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Position Paper

On the Revision of the Directive on Measures to reduce the Cost of deploying high-speed Electronic Communications Networks (BCRD 2014/61/EU)

Position Paper of the German Energy and Water
Industries

The German Association of Energy and Water Industries (BDEW) and its regional organisations represent over 1,900 companies. The membership comprises both privately and publicly owned companies at the local, regional and national level. They account for around 90 percent of the electricity production, over 60 percent of local and district heating supply, 90 percent of natural gas, over 90 percent of energy networks and 80 percent of drinking water extraction as well as around a third of wastewater disposal in Germany.

Initial Remarks

With the introduction of the Broadband Cost Reduction Directive (2014/61/EU) in 2014, the European Commission has already prescribed a harmonisation, acceleration, and cost reduction of measures for the expansion of high-speed networks in the EU. These measures focus on access to existing physical infrastructures, the coordination of construction work, the simplification of administrative procedures and the requirements for in-building physical infrastructures in new buildings or buildings undergoing extensive renovation. In addition, the Directive introduced provisions to ensure transparency of relevant information through single information points and dispute resolution mechanisms.

The requirements were transposed into German national law in 2016 through the Act to Facilitate the Expansion of Digital High-Speed Networks (Gesetz zur Erleichterung des Ausbaus digitaler Hochgeschwindigkeitsnetze, DigiNetz-Gesetz). Among other things, this created opportunities for the shared infrastructure use of public and private utilities (energy and waste water, as well as roads, railways and waterways) and an increase in transparency about shared use infrastructures within the framework of the Infrastructure Atlas of the Federal Network Agency (BNetzA).

The German Association of Energy and Water Industries (BDEW) represents both owners and operators of utility networks in the areas of gas, electricity, district heating and waste water, which under certain circumstances must make their infrastructures available to operators of public telecommunications networks for joint use, and operators of public telecommunications networks themselves. In total, BDEW represents over 1900 companies. The spectrum of members ranges from local and municipal to regional and national companies (both public and private). They represent about 90 percent of electricity sales, 60 percent of local and district heating sales, 90 percent of natural gas sales as well as 80 percent of drinking water production and about one third of wastewater disposal in Germany. BDEW also accounts for 94 percent of the electricity grid length, 92 percent of the gas grid length and 78 percent of the heating and cooling grid length.

From BDEW's point of view, ensuring a fast and comprehensive expansion of high-speed networks for electronic communication is of great importance for economic growth and the development of new digital business models. At the same time, synergies and corresponding obligations for the affected supply and telecommunications infrastructure must be implemented uniformly. One-sided cost advantages for individual sectors or companies and impairments of infrastructure operability should be prevented in order to maintain a high level of security of supply.

Based on the available evidence on the implementation of the Directive and the current developments in technology and telecommunications markets, the Commission considers it neces-

sary to revise the Directive. The revision of the Directive aims at contributing to the more efficient and rapid development of more sustainable high-capacity networks, including fibre and 5G networks, to make it consistent with the European Electronic Communications Code (EECC). Ensuring coherence with the Green Deal, by means of greening the information and communication technology sector, is also the focus of the review.

BDEW generally welcomes the initiated review of the Broadband Directive. However, a tightening of the regulations on the shared use of existing physical utility infrastructures from the various utility sectors and on transparency would exceed any objective and should be kept to the minimum.

Against this background, BDEW has drafted nine recommendations on the central aspects of the revision of the Broadband Directive, which aim to focus on targeted measures that further promote the expansion of high-speed networks for electronic communications in the EU and ensure an appropriate margin for implementation of the Member States.

The individual BDEW Recommendations in Detail

1 Legal Instrument and Legal Effect

We support general EU-wide requirements to enable the accelerated roll-out of high-speed electronic communications networks, allowing Member States and public utility network operators, as well as public telecommunications network operators, leeway to implement measures in line with the subsidiarity and proportionality approach.

The legal instrument in the form of a directive is proportionate, adequate, and also more flexible than a regulation. By implementing the objectives set out in the directive, Member States can respond quickly to emerging challenges. In contrast to regulations, directives are not directly applicable according to Art. 288(3) TFEU but must be transposed into national law by the Member States. This gives Member States some room for manoeuvre to account for national and sectoral circumstances, as well as the time to set stricter requirements, if necessary. The direct applicability of regulations, on the other hand, would unnecessarily exclude the decision-making power of Member States in the present case and may lead to an ineffective response to challenges.

2 Exemption of Drinking Water Infrastructure from the Scope

The exemption of the drinking water industry from the scope of application of the Broadband Directive should continue to be maintained. Drinking water is one of the most important common good for humans. In the context of water supply as a service of general interest, the focus lies on maintaining the quality of drinking water as a commodity and complying with the re-

quirements of the EU Drinking Water Directive (2020/2184/EU). The EU Drinking Water Directive prescribes in detail the monitoring of water supply in the Member States. With the deployment of cables, substances can get into water pipes and drinking water installations in the European Union, which entail an increased monitoring effort for the authorities responsible for the health of the population. It is doubtful how the increased enforcement burden in the Member States will be met. Deploying cables in drinking water pipes can represent an operational change to parts of a water supply system carrying drinking water, which can have a significant impact on the quality of the drinking water. The hygienic requirements of national and European legal requirements could not be guaranteed. Liability issues in the event of pipe damage or contamination that poses a risk to health could hardly be clarified in advance. The German Drinking Water Regulation (Trinkwasser-Verordnung) already prohibits objects such as broadband cables in drinking water pipes for hygienic reasons in § 17.

In view of the above, the protection of groundwater should take priority over the installation of cables in sewers in water safeguard zones. So far, there is no procedure to test sewers with more than one cable for watertightness. Even with one cable, the effort and thus the costs increase by approx. 60 percent to 160 percent. The COVID-19 pandemic in particular shows how important it is to protect the drinking water supply from bacterial and virological contamination and to ensure a high standard of hygiene, as also addressed by the EU Drinking Water Directive.

3 Coherence with the European Electronic Communications Code and National Legislation

The provisions of the European Electronic Communications Code (EECC) already provide for multiple measures to address any grievances regarding the expansion of telecommunications networks. The German Telecommunications Modernisation Act (Telekommunikationsmodernisierungsgesetz, TKG), which is currently in the parliamentary process, transposes provisions of the Code into national law and frequently goes beyond the European minimum. The amendment to the Telecommunications Act (TKG) explicitly addresses and rectifies shortcomings from the scope of the Broadband Directive.

As part of the amendment to the TKG, measures are already being introduced to accelerate the licensing procedures, among other things. This should be taken into account in the revision of the relevant European legislation such as the BCRD. The Commission should ensure that the requirements resulting from the EECC, as well as the measures currently in the parliamentary procedure to remedy national implementation difficulties from the area of the Broadband Directive, can first develop their practical effect in the Member States before introducing additional legal requirements. Against this background, the creation of coherence between the Broadband Directive and the EECC is deemed necessary.

In addition, when revising the Broadband Directive, the Commission should address the problem of the prevalence of different cost concepts in both the EECC and the Broadband Directive and create a uniform definition of the concept of costs.

4 Co-Deployment and Use of Public Utility Infrastructure

The right to co-deploy is generally used by the competitor for strategic business reasons and contributes little to improving the supply situation on site. This becomes evident when considering that the right to co-deployment is typically asserted when rolling out a fibre optic network and only plays a subordinate role in construction work in energy and water supply networks. This means that the legal right to co-deployment is hardly used by the operator of public telecommunications networks in the very cases in which the legislator assumed the synergy potential. On the one hand, this is due to the different technical and organisational requirements of the expansion of different types of infrastructure. On the other hand, the joint use of empty conduits (passive network infrastructure) in the expansion of fibre optics is rarely possible in practice, because they are often installed in the wrong place, too short, too poorly accessible, or too narrow. Again, the synergy potential is overestimated. Relevant potential, which is in actual demand in practice, exists mostly for costly crossings such as the undercrossing of railway lines or rivers. In addition, the direct deployment of fibre optic cables within pipelines of the physical infrastructure - especially for gas or sewage - is hardly used due to the limited usability. This situation becomes particularly evident in the example of sewers in rural areas, where the need for shared use is particularly high, but the nominal widths of the sewers are not sufficient. In most cases, the laying of a fibre optic cable within a media line, especially in pressure pipelines, should be rejected because it would then no longer be possible to replace defective pipe sections without first removing the cable.

Another example that explains the limited usability would be that in cases of a renewal of a sewer pipes is fibre optic cables would have to be removed. Furthermore, in order to maintain the functionality of sewers, it is necessary to clean them repeatedly with high pressure, and this may lead to severe damages of the cable infrastructure of fibre optic cables. In addition, the installation of fibre optic cables can lead to increased blockages, so that cleaning in this area would even have to be intensified. In view of this we would favour exemptions for the following cases:

- Sewer networks in the condition of damage classes 1 to 3 (according to the DWA classification),
- Sewer networks renovated by hose,
- Sewer networks with operational problems,
- Hydraulically overloaded sections,
- Sewer networks with existing fibre cables.

4.1 Coordination of Construction Works: Ensure Investment Protection

It is important to protect planned or already performed investments. Henceforth, the Broadband Directive must ensure that duplication or superpositioning is only permitted in duly justified exceptional cases. Exceptional cases could be, for example, the connection of end customers or the construction of cross-connections between existing telecommunications network areas. The aim of the regulations should be the creation of a high-performance infrastructure and not infrastructure competition. In this way, the business case of the companies that invest first can also be adequately protected. Moreover, the better coordination of construction works can have benefits for the environment: the better a construction site is coordinated, the lower the environmental impact.

In practical application, the right to co-deployment established by the Broadband Directive has led to investment barriers, as it has resulted in some cases in the duplication of the fibre infrastructure. Consequently, investment planning of the first network operator runs the risk of becoming economically unviable. This applies all the more because the expansion projects concerned are usually areas in which broadband expansion has not yet been realised on a private-sector basis, because the possible number of end customers supplied would not cover the investment costs of the network expansion. In order to counteract the problem of superposition, a further exception to the criteria of Article 3(3) as specified by the Commission has been added to national law in the form of § 77g(2)(7) TKG. Such an addition should also be included in the Broadband Directive. Moreover, a further exception should be included for cases in which it can be plausibly shown that concrete plans for self-use of the requested infrastructure exist.

Nevertheless, a large number of our members in the energy and water industry have had considerable reservations about investing in the expansion of the local fibre optic network, not only because of concerns about superposition and double deployment. Uncertainties about the validity of the right to co-deploying according to Article 5 of the Broadband Directive or § 77i TKG led esp. in the case of expansion projects supported by subsidies as well as self-financed expansion projects also led to investment concerns and ultimately a lack of investments.

BDEW welcomes that these investment concerns are to be counteracted by extending the exemption provisions in § 142 TKG (previously § 77i) in the course of the amendment of the TKG. The clarification that in the cases of construction work financed in whole or in part from public funds the coordination of construction work and co-deployment must not impair the main purpose of the construction work is accordingly to be welcomed and should also be introduced as a supplement in the revision of the Broadband Directive. Furthermore, during the revision of the Broadband Directive, the Commission should advocate for a more concrete definition of the term "civil works financed by public means". According to Article 5(2) of the Directive, Member States shall ensure that all network operators carrying out, directly or indi-

rectly, works fully or partially financed through public funds shall comply with reasonable requests for the conclusion of an agreement on the coordination of works by operators of public telecommunications networks, provided that none of the following exceptions apply. This wording was adopted in national law in § 77i paragraph 3 sentence 1 TKG. It is unclear with this wording to what extent private-law companies with municipal shareholders (e.g. public utilities) are covered by the scope.

The amendment to the wording in § 145 TKG (formerly § 77i TKG), which is currently being discussed within the framework of the amendment to the TKG, is intended to clarify that only construction work which is financed entirely or predominantly from public funds falls under the scope of application of the paragraph. Nevertheless, BDEW sees a need for further specification and suggests that in the revision of the Broadband Directive it should be made clear that not every company with public participation automatically falls under the scope of Article 5. Public funds according to the meaning of Article 5 should only exist if public financial or in-kind contributions are made for the construction work. In addition, BDEW believes there is a need to clarify that for non-publicly financed construction measures, there is only an optional coordination of construction work and no obligation is imposed.

In addition, investment protection should also be ensured for publicly subsidised fibre networks. Here, too, superpositioning should only be granted in justified exceptional cases. Currently, there is still a regulatory loophole which means that, despite the Open Access obligation, publicly funded fibre-optic networks can be overbuilt after the construction work has already been completed. This happens despite a previously held market exploration procedure, in which a private-sector expansion company did not register.

BDEW sees the following negative consequences:

- State-supported fibre-optic networks stand empty or are used significantly below their possible capacity. This ultimately leads to a waste of government funding and taxpayers' money.
- Instead of concentrating on the expansion in areas that have not yet been developed, existing networks are overbuilt. This ultimately slows down the entire expansion of high-speed networks for electronic communication and further hinders the goal of a nationwide gigabit network.
- New construction sites are created and cause a reduction in the acceptance of citizens, for example through road closures, traffic obstruction and noise pollution.

5 Clarify Liability and Cost Issues in case of Civil Works and shared use of physical Infrastructure

In the course of the co-deployment of telecommunications infrastructure in public supply infrastructure, liability issues must be clarified. In addition, it must be clarified who bears any follow-up costs. So far, co-deployment by broadband providers has not been accompanied by

increased liability requirements for these companies. In some cases, the co-deploying of broadband cables can cause damage to existing supply infrastructure. In the case of deploying broadband cables above sewage pipes, for example, the horizontal drilling method used has caused damage to pipeline systems. This is particularly likely to happen if the contractor does not obtain information about the sewage pipes or if the information provided is not followed. In cases of damage to the cable caused by third parties, the cable network operator should therefore pay the costs and the transfer of liability to the cable network operator should be clearly regulated.

Co-deploying in gas infrastructure can also bear risks. In the course of the deployment, damage to the existing infrastructure is often found because quality standards and safety obligations (information on pipes, manual excavation, search slots in horizontal drilling methods) are not respected. Furthermore, the implementation of maintenance and rehabilitation measures is subject to considerable restrictions if broadband lines are connected to the gas or water network.

To protect security of supply and limit damage, no general right of co-deployment should therefore be introduced in the future, but the justified rejection of co-location applications should continue to be possible on the grounds of Article 3(3). In addition, Member States should continue to be given the possibility of adding exemptions. In national telecommunications law, for example, an exemption clause was included in §77g TKG to prevent superposition.

Moreover, utility infrastructure operators should, under certain conditions, be granted an extension of the deadline for processing a licence application. The period of two months may be too short for determining the technical suitability, because it includes cleaning, a TV inspection, the evaluation thereof and a hydraulic check. The security issues have to be cleared by authorities, the BND and other agencies, which is also very time-consuming. The time limit for the submission of an offer should be based on the scope of the offer or the complexity of the requested infrastructure (length, number, parts, etc.). Furthermore, the two-month period should be suspended in analogy to § 203 of the German Civil Code (Bürgerliches Gesetzbuch, BGB) in the event of already existing bilateral negotiations between the parties. Such an exception would be necessary for wastewater infrastructure operators in the following cases:

- A survey of condition of the sewer is not yet completed.
- An assessment of the hydraulic situation of the sewer (e.g. by camera inspection) is still pending.

Furthermore, it needs to be clarified whether the processing period also applies to the shared use of publicly funded supply networks.

6 Preventing the Superposition of existing physical Infrastructure

A further liability problem arises if access to the existing physical infrastructure is impeded, in particular by overbuilding broadband cables - especially through shallow deployment methods such as mini- or microtrenching. This is not only to the detriment of the supply infrastructure operator, but also jeopardises the guarantee of supply security in the event of access obstructions.

The EU Directive must therefore ensure that it is not permissible to build over existing physical infrastructure. Additional costs associated with this as a result of necessary relocations must be borne by the telecommunications network operator. It must be ensured that the operators' claims for relocation of inadmissibly overbuilt supply network components are not subject to the short standard limitation period, since such superposition is usually only discovered during later repair or expansion work - i.e. often only after several years. In this respect, a limitation period of at least 15 years is required.

7 Transparency Measures

Information sharing obligations should have a clear added value for both utility infrastructure operators, telecommunications infrastructure and other relevant stakeholders.

7.1 Avoid additional administrative Burden without clear added Value, especially for SMEs

With the so-called Infrastructure Atlas, a single information point for broadband expansion in Germany already exists. The Infrastructure Atlas contains the data of almost 3,000 network operators and makes this information available to companies, but also to the federal government, federal states, districts and municipalities.¹ Information on the possibilities of sharing physical infrastructure for broadband expansion as well as information on the location and availability of fibre optic lines, empty conduits, radio masts and other infrastructures that can be used for broadband expansion can be viewed here.

Due to the high level of information already provided by companies and municipalities through the Infrastructure Atlas, it is essential to refrain from tightening the information obligations without any apparent added value. A tightening of the obligations would lead to a considerable, unacceptable additional effort, especially for small and medium-sized enterprises (SMEs).

It should also be ensured that information obligations to the detriment of trade and business secrets are avoided at all costs.

¹ https://www.bundesnetzagentur.de/DE/Sachgebiete/Telekommunikation/Unternehmen_Institutionen/ZIdB/ZIdB-node.html

7.2 Consider Security Aspects of Critical Infrastructures

The companies of the energy and water industry represent critical infrastructures according to the NIS Directive (Directive (EU) 2016/1148) and the KRITIS Regulation.² Against this background, the security of supply of the population should always be given the highest priority. As telecommunications infrastructure is also considered critical infrastructure, many parallels to the basic protection requirements of other physical infrastructures can be drawn.

In this context, the identification and the combating of risks (e.g. possible attacks on the infrastructure) go hand in hand with the resilience of such infrastructure. This also includes the protection of information. Hence, no obligation to disclose blanket information obligations (e.g. on the Infrastructure Atlas) should be introduced in the future. The collection of data from these companies is of particular relevance for the smooth and secure functioning of the community of Member States. Disclosure of data is contrary to these obligations and could lead to the respective companies not being able to perform their tasks properly.

8 Advance Fibre Roll-Out and Synergy Effects in 5G Roll-Out

For companies in the energy and water industry, the expansion of high-performance networks for electronic communication plays a major role for several reasons. On the one hand, many municipal and private companies have already taken on the expansion of fibre optic networks themselves, even in places where an expansion was not considered economically attractive for larger telecommunications network operators. In particular, municipal companies have thereby made investments and have pushed the expansion of fibre optic cables in various regions. The expansion of fibre optic cables not only has a positive effect on economic growth, but also enables the development of new digital business models. At this point, we would like to emphasise that the nationwide expansion of broadband will only succeed in a functioning competition between all market participants. The companies of the utility infrastructure (municipal as well as private companies) are equal market participants. This competition must be protected and further stimulated. Opportunities for these participants increase even further through enabling 5G expansion based on nationwide fibre-optic infrastructures. The expansion of mobile base stations is primarily carried out by the large telecommunications companies. However, municipal and supra-regional energy providers make a significant contribution to mobile coverage by laying fibre and broadband cables and thus connecting base stations to the fibre network. In addition, these companies can make a significant contribution to the rollout by providing support structures on their properties for the erection of antennas for micro and pico cells. Co-design saves costs in civil engineering, enables lucrative partnerships with telecommunication companies and the development of new business models (from energy provider to full provider). 5G could represent a cost-effective, significantly faster and more powerful communication solution. Possible 5G use cases for the energy and water industry therefore include the connection and control of decentralised supply structures (virtual

² <https://www.gesetze-im-internet.de/bsi-kritisv/BJNR095800016.html>

power plants/water systems), "real-time" communication between machines, people and machine elements (IoT), 5G products such as smart homes, autonomous driving and AI applications, as well as smart meter and smart grid applications related to the Act on the Digitalisation of the Energy Transition (Gesetz zur Digitalisierung der Energiewende, GDEW).

9 Efficient and environmentally friendly Infrastructure is a basic Prerequisite for Digitalisation

The requirements for speed, quantity and quality of data transmission will continue to increase in the future. Fibre optic technology is best suited to meet these needs because, in contrast to copper cables, fibre optic cables enable high speeds of at least 1 Gbit/s. According to current knowledge, it is not possible to achieve these speeds with copper cables for physical reasons. However, FTTC (Fibre to the Curb) can be a suitable transitional solution on the way to full FTTH/B (Fibre to the Home / Basement) coverage.

Not only does fibre optic technology possess clear advantages in terms of speed and reliability but is also more environmentally friendly and is therefore a better prerequisite for environmentally friendly use. According to the German Federal Environment Agency, the power consumption in the access network for cable-based networks is 0.4 watts for fibre optics in the 2015 technology generation, and as low as 0.3 watts for the 2020 generation. VDSL technology, on the other hand, requires 1.4 watts for the older technology generation and currently 2 watts.³ The lower electricity use also leads to a significant reduction in carbon emissions.

Another possibility to deploy fibre optic cables environmentally friendly, would be to use decommissioned networks. In Germany we see the trend that each year thousands of kilometres of the different utility pipes are decommissioned. Those old utility pipes might be valuable conduits (empty pipes) for the future needs of fibre optic deployment. Therefore, it is necessary to share information on such decommissioned utility pipes because they might be valuable for future fibre deployment.

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³ https://www.umweltbundesamt.de/sites/default/files/medien/376/publikationen/politische-handlungsempfehlungen-green-cloud-computing_2020_09_07.pdf