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Position Paper

on the European Green Deal
and associated follow-up measures

Berlin, 29. July 2020

Building on the process of developing a “long-term strategy for a climate-neutral Europe by 2050”, even before her election in autumn 2019, the President of the European Commission (EU Commission), Ursula von der Leyen, announced a future-oriented strategy for the climate-neutral transformation of the European economy. In December 2019, the EU Commission then presented a comprehensive growth strategy entitled the European Green Deal.

The European Green Deal is not only intended to pave the way for the climate-neutral transformation of the European economy by 2050, but also to provide important impetus for European competitiveness, future innovations, and social prosperity. With the European Green Deal, the EU Commission is making it clear that the coming decades will not only be characterised by the climate-neutral transformation of the European economy, but will also be marked by a comprehensive digitalisation of the economy and society.

In its communication on the European Green Deal, the European Commission has identified key challenges such as strengthening European competitiveness in international comparison, as well as opportunities such as technological leadership in climate-neutral technologies. Based on this, the Commission has announced a cross-sectoral review of the current European legislation and further sector-specific measures such as the development of an industrial strategy.

eco – Association of the Internet Industry and the “Alliance for the Strengthening of Digital Infrastructures in Germany”, initiated by eco,[1] assess as positive the communication on the European Green Deal and the follow-up measures announced therein. Digital infrastructure operators include data centres such as cloud, co-location and hyperscale providers, which are regarded as the backbone of digitalisation in Europe. The operators of data centres share the assessment of the EU Commission that a strategically-oriented concept is necessary to cope with the emerging challenges of climate and structural policy. In the course of the work arising from the Green Deal, a modern regulatory framework must be developed which ensures planning security for investments and innovations, strengthens European competitiveness, and enables prosperity in Europe.

The operators of digital infrastructures are conscious not just of their structural responsibility, but also of their energy and climate policy responsibility, and have supported the development of a modern regulatory framework in order to help meet the challenges ahead.

With regard to the European Green Deal and the follow-up measures, the following topics are of particular relevance to the operators of data centres:

- Monitoring of existing European legislation
- Development of sector-specific and cross-sectoral strategies and measures

[1] Further information on the Alliance for the Strengthening of Digital Infrastructures in Germany can be found at https://digitale-infrastrukturen.net/

- Decarbonisation of the European energy system
- Infrastructure expansion for the development and use of sustainable digital technologies and applications
- Strengthening of research and development
- Modernisation and strengthening of training and further education
- Development of digital infrastructures for the digitalisation of the economy
- Reduction of administrative barriers
- Strengthening the possibilities for corporate financing

The European Green Deal

In the “European Green Deal” growth strategy, the EU Commission outlines the cornerstones for a modern and future-oriented regulatory framework to meet future climate and environmental challenges. By 2050, the European economy should be characterised by its modernity, resource efficiency and competitiveness.

In order to achieve cross-sectoral climate neutrality by 2050, the monitoring of existing European legislation with regard to the feasibility or compatibility of targets is presaged in the European Green Deal. Data centre operators welcome the announcement of the review of legislation, particularly in the areas of energy, climate, industry, infrastructure and taxation. The operators of data centres are active in a market environment that is strongly characterised by both European and international competition. In order to offer data centres in Europe attractive conditions for infrastructure expansion or relocation, administrative barriers should be resolutely removed in the coming years and the existing burden of costs should be reduced to an internationally competitive level – especially energy costs, even in light of the expansion of renewable energies. Due to the high energy consumption of data centres, energy costs are a central criterion for choice of location. In order to provide better economic framework conditions for data centres, the State Aid Guidelines for Environmental Protection and Energy and the Energy Taxation Directive should be subject to a fundamental revision, taking into account environmental considerations. Currently, despite an energy consumption behaviour which is almost identical to that of energy-intensive industry, data centres do not benefit from any favourable special circumstances in energy pricing, due to their status as service providers. This baseline situation must be critically reviewed, taking into account the future strategic importance of digital infrastructures, European data sovereignty, and the potential added value from innovations like digital applications and technologies.

In order to meet the specific challenges of individual economic sectors, sector and industry-specific strategies are to be developed, e.g. an industrial strategy and a strategy for intelligent sector integration. On the basis of the strategies, sector-specific issues are to be identified and, building on this, approaches to solutions and concrete measures are to be devised.
The operators of data centres consider the development of sector and branch-specific strategies to be an important measure in order to be able to adequately meet the challenges and opportunities of the individual sectors. In the preparation of the strategy for intelligent sector integration in the area of waste heat potentials, eco calls on the EU Commission to evaluate, without exception, all sources of waste heat, and to examine cross-sectoral forms of use. Due to their technical design, data centres have large amounts of waste heat that have not yet been systematically utilised, e.g. for feeding into local or district heating networks or for vertical farming. From the point of view of eco and its members, sustainable impetus in the areas of

digitalisation, innovation, resource efficiency and competitiveness should be provided in the development of the industrial strategy.

The decarbonisation of the European energy system is regarded as one of the central challenges of the coming decades, due to the high demand for fossil fuels of the energy sector. A balanced mix of measures for decarbonisation is being sought. Increasing energy efficiency is the top priority, coupled with a massive expansion of renewable energies. Both strands of measures should be consistent with each other in order to ensure a secure and affordable energy supply.
Data centre operators welcome the EU Commission's decision in favour of a fully decarbonised and efficiency-oriented energy sector in Europe.
Future forms of energy generation will have a direct impact on the greenhouse gas emissions of data centres. In contrast to some branches of energy-intensive industry, data centres – whose primary energy source is electricity – do not produce their own energy. As a consequence, data centres have only a limited influence on the greenhouse gas emissions of their operations and are dependent on the decarbonisation of the energy system. In order to already enable a climate-neutral energy supply to large electricity consumers to take place today, Power Purchase Agreements (PPAs) – long-term contracts for the supply of renewable energy – have been in force for several years between renewable energy power plant operators and large electricity consumers. A European comparison makes it clear that these contract options cannot always be depicted as economical, taking into account the respective energy pricing policies in the individual Member States.
Uninterruptible energy generation is essential for the safe and reliable operation of data centres. In order to secure the energy supply against power failures, data centres currently operate high-powered fossil-fuelled generators that kick in automatically when needed. In order to be able to develop low-emission or zero-emission supply alternatives for the operation of the current fossil-fuel generators, especially on the basis of hydrogen or in the form of carbon-free biofuels, research and development projects for the development and testing of alternative drive technologies and fuels should be strengthened. What can be gained from the resulting research and development approaches are not only possibilities concerning the supply for the emergency operation of data centres, but also important insights, e.g. in the areas of industry and mobility.

In order to develop resource-efficient and environmentally-friendly solutions and to open up new value chains, better use must be made of the data available in Europe and the digital infrastructures required for this purpose, e.g. the 5G mobile standard and cloud services must be expanded. eco and the members of the Alliance for the Strengthening of Digital Infrastructures support the EU Commission's demand for the expansion of the necessary network and storage capacities. Only on the basis of a high-performance and widely available 5G mobile communications network can the potential of the Internet of Things (IoT) and connected mobility be fully exploited. To this end, measures to accelerate the rollout of the network are essential.
For the development, testing and improvement of digital applications – e.g. artificial intelligence (AI) – high-performance digital infrastructures such as data centres are also necessary. In order for the European Union to be able to compete with international partners in areas of digitalisation, the development of modern network standards and high-performance infrastructures is absolutely essential. Energy, climate and environmental policy objectives should be taken into account from the outset when developing the infrastructures; a "European master plan" for the sustainable digitalisation of Europe would be desirable.

European Industrial Strategy

As a sector-specific measure of the European Green Deal, the EU Commission presented the European Industrial Strategy in March 2020. In order to enable European industry to assume a future-oriented position in the ongoing transformation processes and to drive forward its competitiveness, the EU Commission wants to use the industrial strategy to create secure framework conditions for innovation and investment. Despite the digital and sustainable transformation, European industry should not lose its leading innovative position in the labour, social and environmental fields. Rather, experience and successes should be used to catch up with the structural backlog, e.g. in the area of digital technologies and applications.

The EU Commission has already pointed out in the European Green Deal that the digital economy has a dual function in managing the transformations – the emission-free operation of digital infrastructures, and the development of low-emission/free applications and technologies. This formulation of objectives is reaffirmed by the European Industrial Strategy. In order to help the digital economy to achieve the objectives of the future transformation path, the EU Commission has identified numerous supporting measures.

A survey of research and development spending by European companies has found that their investment has declined over the past five years, while American and Chinese companies have significantly increased their research spending. In order to halt this trend, the existing frameworks for research and development of digital infrastructures, applications, technologies and questions of security are intended to be expanded and accelerated.
eco welcomes the announced expansion and acceleration of research and development projects. In recent years, data centre operators have repeatedly pointed out that existing research and development programs need to be strengthened and new ones developed. In addition to central research questions such as IT security, relevant issues such as the efficiency potential of digitalisation must be researched in the future and, based on this, energy, climate and environmentally-friendly applications and technologies must be developed or promoted.

In order to meet the challenges of transformation, the EU Commission is advocating a revision of the education system. In the course of the revision, the challenges and opportunities of the transformation must be reflected in the educational offers. With a view to the increasing digitalisation of the economy, the EU Commission already puts the shortage of skilled workers in Europe’s Internet and digital economy at just under 1 million.
eco and the operators of data centres share the EU Commission’s assessment of the shortage of skilled workers and the need for a far-reaching modernisation of our education and training systems. In 2017, approximately 210,000 staff were employed directly or indirectly in data centres in Germany, and the operators of data centres are already feeling the effects of the lack of skilled workers in the recruitment of personnel. In order to counteract a further increase in this development, in addition to general education measures – e.g. computer or media lessons at school – additional efforts in the areas of training and further education are essential. In order to recruit skilled workers, future-oriented occupations requiring training through apprenticeships should be appealingly designed and underpinned by attractive framework conditions. Measures should also be taken to develop and establish climate and environmentally-oriented training and courses of study. The

expectations of data centre operators show that the importance of topics such as environmental management will increase significantly in the future. Such developments should become an integral part of existing curricula.

Finally, the European Industrial Strategy highlights an increasing need for digital infrastructures, not only to achieve the climate-neutral transformation of the economy, but also to push ahead with digitalisation and to leverage its associated efficiency potential. To this end, the EU Commission has identified the development of the 5G mobile standard as the basis for the ongoing transformations. Similarly, industrial capacities of critical digital infrastructures are to be developed and digital infrastructures of strategic importance such as high-performance computing, data and cloud infrastructures, blockchain and quantum technology are to be built to drive digital transformation and strengthen European security and sovereignty.
The members of the Alliance for the Strengthening of Digital Infrastructures support the EU Commission's analysis of the development and the necessity of strategic digital infrastructures. In order to strengthen Europe's digital autonomy, data centre operators have in recent years repeatedly stressed the importance of strategic, high-performance and efficient infrastructures. For example, on the basis of efficient hyperscalers, important applications such as AI can be enabled, and these can take on a central infrastructure role. In order to ensure that the development of strategically important digital infrastructures is as demand-oriented as possible and in accordance with sustainability aspects, scientific monitoring should be provided on the economic and ecological advantages and disadvantages of the respective infrastructure types and their optimal fields of application.

The European SME Strategy

With its concept of "An SME Strategy for a sustainable and digital Europe", the EU Commission is creating another specific strategy which includes a competitive and future-oriented framework for small and medium-sized enterprises (SMEs) in Europe. Due to their structural and economic characteristics, SMEs play a central role in successfully managing the transformations.

In order to maintain or strengthen the position of SMEs as drivers of innovation, the strategy presented announces measures for growth and expansion, for strengthening competitiveness and resilience, and for implementing sustainable courses of action. In order to strengthen European SMEs' capacity to act, the European Commission calls on the Member States to make a joint commitment to SMEs. Under the slogan "Think Small First", the framework conditions for SMEs are to be optimised for the future.

In the past, SMEs were held to be drivers for innovative and sustainable solutions in Europe. This role must be consolidated and made future-proof through the European SME Strategy. For the development of modern and sustainable solutions, SMEs should draw on their existing know-how and on digitalisation. Digitalisation are be used to identify and implement the efficiency potential of services and products and to develop innovative business models.
eco and the operators of data centres share the assessment of the EU Commission that SMEs will act as the basis for successfully managing the transformation processes. In order to make full use of existing experience in developing innovative solutions, further reduction of administrative burdens should be undertaken, e.g. through digital and efficient administrative processes. These should not only focus on import and export and possible expansion procedures, but also provide for

simplifications, e.g. in the construction of required infrastructure. In addition to indicators such as energy costs and the availability of skilled workers, the level of bureaucracy in particular is an important criterion for the choice of data centre location.
In addition to measures to reduce administrative burdens, further efforts are needed for SMEs in the area of training and further education. European SMEs will only be able to maintain their position as drivers of innovation if the companies and their employees have the necessary digital know-how.

To strengthen the entrepreneurial landscape in Europe, Europe is to become the most attractive location for start-ups and scale-ups. To this end, not only are there plans to make it easier to set up a company and obtain financing, but measures are also planned for international recruitment of skilled workers, as well as for employee participation.
eco welcomes the measures taken by the EU Commission to make the European Single Market more attractive for domestic and foreign company founders. From the perspective of eco, access to capital is of particular importance for the establishment of modern, digital and sustainable business models. Although the share of European investors in providing venture capital has increased, it is still very low compared to North American or Asian investors. In order to solve this problem and prevent the associated risk of a migration of innovation, a balanced mix of instruments must be put in place, including state support, financing via the capital market, opportunities for private investment, and other solutions.

Conclusion

eco and the members of the Alliance for the Strengthening of Digital Infrastructures welcome the efforts of the EU Commission to achieve a climate-neutral transformation of the European economy by 2050, and want to contribute to meeting the challenges ahead. With the European Green Deal and the industrial and SME strategies which are based on it, the EU Commission has defined important opportunities and challenges in the respective structural environment and, building on this, identified sector-specific and cross-sectoral fields of action. In order to enable the digital and Internet industry to fulfil its dual function of developing climate and environmentally-friendly applications and technologies and reducing its own greenhouse gas emissions, a modern and forward-looking regulatory framework should be developed in the coming years.

In order to strengthen and advance Europe’s digital autonomy and to develop climate and environmentally-friendly digital applications, the expansion of digital infrastructures, e.g. data centres, should be driven forward. The duration of administrative processes such as approval procedures, energy price levels, and the availability of skilled workers play a central role in the choice of data centre location. Improvements must be made in future in relation to all criteria for decision-making in order to secure Europe’s long-term attractiveness as a business location. Possible measures could include the design of modern, efficient and digital administrative processes and the modernisation of existing – and/or the development of new – training and further education structures. The future strategic importance of data centres should be taken into account in the announced monitoring of the existing legal framework in the field of energy and climate policy, and in the revision of the Guidelines on State Aid for Environmental Protection and Energy. In this context, there is a need for discussion as to whether special measures for reduced energy prices for energy-intensive industry can still be deemed as appropriate. Despite a

similar power consumption pattern, data centres pay the full cost of energy. This fact has a significant impact on the attractiveness of Europe as a digital location.

Decarbonisation of the European energy system is essential for the climate-neutral operation of data centres. In comparison to individual sectors of energy-intensive industry, the operators of data centres do not themselves produce the electricity they need, but instead purchase it via supply contracts with energy traders/producers. In order to reduce greenhouse gas emissions from the operation of data centres, their operators fundamentally support the expansion of renewable energies in Europe. New forms of energy supply, such as Power Purchase Agreements (PPAs), support the expansion of renewable energy and enable operators of renewable energy power plants to secure their investments. In order to make such contractual options viable for the future, attractive and future-oriented regulatory frameworks should be drawn up that enable the economical use of PPAs in all Member States of the European Union.

eco also advocates for the strengthening of existing research programmes and initiation of new ones in order to not only develop innovative climate and environmentally- friendly digital applications – such as software for increasing the efficiency of systems and digital technologies like intelligent and efficient components in mechanical engineering – but also for research and development of essential low-emission or emission-free fuels based on hydrogen or biofuels. On the basis of the ensuing research results, new funding frameworks should be developed for the testing and development to market-readiness of the innovative solutions.

In order to give innovative ideas and business models a future in Europe, the prevailing conditions should be improved, particularly with regard to the capitalisation of young companies. In recent years, future-oriented innovations have repeatedly been bought up by North American and Asian investors, because start-ups have not found the necessary volume of potential investors in Europe. eco advocates for the halting of this trend through a balanced mix of instruments.

About eco:

With more than 1,100 member companies, eco is the largest Internet industry association in Europe. Since 1995 eco has been 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.