

**Meeting between [REDACTED] of EWE AG [REDACTED] Article 4(1)(b) and
Commissioner OETTINGER
at 12:00hrs on 5th September 2016 in BERL 13 Salon 1**

I. Scene setter

For EWE AG: [REDACTED] Article 4(1)(b) *(full CV in Annex)*

[REDACTED]
Article 4(1)(b)

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[REDACTED]
Article 4(1)(b)

Accompanied by:

- [REDACTED] Article 4(1)(b) *EWE AG (CV provided in Annex);*
- [REDACTED] Article 4(1)(b) *EWE AG (Cv provided in Annex).*

For the Cabinet:

- *Markus Schulte*
- *Christian Staat*

Estimated duration: 12:00 – 12:40 (lunch meeting)

Agenda:

- Vectoring decision Germany
- Review of the Telecommunications Regulatory Framework

Vectoring in Germany

EWE Tel is large regional fixed network operator in Germany (mainly in the northwest of Germany).

Being heavily reliant on regulated wholesale access products of the German incumbent telecom operator (Deutsche Telekom, DT) in order to supplement their own network reach EWE Tel is concerned about the plans of German telecoms regulator (Bundesnetzagentur, BNetzA) to allow DT to upgrade its copper network with vectoring technology. Mainly because, vectoring will reduce EWE Tel's ability to rely on local loop unbundling (making it more difficult to compete with DT on the basis of regulated access to DT's network).

Review of the Telecommunications Regulatory Framework

The proposals for the telecoms review will be adopted next week (13/14 September). The issues to be addressed by the review are: connectivity enabling full benefits of DSM, spectrum reform in particular in light of 5G, modernization of universal service, updating rules for services taking into account market and legislative developments and finally reforming the institutional set-up to ensure effective and coherent implementation and application of rules.

Objective(s):

Their Position – Vectoring

- EWE Tel was one of the more vocal access seekers when expressing its opposition to BNetzA's plans to allow for vectoring in Germany, both at national level but also very much here in Brussels.
- Going forward, if it becomes inevitable that DT will be able to deploy Vectoring im Nahbereich in principle, like many other access seekers, EWE Tel would at least like to ensure that the technical parameters for the Layer-2 "Ersatzprodukt" are as closely aligned as possible with a physical unbundling product, allowing an access seeker a maximum of flexibility and room for product innovation and differentiation.
- At the same time EWE Tel calls for the Layer-2 product to be priced as closely as possible in line with current prices for physical access, i.e. not allowing for too great a mark-up for the active components (equipment etc.) of the virtual access product.

Their position – Review of the Telecommunications Regulatory Framework

A paper on their latest positions on Article 4(3) in the context of review of the telecom package was also provided to the cabinet ahead of the meeting ("Breitbandausbau aus Sicht der EWE AG" in Annex). The paper highlights (unofficial draft translation of the main points):

- [REDACTED]
[REDACTED]
- [REDACTED]
Article 4(3)
- [REDACTED]
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- [REDACTED]
[REDACTED]
- [REDACTED] Article 4(3)
[REDACTED]
- [REDACTED]
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II Speaking points

Vectoring

- As you will know we had our own serious concerns with BNetzA's original April proposal for vectoring in Germany.
- Following our serious doubts letter to BNetzA, the German regulator withdrew its plans on 16 June and re-submitted revised proposals, which addressed a number of our – and as I understand also some of your - main concerns.
- However, we remain very much aware of your (and other operators') concerns regarding Vectoring in Germany, and in particular concerning the appropriateness of the Layer-2 Bitstream access product as a replacement for the loss of VDSL-quality unbundling.
- In this respect we asked BNetzA in July, to improve the technical means through which alternative operators can provide internet access over DT's upgraded/vectorized networks and asked them to submit to the Commission its plans concerning the technical parameters and prices for the relevant access products, which we will then assess against our previous guidance.
- We take note of the fact that, last week, BNetzA's published its decision concerning the principles of Vectoring im Nahbereich. This should offer everyone involved more clarity and legal certainty, much needed to make important investment decisions.
- However, we are now carefully assessing the final measure of BNetzA to see whether the German regulator has taken utmost account of our July comments and to follow this up as appropriate with the German authorities.
- We are aware that the industry groups representing access seekers have reacted with disappointment regarding BNetzA's decision and it goes without saying that we will remain in close contact with the German regulator to ensure that the forthcoming proposals in particular for the technical details of the virtual alternative access product and its pricing will be in line with the parameters we have set out in previous guidance to all regulators in general and to BNetzA in our July decision in particular.
- We will continue to use our influence to ensure that the regulatory regime for vectoring in Germany strikes the right balance between network upgrade and high quality access for competitors and that the technical details and pricing of the alternative Layer-2 product will allow for sustainable competition and a wide choice of products for end-users.

Review of the Telecommunications Regulatory Framework

- Thank EWE AG for the position paper provided ahead of the meeting ("Breitbandausbau aus Sicht der EWE AG" in Annex). Listen to their views on how the regulatory framework could be improved.

- Stress the goals of current Commission initiatives to foster infrastructure investment in the single telecoms market for ubiquitous broadband coverage and more and better services.
- Reassure that the future Regulatory Framework will promote investment in infrastructure by focusing on the remaining bottlenecks.

Line to take: Review of the Telecommunications Regulatory Framework

Introduction and Connectivity

- It is obvious that a real DSM only materialises if our citizens and business have access to affordable and unconstrained connectivity, fixed and mobile, that supports digital services.
- In short, connectivity, and increasingly connectivity to very high speed networks, has become an imperative component of the single market. This is a view shared also by the respondents to our public consultation. Many respondents point to the need for policy measures and adjustments to current policy and regulatory tools to support the deployment of infrastructure in line with future needs.
- In order to reap full benefits of the digital economy, we rely on a competitive telecoms sector which invests in high-performing networks.

Market Regulation, Competition & Investment

- I am a strong supporter that competition is the main driver for investments and bringing the best outcome for consumers.
- As we said on many occasions - access regulation to dominant networks will remain a central mechanism of the telecoms framework.
- However, business as usual will not help to achieve the DSM ambition. Adaptations to the regulatory model are needed if connectivity ambition is to be achieved.
- Such adaptations should ensure that every market player would then have to have equal chances to invest – or if necessary to co-invest – and those who take that chance should then also get the benefit.
- We must have a regulatory model which leads to a race to invest. Infrastructure-based competition should be incentivised wherever it is possible as it provides the only sustainable form of competition. All players, big or small should have this opportunity. Therefore, facilitating access to civil engineering and non-replicable network assets is very important.
- I am a strong believer in encouraging investment projects which are based on open, good faith and reasonable co-investment offers, including a possibility for all players to participate.
- This would ensure that at least the current level of competition is kept when a new high capacity network is build - by maintaining regulated access for broadband at the level that was equivalent prior to the new investment.

Spectrum

- 5G networks will be providing connectivity solutions to smart devices used within different sectors like automotive, health, energy and broadcasting. We need to enhance the spectrum management framework to boost digital network and services' rollout, based on competition, innovation and investment.
- This is a great opportunity.

- We need to work closer together to reach this common ambition and to clearly spell out areas where greater coordination of spectrum management will be a win-win solution for all, notably by focusing on those which have the greatest impact on network deployment incentives and markets developments with particular view to 5G. I believe that issues such as spectrum awards, licence duration, coverage criteria, trading and sharing of spectrum are examples of areas where we need more consistency. We also need to enhance transparency and levels of consultation in these processes to ensure regulatory predictability.
- I call on your active and genuine cooperation in this regard. This is not only about your sector but about Europe's industry competitiveness in general.
- While connectivity is a central theme in the review process, network access is not the only building block of the telecoms package. The building blocks of the package are not self-standing topics - they are closely linked to the overall connectivity narrative.
- I want to build spectrum debate on a positive foundation and while **Article 4(3)**, getting Member States on board in terms of the overall connectivity ambition will facilitate spectrum debate.
- It is imperative to enhance spectrum management framework, especially as it is so important for the success of ubiquitous connectivity.

There will be a need for a large bandwidth of radio spectrum to be used by 5G networks for various purposes. *Services*

- We also concluded from the consultation the clear need to respond to the convergence of online and traditional services to ensure a fair competition between digital players, in particular when they provide competing or comparable services. On the basis of your contribution, I believe this a common concern.
- We aim to level the playing field, to the extent possible through simplification and deregulation, in light of new competitive choices for end users, while extending regulation only where strictly necessary to maintain end-user interests or effective competition and innovation.
- An important delineation with regard to various OTT communications services is whether they use numbers from numbering plan to ensure end-to-end connectivity or not. Those using numbers as a public resource are in many respect treated like the traditional telecommunications services whereas those OTT communications services provided exclusively on open internet are clearly not equivalent services and would be subject only to a limited set of rules.
- Our current assessment is that the level playing field and focused end-user protection is best achieved by a targeted mix of both deregulation and extension of a key, but limited, set of sector-specific rules to OTT communication services, for example on security of communications services. Another important area where OTTs may need to be covered by sector-specific rules is confidentiality of communications. However, our reflections on the review of the e-privacy Directive are still pending.
- **Universal service** objectives and methods need to be brought up-to-date.

Governance

- Changes to sector's governance will also be needed in order to support the substantive adaptations to the framework.
- We will need an efficient EU system of regulatory authorities to increase regulatory predictability for market players. This would necessitate reinforcing the competences of regulators and their capacity to act towards the single market in the European bodies. BEREK must have a stronger basis and commitment to work towards the DSM.

Closing

- My ambition is that the proposals could be agreed by the end of 2017, so that the new rules are effectively applied before 2020.
- We have the task to develop a framework for the 3rd decade of the 21st century.
- The challenge is to establish a future-friendly framework supportive to our overall DSM ambition.

Defensives – Vectoring

What has changed since May?

- [In May the Commission set out](#) why it had serious doubts that BNetzA's original proposal was in compliance with EU telecoms rules (see further [DE/2016/1854](#)).
- In particular, the Commission raised four main areas of concern (see below). In the discussions with BNetzA that followed the Commission's opening of an in-depth investigation, BNetzA agreed to address the vast majority of the Commission's concerns and revised its proposals accordingly.
- The revised plans constitute a clear improvement if compared with the earlier proposals, on each of the points raised in the Commission's serious doubts letter. The following table illustrates the changes that have been made in response to the Commission's intervention:

Original proposal	Commission's original concern	New Proposal	Change
The first alternative access product (virtual access at the street cabinet) is limited to one alternative operator.	Any such limitation cannot be technically justified and unduly restricts competition	No restriction of number of access seekers at street cabinet	EC Commission strongly welcomes this change
Alternative operators, who wish to migrate to the street cabinet have to invest in their own fibre.	Parallel fibre investment may not be economically viable.	Access to ducts and dark fibre granted for two years to those alternative operators currently present at the local exchange and wishing to use virtual access at the street cabinet.	EC Commission welcomes this change
The second (and possibly main) alternative access product (Layer-2 access at the so-called Broadband Network Gateways, BNGs) is, in BNetzA's own view, not (yet) a functional equivalent to physical unbundling due to technical restrictions in the product design.	Any alternative access product, which is intended to compensate for the loss of physical unbundling needs to be an appropriate functional substitute for physical unbundling and comply with the Commission's VULA-criteria set out in the 2014 Recommendation on Relevant Markets.	Commitment that the Layer-2 product needs to meet the required technical parameters. The exact technical details will be notified within few months; a new national consultation is envisaged. The Commission will afterwards scrutinise these detailed proposals against its own Recommendations.	EC welcomes this change but awaits further notifications by BNetzA on the detailed technical parameters and prices for this product
The eligibility criteria under which an operator can "claim" a Nahbereich are designed in a way that means that DT is likely able to vector significantly over 90% of Nahbereiche.	The stringent eligibility criteria unduly favour DT and lead to a quasi-exclusivity.	Eligibility criteria have been re-designed to allow more alternative operators to claim Nahbereiche (over 30% increase in Nahbereiche, which can be vectored by alternative operators). However, new proposal also introduces an "all-or-nothing" requirement, which may lead to certain operators	EC welcomes this change But is critical of the new "all-or-nothing" approach.

		not being able to make use of vectoring.	
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- On the Layer-2 product, BNetzA agreed to cooperate with the Commission and industry to ensure an adequate solution is found, which safeguards competition. It agreed to notify to the Commission any final product design. The Commission will assess such a notification in detail and act according to its findings to ensure that the Layer-2 BNG product meets all relevant criteria to qualify as an appropriate functional equivalent to the loss of physical unbundling, VDSL-LLU.

Why did the Commission not address the detailed technical specifications for the main alternative access product?

- The Commission is constraint in its response by the formal scope of the notification. This scope is determined by the notifying regulator.
- In this case, BNetzA has not made the technical specifications of the main alternative access product (Layer-2 access product) part of the current notification but stated that these will be subject of a later notification, which the Commission expects to receive after the summer break.
- As a result, whilst the Commission recognises that the exact technical specifications the Commission play an important role for the adequacy of the alternative access solution, it cannot request BNetzA to define already at this stage the final technical specifications for the Layer-2 product as part of this case.
- However, the Commission clearly sets out in its decision, which parameters it expects BNetzA to further improve before accepting the alternative Layer-2 access product as a true functional equivalent for physical unbundling.

Does this mean that the Commission is entirely happy with BNetzA's new plan and has no further comments?

- No, whilst the Commission – also in the interest of allowing for swift network upgrades in Germany to the benefit of end-users – will not block the German regulator to go ahead with its plans, it clearly stated that it needs to see further improvement.
- First, as mentioned above, the Commission is clear that it expects any future Layer-2 BNG access product to meet the relevant VULA criteria as set out in the Commission's 2014 Recommendation on Relevant Markets and further specified in its decision of today. In this respect, the Commission indicates to BNetzA that both the prices and the technical specifications of the Layer-2 product have to be set in a way that allows alternative operators to use the alternative access product as a true functional equivalent to physical unbundling.
- In this context the Commission also noted that BNetzA itself assured the Commission and industry that alternative operators will not lose their current physical access at the exchanges before the adequate Layer-2 access product is available in the market.
- Secondly, the Commission urges BNetzA to re-consider its market definition, which currently states that the virtual Layer-2 access product is not a substitute to physical unbundling.

- Thirdly, the Commission is critical as to whether the newly introduced "all-or-nothing" requirement is appropriate and asks BNetzA to reconsider the need for such a condition in its final measure.
- And last, but not least, the Commission reiterates its earlier concerns (see case [DE/2011/1177](#)) with regard to BNetzA's proposal to limit the ability of alternative operators to access DT's ducts to the loop between local exchange and the street cabinet (and to the sole purpose of taking up DT's wholesale products).

What is next?

- The German regulator can now adopt its proposed measure but will have to take utmost account of the Commission's comments (see Q5 above).
- With regards to the need to set the technical parameters and prices for the replacement for the loss of physical access, i.e. the Layer-2 access product, the Commission clearly sets out that it expects BNetzA to notify these conditions as soon as possible after the summer break. The Commission will then assess these proposals against the guidance it has given in the Explanatory Note to the Commission's 2014 Recommendation on Relevant Markets and the more detailed expectations it expressed in its July decision.

Are there similar cases in other Member States?

- Vectoring technology is also deployed in other Member States.
- However, the cases there are not comparable, as they either do not concern nearshore vectoring (and thus do not result in the loss of physical access at the exchange in VDSL quality) or are addressed appropriately by the respective regulator by the imposition of virtual access product at the exchange, which meets the Commission's VULA requirements.

Authors: Article 4(1)(b) **(DG CONNECT B3)** tel. Article 4(1)(b) **(DG CONNECT B1), tel.** Article 4(1)(b)

IV. Background

What is vectoring?

Vectoring technology can upgrade copper networks to bring higher broadband speeds and is used as an intermediary upgrade technology instead of the deployment of optic fibre networks. Vectoring technology can upgrade copper networks to bring higher broadband speeds in conjunction with the deployment of optical fibre in networks as far as the street cabinet. It is estimated that BNetzA's proposal would lead to broadband speed gains across Germany bringing connection speeds above 50 Mbit/s to 1.4 million households for the first time. However, the technology currently only works when it is applied to an entire bundle of copper cables leading from the cabinet to households and, thus has the potential to restrict competition by excluding competitive unbundling of such lines.

What are the advantages of vectoring – and what are the disadvantages?

It is estimated that BNetzA's proposal would lead to broadband speed gains across Germany bringing connection speeds above 50 Mbit/s to 1.4 million households for the first time. However, the technology currently only works when it is applied to an entire bundle of copper cables and, thus, has the potential to restrict competition.

Today's decision aims at ensuring that the introduction of nearshore vectoring in Germany is accompanied by adequate safeguards restricting the negative effects vectoring can have on the position of alternative operators.

Short update on development in Germany before notification

- In 2015 DT applied to BNetzA to upgrade street cabinets in the so-called nearshore ("*Nahbereich*") to deploy vectoring technology. This would, however, no longer be compatible with the unbundling of the VDSL line at the exchange, i.e. would mean the loss of VDSL LLU.
- In 2013 BNetzA already allowed operators to deploy vectoring outside the *Nahbereich* (since the effects on the loss of LLU were limited there) – the Vectoring I decision. BNetzA used a first-come-first-served approach (*Windhundrennen*) meaning that alternative operators, too, were able to benefit from the ability to vector a street cabinet. At the time the decision was to require the operator that vectors street cabinets to provide a Layer-3 Bitstream access product as an interim solution and a Layer-2 VULA product by the end of 2015. However, the latter deadline has recently been extended to July 2016 since provision of the necessary Layer-2 product has been delayed.
- With the goals of the Digital Agenda in mind, the Commission, in principle, welcomes the development and deployment of speed enhancing technologies. In this context the Commission so far recognised that vectoring allows for greater speeds not only for the incumbent but also for alternative operators. However, in light of the apparent conflict of vectoring with the ability to physically unbundle the vectored line, the Commission repeatedly stressed that a virtual access solution (VULA), should mimic as much as possible the quality and functionality of an unbundled line, thus being able to act as an appropriate substitute for SLU/LLU.
- In this respect, the Commission has set out clear guidance to NRAs in its 2014 Recommendation on Relevant Markets, which product characteristics a VULA product should display in order to be considered a functional substitute for full physical unbundling.

- In 2015, BNetzA required DT to work on an offer of a Layer-2 Bitstream product to be provided at ca. 900 regional hand-over points (BNGs or border network gateways). This product is still under development, and a decision approving it (approval of the Reference offer) is expected in the future. BNetzA committed to closely cooperate with the Commission to ensure that the Layer-2 Bitstream product meet the criteria set out by the Commission, and be an adequate and appropriate substitute product for lost VDSL LLU.

Recent cases: DE/2016/1854 (withdrawn) and re-notified case (DE/2016/1876 – closed with comments)

- BNetzA notified for the first time its decision on near-shore vectoring on 7 April 2016, which - in view of the Commission's serious doubts (sent on 10 May 2016) - BNetzA withdrew in early June. The Commission serious doubts were focused on these main points:
 - Relatively small net-effect of 1.4 million households receiving broadband speeds of above 50 Mbit/s; alternative rollout scenarios were not sufficiently taken into account;
 - Very strict criteria for alternative operators to qualify for own-vectoring (at least 50% of street cabinets in a given area should be connected with DSL, more than 90% of the street cabinet were to be vectored by DT);
 - Limitation of the number of alternative operators who could request an alternative product at the street cabinet (maximum 1 operator);
 - Access to dark fibre only subsidiary (only when no access to ducts is possible);
 - Lack of clarity as to the characteristics of the substitute Layer 2 virtual access product.
- On 20 June BNetzA then re-notified improved plans taking account of some of the Commission's initial concerns.
- The new proposals introduced some necessary competitive safeguards, which were required by the Commission to ensure an appropriate balance between gains in network performance and continued effective competition from alternative operators, both of which benefit internet users.
- The Commission largely accepted these revised plans. In our view the revised proposals now provide adequate competitive safeguards and restrict the negative effects vectoring deployment can have on the position of alternative operators in Germany. For example, BNetzA proposes to remove the restriction on the number of access seekers at street cabinet, and intends to grant access to ducts and dark fibre for two years to those alternative operators currently present at the local exchange and wishing to use virtual access at the street cabinet. In addition, the increased ability of alternative operators to deploy vectoring themselves, together with BNetzA's commitment to enhance the broader technical parameters of the two alternative access products led the Commission to endorse the overall proposal.
- However, the Commission also warned BNetzA that it must improve the technical means through which alternative operators can provide internet access over DT's upgraded/vectored networks.
- Since the use of vectoring in the areas of 550m around a local exchange is not compatible with alternative operators being able access the physical infrastructure linking customers'

premises to the local exchange (also known as local unbundling) at VDSL quality, the Commission requires BNetzA to ensure that competitors have an adequate and alternative means of offering internet access to customers.

- In this respect, the Commission has called upon BNetzA to improve their plans concerning the technical specifications for the main replacement product (a Layer-2 virtual access product) and notify them to the Commission. The Commission will then assess these proposals against the guidance in the [Explanatory Note to the Commission's 2014 Recommendation on Relevant Markets](#) and the more detailed expectations expressed in today's decision.
- In addition, the Commission also set out that it expects BNetzA to submit to the Commission further plans concerning prices for the relevant access product.
- The Commission will then assess these new proposals against its previous guidance and the expectations it has set out in its decision today.

BNetzA's final measure of 1 September – brief initial assessment (not to be shared publicly)

- On 1 September, BNetzA published its final decision in case DE/2016/1876, following our comments letter of 19 July.
- Under the regulatory framework, BNetzA is under an obligation to take utmost account of our comments.
- We still need to assess thoroughly, whether BNetzA honoured its obligation, but a few initial observations at this stage:

Characteristics of the alternative BNG Layer-2 access product

- In its comments letter, the Commission set out a number of criteria it expects BNetzA to take into account when developing the technical parameters for the new BNG Layer-2 access product.
- It has to be noted that such technical details will be subject of a new (forthcoming) notification, which we expect in the near future.
- In its final decision BNetzA clarified that it is of the view that the forthcoming BNG Layer-2 product, the technical details of which are currently in national consultation and will be notified to the Commission in the near future) will meet largely ("weitgehend") the guidance of the Commission.

Market definition / re-classification of the BNG Layer-2 access product

- The Commission asked BNetzA to consider a re-classification of the BNG Layer-2 access product as potentially being located in the local access market as a substitute to physical unbundling.
- BNetzA confirmed that it will look at the classification of all relevant products anew when carrying out the next market review (although it repeated its arguments why it currently thinks the Layer-2 product is a central and not a local access product).

Criteria for vectoring deployment (Alles-oder-nichts criteria)

- The Commission invited BNetzA to reconsider the need to introduce a requirement that alternative operators who wish to vector a street cabinet themselves will have to commit to

deploy VDSL2 vectoring to all street cabinets connected to the same exchange (all-or-nothing requirement).

- In its decision, BNetzA continues to apply this requirement arguing that only such an approach would avoid "cherry-picking" and ensure nationwide vectoring deployment.

Access to ducts

- The Commission urged BNetzA to impose on DT a duct access obligation which is not limited to the distance between the local exchange and the street cabinet, nor limited to the sole purpose of taking up DT's wholesale products.
- Mainly for legal reasons, BNetzA remains of the view that duct access should only be granted to gain access to take up DT's KVz-VULA product, i.e. which is limited to the distance between the exchange and the street cabinet.

Background:

Review of the Telecommunications Regulatory Framework

The public consultation on the evaluation and the review of the regulatory framework for electronic communications networks and services ended on 7 December 2015. 244 contributions were received online and around 30 contributions through other sources. A wide array of stakeholder groups replied, with the majority of contributions coming from the telecom players. Wider digital economy and traditional non-telco industry players were also active. On 20 April 2016, the synopsis report of the consultation was published on the DSM website.

Policy options/issues in the review

We consider that the framework review should pursue one overall regulatory objective, articulated in terms of outcomes: widespread access to and take-up of very high-performance connectivity. It would be made clear, that the current three policy objectives i.e. promotion of competition, of the internal market, and of citizen interests, as well as the regulatory principles relative to investment and innovation, are at the service of this overriding objective.

Network access

Our future proposals on network access will aim at responding to the objective of the DSM strategy to incentivise investment in very high-capacity broadband networks and to the overall ambition to enhance connectivity, while maintaining a pro-competitive approach. To this end we are working on a set of measures which provide necessary safeguards for access-based competition, while limiting regulation to what is necessary and increasing incentives for incumbents and alternatives to roll out very high-capacity networks and (where feasible) competing infrastructures.

To address the investment challenge we would start from the existing premise that competition is the main driver for investments. Market analysis and appropriate remedies, would remain central tools. However, more emphasis should be put on regulatory models that give sufficient space to competition to invest rather than focusing primarily on ensuring access-based competition.

To achieve this we are considering a set of measures which aim for (1) the simplification and geographic focus of access regulation, (2) Value the well-designed access programmes to the civil infrastructure (ducts, poles, etc.), (3) Improving the investment environment for very high-performance networks of SMP operators (4) Clarifying regulatory treatment of wholesale-only models (5) The legal regime on symmetric access to non-replicable assets could be clarified and (6) To enhance competition in the provision of cross-border business services.

To equip the NRAs with sufficient tools to address the connectivity challenge, in particular in rural areas, the competences and tasks of independent regulators may need to be reinforced, e.g. as regards the powers of NRAs to map broadband investment plans across their national territory.

Spectrum

Spectrum is a core enabler for the deployment and development of current and next generation mobile and fixed wireless networks (e.g. 5G). In addition to affecting deployment, the manner in which spectrum is assigned and the conditions attached to spectrum assignment and usage, are also major determinants of mobile competition, which in turn influence quality of service, prices, speed of roll-out and take-up of mobile broadband. At the same time, fixed-mobile and telecommunications-broadcasting convergence are blurring the distinction between traditional telecommunications markets, which will lead to significant change in the nature of competition for products and services.

The Framework review will be a major building block of the 5G strategy. The objective is to have spectrum rules fit for 5G success and for supporting efficient investments, thereby contributing to the overall objective of deployment of very high-capacity networks throughout Europe. Our proposals would focus on (1) a more efficient timing between allocation and assignment; (2) predictability and consistency for market investors in the next generation of wireless broadband networks regarding the main conditions for assigning or renewing national spectrum rights of use and (3) regulatory clarity on additional needs for 5G beyond spectrum.

Regardless of the question as to what extent the above-mentioned issues should be dealt with exclusively at the national level or co-ordinated at the EU level, it is clear that all of them have a direct impact on the market functioning at the national level and would benefit from greater consistency. Therefore we are reflecting on the right balance of competences between various national authorities, including the role of NRAs acknowledging that, at present, all of them do not have competences in spectrum matters, and on the appropriate setting in which such peers can contribute at EU level alongside the Commission to general policy guidance and to peer-review of specific national proposals, so that the market knowledge is appropriately taken into account in establishing national award procedures, conditions for renewals and main conditions attached to spectrum usage rights.

Services

The objective of revised sector-specific end-user rights is two-fold. First, in REFIT we are screening the scope for deregulation or adaptation either by concluding redundancy or recourse to horizontal consumer protection legislation. Second, in order to close gaps in the protection of end-users and foster fair competition we aim at addressing a level regulatory

playing field between traditional electronic communications services and functionally substitutable communications services provided by online service providers (OTTs).

While the scope for deregulation is the subject of ongoing assessment, we have identified certain areas where leaner provisions may be warranted. For instance, the provisions on contractual information and transparency could potentially be limited to IAS only; horizontal rules on alternative dispute resolution and online dispute resolution may have made sector-specific rules redundant. Furthermore, we aim at adapting the scope of beneficiaries to the objectives of the relevant provisions in the Universal Service Directive. The experience and feedback in applying the current framework has shown that the level of protection needed by (larger) business users is not the same as that of individual consumers and of small and micro enterprises.

As regards the level playing field discussion, sector-specific rules for Internet Access Services (IAS) are largely accepted; divergences exist rather regarding the exact scope of rights and obligations. The question of equivalence when communications services are provided in addition to (or over) Internet Access is more complex. If the provision of a service is tightly linked to network operation and is dependent on and benefits from the use of a public resource, such as numbers, in order to ensure interoperability and end-to-end connectivity via the network, such a service may not be in all respects comparable to a service which is provided on a best effort basis without recourse to such a public resource.

It may thus be opportune, for the purposes of further discussion, to reflect on a possible distinction between (1) rules applicable only to communications networks, and to communications services that include provision of connection to the network as a key feature of the service, and which may use public resources to this effect, and (2) a subset of rules also applicable, according to need, to other communications services. Services that could be considered to provide a connection to the network could include POTS telephony, IAS provision, provision of managed services, or provision of any other services using public numbers (in or out).

We are also examining to modernise the universal service regime by removing old services from the scope. These old services, like public payphones, comprehensive directories and directory enquiry services, may have become redundant since the market offers competitive services.

Governance

We consider that an adequate and efficient institutional set-up is key to ensuring a positive outcome for the overall regulatory framework, and also that an efficient EU system of regulatory authorities is critical for the "connectivity" based digital single market. NRAs and BEREC have been, and should continue to be, at the core of the telecoms regulatory system.

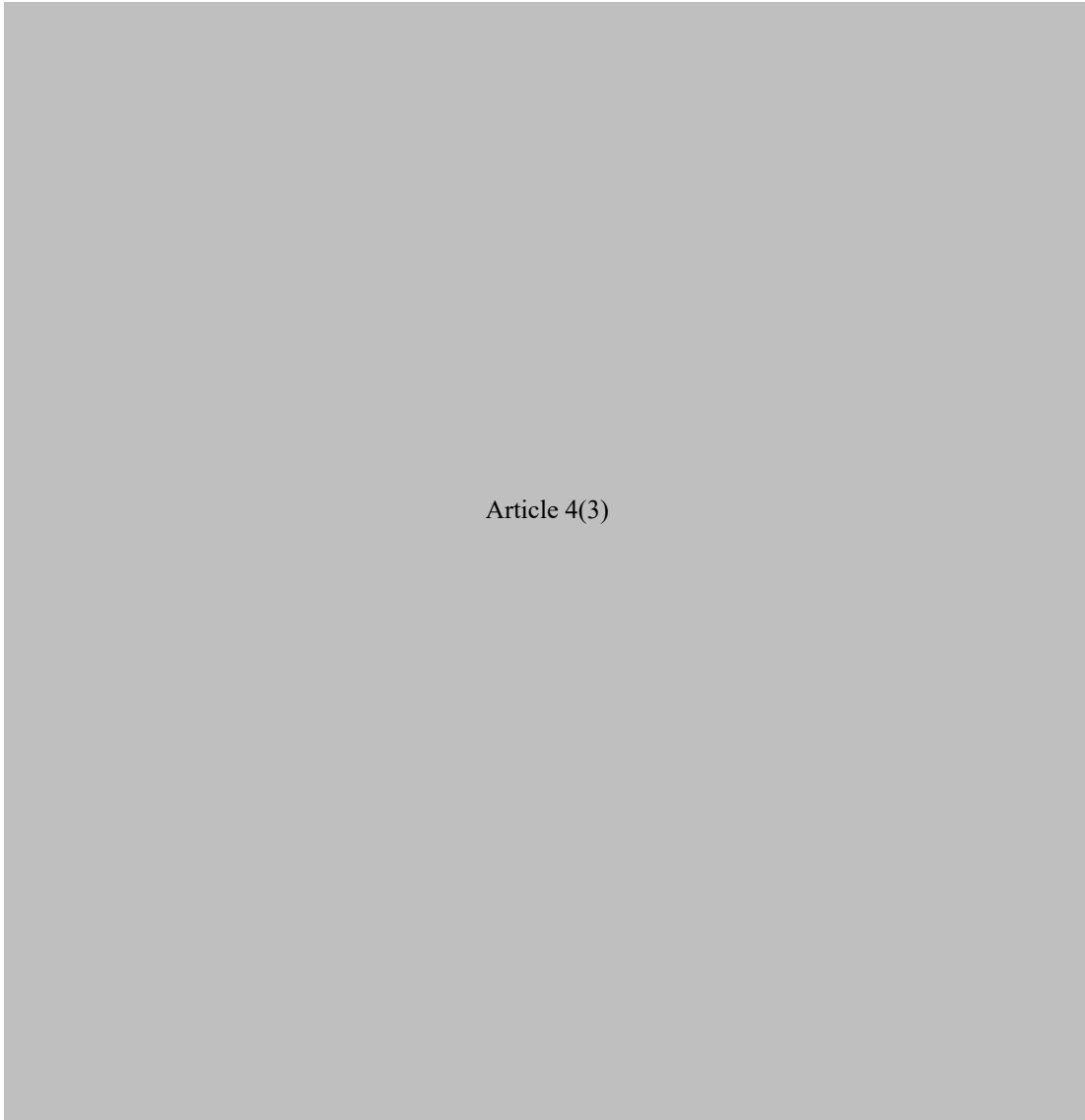
A critical aspect of the governance system is the distribution of competences amongst the different institutional stakeholders (at national level: independent NRAs and other national authorities; at EU level: BEREC, RSPG, Commission...). Another critical aspect is how to efficiently ensure the independence of NRAs, including that they should be adequately resourced to perform their core tasks and to fully participate in BEREC.

In view of market and technological developments, there are areas of pan-European relevance where BEREC could play a (greater) role, such as coordinating the mapping of network

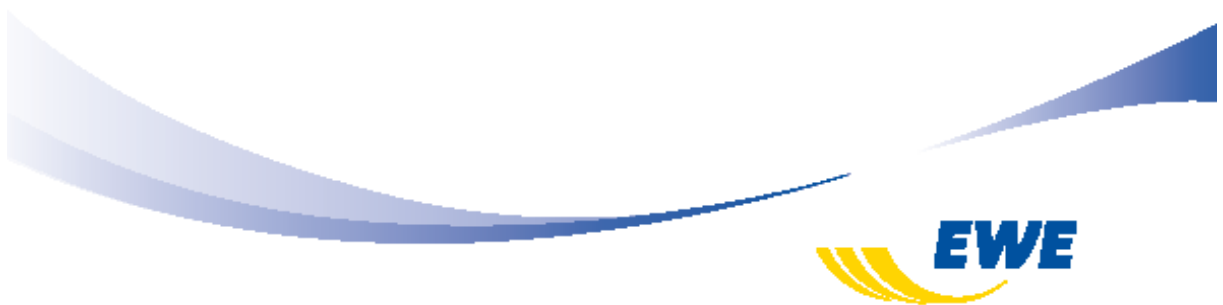
infrastructures, monitoring the quality of Internet services or the conditions for provision of cross-border business services, monitoring the development of wider markets for communications platforms or services, and developing as appropriate technical guidance or prerequisite preliminary specifications for standardisation. In co-responsibility with the Commission, BEREC could play a stronger role as repository of regulatory experience.

V. Attachments

Annex



Article 4(3)



Article 4(3)

Annex

CV

Article 4(1)(b)



Article 4(1)(b)

Article 4(1)(b)

Annex
CVs

Article 4(1)(b)

Article 4(1)(b)

Article 4(1)(b)

Annex

EWE company profile

Main activities

- Energy (quote from EWE website):

As a comprehensive provider, EWE covers every aspect of the value chain – from the production of electricity and heat to the distribution networks and sales. With its regional roots and being majority-owned by local councils, the Group is always aware of local needs and reacts with a correspondingly flexible, forward-looking energy mix, modern infrastructure, innovative offers and comprehensive services. Today, EWE provides more than 1.3 million customers with electricity and 1.7 million with gas.

- Telecommunications (quote from EWE website):

The energy supply of the future will be based on a continuous exchange of data between decentralised producers, networks and users. For this reason, EWE set up its own telecommunications branch in 1996 with a high-performance network. The Group has since become one of Germany's largest regional providers with the most experience. About 700,000 customers now receive telecommunication products from the Group company.

EWE baut in ihrem Tätigkeitsgebiet in den Bundesländern Niedersachsen und Bremen das Glasfasernetz konsequent aus und bietet Privat- und Geschäftskunden TK-Leistungen unter den Marken EWE, swb und osnatel an. EWE baut das Breitbandnetz konsequent schrittweise aus und hat u.a. über 6.000 Kabelverzweiger (KVZ) angeschlossen, vorwiegend in der Fläche. In immer mehr Bereichen bietet EWE bereits FTTH an. EWE TEL GmbH, die 100 %-Tochter der EWE AG, hat 615.300 Kunden und 1.235 Mitarbeiter und erzielt einen Umsatz von 444 Mio. € (31.12.2015).

- Information technology (quote from EWE website):

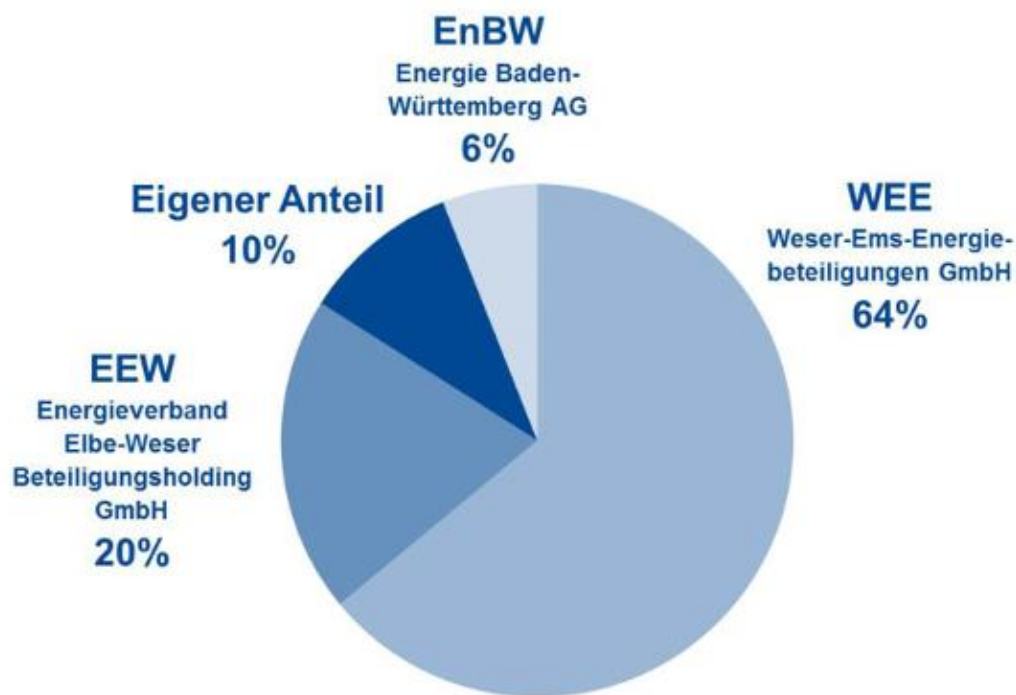
Being able to transfer data quickly is vital for all of the interactions involved in modern energy supply systems. However, only once the data transferred has been processed can the information contained there be used to control networks, generation and consumption efficiently. In this way, it is also possible to show customers how to use energy optimally. In order to be prepared for these tasks, EWE founded the subsidiary BTC in 2000. Today, this company is one of the foremost providers of information technology services in Germany, with additional offices abroad.

EWE Group figures (from EWE website)

Group Figures	2015	2014	Change in %
in Mio. Euro			
Sales	7,819.3	8,134.2	-3.9
Operating EBITDA	864.0	849.2	1.7
Operating EBIT	428.1	427.5	0.1
EBIT	212.0	354.7	-40.2
Result for the period	-9.4	146.3	-106.4
Cash paid for investments (total)	666.9	721.4	-7.6
Cash flow from operating activities	708.2	770.3	-8.1
Balance sheet total	9,744.3	9,800.9	-0.6
Equity ratio in %	18.0	23.3	-22.7
Net financial position	4,237.1	4,120.7	2.8
Employees (ratio)	8,855	9,154	-3.3
Employees in full-time equivalents (FTE)	8,465	8,538	-0.9

EWE Shareholder structure (from EWE website)

EWE is a public company which is not listed. The majority of its shareholders are local authorities and municipalities in the Ems/Weser/Elbe region. They are organised in two associations, the Weser-Ems-Energiebeteiligungen GmbH (WEE) holding a stake of 59 per cent in the company and the Energieverband Elbe-Weser Beteiligungsholding GmbH (EWE) holding 15 per cent. Together these associations build the Ems-Weser-Elbe Versorgungs- und Entsorgungsverband. Ten per cent are held by EWE itself. EnBW Energie Baden-Württemberg AG will have fully pulled out by the end of 2019. Beginning in 2017, EWE will look for a new strategic partner.



EWE organisational structure

