sustainability goals.

▶▶ The EED proposes four basic dimensions of a sustainable data centre (recital 67). These refer to "how efficiently a data centre uses energy, how much of this energy comes from renewable energy sources, the reuse of any waste heat that it produces and the usage of freshwater." From our

perspective, a broader view of clean energy is needed to encompass all forms of carbon-free energy resources. We recommend broadening this dimension to "how much of that energy comes from renewable *or carbon-free* energy sources". Further, the dimensions on energy efficiency, clean energy and freshwater should not be equal to an indicator on data centre waste heat recovery. While data centre operators want to pursue data centre waste heat recovery projects, it is important to understand that the viability of such projects has to be assessed on a site-by-site basis and is dependent on third parties and infrastructure outside of the data centre. Adding waste heat recovery to the list of primary sustainability dimension indicators will create a perception that data centres are more sustainable in certain parts of Europe, where district heating is prevalent. Failing to reflect the geographic and climate variations across the EU may have the unforeseen consequences of driving investments towards certain Member States and away from others.

Data Centre Waste Heat Recovery Assessments

▶▶ We welcome the Commission's pragmatic cost-benefit assessment approach to promoting greater recovery of data centre waste heat. This approach recognises the importance of assessing viability on a site-by-site basis. The unique features of each site must be considered, factoring in technical feasibility, demand, and the economic viability of such projects.

▶▶ We also welcome the explicit exemption of cost-benefit assessments for data centres that recover their own waste heat on site. To provide clarity to local authorities, co-legislators need to provide clear definitions for the terms "newly planned" and "substantially refurbished" data centres. Furthermore, it is essential to clarify the scope of the cost-benefit assessments to ensure uniform application across the EU.

▶▶ Data centre operators want to share their waste heat with offtakers and seek a regulatory framework that facilitates and simplifies the process of delivering heat recovery and reuse projects where these are viable. Regulatory barriers for businesses wishing to make their heat available can be addressed. Heat producers need a framework that does not penalise them when heat is temporarily unavailable because of maintenance, seasonality, or other downtime events. We have also seen how incentive structures can encourage heat reuse agreements. For instance, Denmark has introduced tax incentives for waste heat recovery. These types of programmes, at national or local level, can make the recovery of low temperature heat more financially viable and encourage investment.

Public procurement

▸▸ Article 7 on public procurement proposes to grant Member States the flexibility to set "wider sustainability, (…) environmental and circular economy" criteria in public procurement practices. We support the principle of sustainable public procurement underpinned by green public procurement criteria [5] [6]. However, we note the high potential for fragmentation of the internal market as a result of Member States introducing diverging criteria. Member States pursuing asymmetric approaches create barriers to trade in the internal market. These barriers deprive the green transition of the economies of scale that reduce the cost of the transition.

▸▸ As such, prior to the adoption of sustainability criteria at EU level, Member States seeking to introduce sustainability standards for public procurement should be required to make use, where they exist, of the EU Green Public Procurement (GPP) criteria "core" level specifications. If there is a desire to go further, Member States can choose to make use of the "comprehensive" level specifications.

○ ◥ ⬝⬝ ◢   Additional aspects in the revised Energy Efficiency Directive

Exemplary role of the public buildings

▸▸ Article 6 of the proposal seeks to extend the scope of the mandatory 3% public building annual renovation target beyond central government buildings to include all levels of public administration, including regional and municipal authorities. Further, it is proposed to lower the floor area limit to 500 m^2 to 250 m^2. As buildings represent 40% of EU energy consumption, we support measures to strengthen the exemplary role of the public sector in renovations in pursuit of the Renovation Wave's ambition to at least double the current 1% annual renovation rate for public and private buildings.

▸▸ In this regard, DIGITALEUROPE would like to underline the key role of digital as an integral component of the green transition in the built environment. The proliferation of Internet of Things (IoT) solutions in the

---

[5] DIGITALEUROPE (2020), *Procurement for a Sustainable Future*,
<https://www.digitaleurope.org/resources/procurement-for-a-sustainable-future/>.

[6] DIGITALEUROPE (2021), *Digital action = Climate action: 8 ideas to accelerate the twin transition*,
<https://www.digitaleurope.org/resources/digital-action-climate-action-8-ideas-to-accelerate-the-twin-transition>.

built environment, within Technical Building Systems (TBS) and at the building management level are fundamental to improving the energy efficiency use, ongoing operation and longevity of buildings and their TBS.

In conclusion, DIGITALEUROPE is committed to continue supporting the European Commission on the "Fit for 55" legislative package. We stand ready to provide additional feedback during the next legislative steps of the proposal for the revision of the Energy Efficiency Directive.

FOR MORE INFORMATION, PLEASE CONTACT:

Claudia Gherman

Policy Manager

claudia.gherman@digitaleurope.org / +32 493 25 40 67

About DIGITALEUROPE

DIGITALEUROPE represents the digital technology industry in Europe. Our members include some of the world's largest IT, telecoms and consumer electronics companies and national associations from every part of Europe. DIGITALEUROPE wants European businesses and citizens to benefit fully from digital technologies and for Europe to grow, attract and sustain the world's best digital technology companies. DIGITALEUROPE ensures industry participation in the development and implementation of EU policies.

DIGITALEUROPE Membership

Corporate Members

Accenture, Airbus, Amazon, AMD, Apple, Arçelik, Assent, Atos, Autodesk, Bayer, Bidao, Bosch, Bose, Bristol-Myers Squibb, Brother, Canon, Cisco, DATEV, Dell, Dropbox, Eli Lilly and Company, Epson, Ericsson, ESET, EY, Facebook, Fujitsu, GlaxoSmithKline, Global Knowledge, Google, Graphcore, Hewlett Packard Enterprise, Hitachi, HP Inc., HSBC, Huawei, Intel, Johnson & Johnson, Johnson Controls International, JVC Kenwood Group, Konica Minolta, Kyocera, Lenovo, Lexmark, LG Electronics, Mastercard, Microsoft, Mitsubishi Electric Europe, Motorola Solutions, MSD Europe Inc., NEC, Nemetschek, NetApp, Nokia, Nvidia Ltd., Oki, OPPO, Oracle, Palo Alto Networks, Panasonic Europe, Philips, Pioneer, Qualcomm, Red Hat, ResMed, Ricoh, Roche, Rockwell Automation, Samsung, SAP, SAS, Schneider Electric, Sharp Electronics, Siemens, Siemens Healthineers, Sky CP, Sony, Sopra Steria, Swatch Group, Technicolor, Texas Instruments, TikTok, Toshiba, TP Vision, UnitedHealth Group, Visa, Vivo, VMware, Waymo, Workday, Xerox, Xiaomi, Zoom.

National Trade Associations

Austria: IOÖ
Belarus: INFOPARK
Belgium: AGORIA
Croatia: Croatian Chamber of Economy
Cyprus: CITEA
Denmark: DI Digital, IT BRANCHEN, Dansk Erhverv
Estonia: ITL
Finland: TIF
France: AFNUM, SECIMAVI, numeum

Germany: bitkom, ZVEI
Greece: SEPE
Hungary: IVSZ
Ireland: Technology Ireland
Italy: Anitec-Assinform
Lithuania: INFOBALT
Luxembourg: APSI
Moldova: ATIC
Netherlands: NLdigital, FIAR
Norway: Abelia
Poland: KIGEIT, PIIT, ZIPSEE
Portugal: AGEFE

Romania: ANIS
Slovakia: ITAS
Slovenia: ICT Association of Slovenia at CCIS
Spain: AMETIC
Sweden: TechSverige, Teknikföretagen
Switzerland: SWICO
Turkey: Digital Turkey Platform, ECID
United Kingdom: techUK