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Position Paper

on the revision of the European Guidelines on State aid for environmental protection and energy

Berlin, 02 September 2020

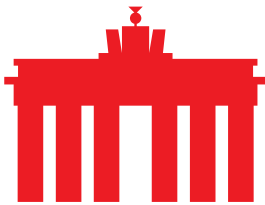
In May 2019, the Directorate General for Competition of the European Commission (EU Commission) launched a consultation on the revision of the Guidelines on State aid for environmental protection and energy 2014-2020 ([EEAG](#)), which are in force until 2020. The consultation is to evaluate, among other things, the functioning of the guidelines, their economic impact, and any possible need for changes to the current guidelines.

At the end of 2019, the newly elected EU Commission, under the leadership of Commission President Ursula von der Leyen, presented the European Green Deal, an ambitious growth strategy that is designed to lead the European economy to climate neutrality by 2050. In order to reach this goal in the long term, coherent and targeted legislation in the EU is to be established, including the revision of the existing state aid rules.

The EEAG has a direct impact on the promotion of renewable energy and gives Member States the possibility to reduce the burden related to funding support for energy from renewable sources on a pro rata basis. Up to now, the EEAG has allowed the Federal Republic of Germany to suspend the Renewable Energy Sources Act (EEG) levy especially for electro-intensive industries, e.g. steel, chemical, and metal manufacturers, on a pro rata basis. The German EEG levy is used to finance the expansion of renewable energies.

eco – Association of the Internet Industry and the Alliance for the Strengthening of Digital Infrastructures in Germany initiated by eco welcome the announced revision of the EEAG, and both parties participated in the corresponding consultation last year. Digital infrastructure operators comprise of data centres such as co-location, cloud and hyperscale providers, which are considered to be critical infrastructures for the maintenance of important societal functions. Despite their high electricity consumption and their systemic importance, data centres are not among the sectors eligible for EEAG aid.

From the point of view of data centre operators, the EEAG in its present form and the assessment of the economic sectors contained therein is no longer deemed to be appropriate. Against the background of increasing digitalisation, it is therefore necessary to consider the importance of data centres and to critically discuss their previous position under the EEAG.



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Energy costs

The operation of data centres requires a constant and reliable energy supply – the primary energy source is electricity – to ensure the transmission, storage, processing and management of data. The electricity demand of German data centres in 2018 was just under 14 TWh.¹ Current analyses of the future energy consumption of data centres show very high margins of fluctuation, but almost all studies agree that the energy requirements will continue to increase.

Data centres operate in a market environment strongly influenced by international and European competition, so that investment decisions for the expansion of existing data centres or their new construction are made primarily on the basis of the prevailing cost situation. In the course of deciding to invest, the energy costs due to the high energy consumption of the data centres are a central decision criterion. In 2018, non-electro-intensive industrial companies located in Germany with an annual electricity consumption of 160 MWh to 20 GW spent an average of 17.96 cents/kWh on electricity procurement. In contrast, the average electricity price for electro-intensive industrial enterprises amounted to 8.96 cents/kWh in the same period.² According to Article 63 et seq. EEG, data centre operators cannot apply for a limitation of the EEG levy and must therefore pay the electricity price and all applicable levies, charges and taxes in full. This circumstance leads to considerable cost pressure on the data centres located in Germany compared to European competitors.

In recent years, the northern European Member States have developed extensive settlement strategies for attracting new data centres in order to provide attractive location conditions. It is well known that, due to the prevailing climatic conditions (lower average temperatures) and geographical characteristics, Northern European data centre locations benefit from a high level of renewable energy supply at relatively low cost. In addition, the northern European countries have implemented further measures, e.g. reduction of the electricity tax. In 2016, the Swedish government decided to reduce the electricity tax rate for data centres with a energy consumption > 0.5 MW per year. According to estimates by the Swedish Chamber of Commerce, the electricity price has fallen by 25 to 50 percent as a result of the tax reduction, taking into account the amount of electricity purchased and the location.³

The experience of data centre operators based in Germany shows that both existing and new customers expressly point out the cost and price differentials within the EU and that decisions against western European locations are made with explicit reference to the cost advantages of the northern European countries. While German sites

¹ See Borderstep Institute, "Rechenzentren 2018: Wachstumsschub durch Cloud Computing – Effizienzgewinne reichen nicht aus: Energiebedarf der Rechenzentren steigt weiter deutlich an" (last accessed 13.08.2020)

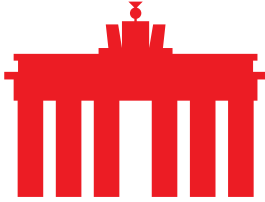
<https://www.borderstep.de/wp-content/uploads/2020/03/Borderstep-Rechenzentren-2018-20200511.pdf>

² See German Federal Ministry of Economics and Energy (BMWi), "EEG-Umlage 2019: Fakten & Hintergründe" (last accessed 06.08.2020)

https://www.bmwi.de/Redaktion/DE/Downloads/E/eeg-umlage-2020-fakten-hintergruende.pdf?__blob=publicationFile&v=4

³ See German-Swedish Chamber of Commerce, "Schweden senkt Stromsteuer für größere Rechenzentren" (last accessed 08.07.2019).

<https://www.handelskammer.se/de/nyheter/schweden-senkt-stromsteuer-fuer-groessere-rechenzentren>.



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have benefited from competitive advantages in recent years from national requirements for data security and data protection, these advantages have been harmonised throughout Europe with the entry into force of the European General Data Protection Regulation. To strengthen the competitiveness of European data centres, reliable framework conditions for investment and innovation must be developed. In addition, a discussion on the eligibility of data centres in the context of the revision of the EEAG is essential. In its final report, a German commission on Growth, Structural Change and Employment has established in its assessment of electricity prices and costs that data centres are also electro-intensive businesses.⁴

eco and the operators of data centres are in favour of using a revision of the EEAG to create framework conditions for fair and future-oriented competition in Europe – beyond the traditional industry sectors. According to Annex 3 EEAG, the sectors eligible for aid are electro-intensive industries whose competitiveness is affected by the costs of developing or promoting renewable energy. With this in mind, it is necessary to question whether the eligibility of an electro-intensive, internationally competitive, and future-oriented industry should continue to be denied its classification as a service sector.

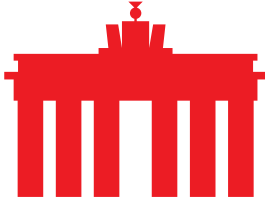
Success of the energy transition

With its communication on shaping Europe's digital future and the greenhouse gas-neutral operation of European data centres by 2030, the EU Commission has declared an ambitious climate target for the Internet industry and the digital economy. The operators of data centres are conscious of their responsibility in terms of energy and climate policy and want to make an active contribution to the restructuring of the energy system. This requires above all measures that enable data centres to act as complementary secondary actors in the energy system, e.g. in the form of systematic waste heat utilisation.

Due to their technical design, data centres have large amounts of waste heat that are not systematically used throughout Europe, e.g. for feeding into local or district heating networks or for use in vertical farming. The average temperature level of waste heat from data centres is around 30 degrees Celsius and could be processed for feeding into the public heating networks using technical equipment such as heat pumps. At present, systematic waste heat utilisation in Germany is not cost-effective due to high acquisition costs for technical equipment, additional energy costs for heat preparation, and a lack of feed-in options.

With the increasing feed-in of electricity from renewable energy sources, new demands are being placed on the electricity grids, for example to compensate for high feed-in fluctuations. To secure the electricity grid against outages and fluctuations, the electricity grid operators purchase supplies of balancing energy. In principle, it is technically possible for data centres to provide secondary balancing energy to a limited extent to stabilise the power grids. To safeguard their own energy supply, data centres operate powerful generators that automatically start up in the event of a

⁴See German Federal Ministry of Economics and Energy (BMWi), Kommission „Wachstum, Strukturwandel, Beschäftigung“ Abschlussbericht, p. 35 (last accessed 08.07.2019).
https://www.bmwi.de/Redaktion/DE/Downloads/A/abschlussbericht-kommission-wachstum-strukturwandel-und-beschaeftigung.pdf?__blob=publicationFile&v=4.



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power failure. A virtual power plant would make it possible to integrate the data centres into the electricity balancing market at any time. Due to the fossil-fuelled generators in the data centres, a connection to the balancing energy market is currently associated with various emission protection, technical, and ecological obstacles. In addition to the admission of new market participants, eco advocates that efforts to research and test low-emission or zero-emission supply options, especially on the basis of hydrogen or in the form of carbon-free biofuels, be intensified.

Conclusion

In order to strengthen the competitiveness of the Internet and digital economy, the EU Commission should forge ahead with the planned measures such as the revision of the EEAG and the development of a strategy for sectoral integration. Data centre operators will only invest in Europe as a business location and drive innovation if they have a future-proof and reliable legal framework. For this reason, eco and the Alliance for the Strengthening of Digital Infrastructures in Germany call for data centres to be put on par with the aid-eligible sectors under the EEAG. A European comparison makes it clear that data centres in other countries are not confronted with a cost factor like the German EEG levy. This enables operators of data centres in other European countries to benefit from more favourable energy prices or lower energy taxation and to then pass the resulting cost advantages on to their customers. This is a competitive disadvantage for data centres operators in Germany. In addition, the necessary legal, economic and ecological framework conditions must be created for systematic waste heat utilisation of the waste heat generated in data centres. The sectoral integration strategy planned within the framework of the European Green Deal offers the opportunity to capture the waste heat potential of data centres and to define measures for its utilisation. The transformation of Europe's energy supply will only be possible if it is possible to maintain societal acceptance of the system transformation and to enable the participation of new actors in the field.

About eco:

With over 1,100 member companies, eco is the largest Internet industry association in Europe. Since 1995 eco has played a decisive role in shaping the Internet, fostering new technologies, forming framework conditions, and representing the interests of members in politics and international committees. eco's key topics are the reliability and strengthening of digital infrastructure, IT security, and trust, ethics, and self-regulation. That is why eco advocates for a free, technologically-neutral, and high-performance Internet.