



Telenor ASA
Postboks 800
1331 FORNEBU

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Your ref.:
Your date:

Executive officer: Tor Arne Knutsen

Draft - Supplementary Decision in Market 3b – Wholesale access to fixed mobile broadband

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1 Introduction

1.1 Background

On 20 December 2018, the Norwegian Communications Authority (Nkom) adopted a decision (M3b Decision/Decision) including the designation of Telenor ASA (Telenor) as a provider with significant market power and an order concerning special obligations in the wholesale market for central access to fixed access networks (Market 3b).

In section 2.4.4.2 of the market analysis, which was prepared in connection with the decision, Nkom made the general conclusion that wholesale access to fixed radio access networks is included in Market 3b.

In section 7.2.6 of the M3b Decision, Nkom assessed whether Telenor should be required to provide access to fixed radio access networks. In that decision, Nkom made reference to the fact that Telenor's "Fixed mobile broadband" product was still in the testing stage and that Nkom therefore had not assessed whether the product would be included in Market 3b. Nkom therefore also did not address whether the product should be subject to an access obligation.

Telenor launched the product in question, which is now referred to as "Mobile Broadband at Home" (HBM), on its website in spring 2019. The product is offered as a replacement for DSL based broadband on parts of Telenor's network where Telenor is closing copper-based access. However, the product is not being offered in areas where the relevant end users have alternative service offers based on fixed infrastructure. Telenor is also considering using the product in areas where Telenor has been awarded government tenders to develop broadband in connection with the national state aid scheme for broadband, provided that the solution is approved for the purpose.

Telenor also offers an equivalent product to selected companies as a replacement for DSL-based broadband. This product is referred to as "Fixed Mobile Broadband" (previously referred to as "Broadband Business Mobile").

Telenor's name for the product in the residential market has changed from "Fixed mobile broadband" to "Mobile Broadband at Home", while the product in the business market is now referred to as "Fixed Mobile Broadband". In this Decision, Nkom has generally chosen to use the term "fixed mobile broadband", which is abbreviated to "FMBB". This is partly to clarify that the assessments and obligations apply to both products aimed at the residential market and products directed at the business market, and partly because the term "fixed mobile broadband" is more appropriate than the terms used for the retail products when referring to wholesale

access linked to the applicable retail products. However, “Mobile Broadband at Home”/”HBM” and “Fixed Mobile Broadband” are still used when referring to Telenor’s retail products. The upper case used in “Fixed Mobile Broadband” referring to the retail business product and the lower case used in “fixed mobile broadband” referring to the wholesale access product should be noted.

1.2 Draft supplementary decision for national consultation - fixed mobile broadband

On 28 November 2019, Nkom published a draft supplementary decision for national consultation concerning fixed mobile broadband (Draft Decision). In this Draft Decision, Nkom gave notice that fixed mobile broadband, including Telenor’s “Mobile Broadband at Home” and “Fixed Mobile Broadband” products, are included in the retail market for standardised broadband access and that a corresponding access product is included in Market 3b. Nkom also gave notice that an access obligation would be imposed on Telenor for a wholesale product that provides access buyers with the opportunity to offer equivalent products to “Mobile Broadband at Home” and “Fixed Mobile Broadband” in the retail market.

1.3 Consultation responses and other comments

1.3.1 Introduction

Fjordkraft, GlobalConnect, NextGenTel and Telenor have commented on the Draft Decision. On 7 January 2020, Nkom invited the operators to submit comments on the consultation responses received by 22 January. GlobalConnect and Telenor submitted comments. All of the comments are available on Nkom’s website.

Below, Nkom summarises the comments to the Draft Decision, including GlobalConnect and Telenor’s comments relating to the consultation responses from other providers. The summary is primarily divided into subject and according to the individual items in the Draft Decision. The most important and most frequent comments are stated here. Nkom also provides its views on the relevant comments and how we have processed this input. Nkom has noted all of the input, and this has been taken into consideration in the work on this decision.

1.3.2 Overall comments on the Draft Decision

Fjordkraft supported the draft supplementary decision. The company was of the view that the supplementary decision will contribute to increasing competition and providing customers with better products and prices.

1.3.3 The market analysis that forms the basis for the M3b Decision.

With reference to the company's market share in fibre technology, **Telenor** considered the current regulation to be based on an outdated market analysis and therefore considered it necessary that a new analysis of the markets is promptly commenced.

Nkom would note that Telenor's appeal of the M3b Decision, which relates, among other things, to this issue, is being processed by the Norwegian Ministry of Local Government and Modernisation.

1.3.4 The market analysis in the Draft Decision

GlobalConnect was of the opinion that there is no doubt that all types of FMBB are part of the relevant market. In addition to the factors described by Nkom in the Draft Decision, GlobalConnect emphasised that Telenor actively markets the service as a replacement to copper-based accesses, and a proportion of the end users who purchase fixed broadband access have already migrated to this service. In their comments to Telenor's consultation response, GlobalConnect disagreed with Telenor that there is a need for a new, complete market analysis, and made reference to Section 3-4 of the Electronic Communications Act, which authorises Nkom to change the use of remedies to safeguard competition without a new market analysis. GlobalConnect also disagreed with Telenor that there is a need to collect new market data.

NextGenTel supported Nkom's assessments regarding substitutability in the retail and wholesale markets.

Telenor did not consider Nkom's analysis in the Draft Decision to be adequate. Among other things, the company noted that Nkom analysed demand-side substitutability without conducting any analysis of demand or collecting market data. Telenor also noted that a number of changes have taken place in the market since the previous analysis which now necessitate a new, complete market analysis. In addition to fibre networks being established by other operators, Telenor made reference to the fact that the company has made the decision to close the copper network by 2023 and has commenced this process. Furthermore, Telenor was of the opinion that the Draft Decision lacks an assessment of these factors and of the impact the introduction of FMBB will have for competition and the assessment of significant market power. In the comments to other consultation responses, Telenor noted that there are also other mobile operators in the Norwegian market that offer or have plans to offer FMBB and that the need for access buyers of FMBB is lower and "*possibly completely redundant.*"

In connection with Telenor's comments, **Nkom** would note that, in the M3b Decision of 20 December 2018, Telenor was designated as a provider with significant market power in Market

3b. This is not altered by the fact that Telenor has chosen, at its own initiative, to announce the decommissioning of the copper network by the end of 2022. Nkom agrees with Telenor that there is a need to further assess the consequences of the decision to close the copper network. In connection with this, Nkom will also assess whether the choice or formulation of remedies must be adapted to the changed situation. Reference is made to section 3.2 below.

Telenor has reported that FMBB will function as a replacement for the copper line for a large proportion of the end users who will lose this in connection with Telenor's decommissioning plans. The service is offered in areas where there is adequate capacity and where the relevant end users do not have other broadband services based on HFC or fibre. The company has also reported that many customers are satisfied with Telenor's FMBB products. In terms of price, the products are comparable with DSL-based broadband and, through very limited mobility, cannot be considered mobile products. When Telenor has chosen to service some end users based on internal wholesale products within one of the pre-defined markets on a different technological platform from before, the principle of technology neutrality suggests that the regulation should not, in principle, be influenced by Telenor's choice of technology. The regulation would not be very effective if such changes in the technological platform were to result in an exemption from sector regulation until a new, complete market analysis had been conducted in each instance.

Nkom therefore disagrees with Telenor that there is a need to conduct a new, complete market analysis in order to include FMBB in the market. Nkom also maintains the conclusion that FMBB is part of the retail market for standardised broadband access and that a corresponding access product is included in Market 3b.

1.3.5 The access obligation – Geographical coverage

GlobalConnect noted that the copper infrastructure is currently the only nationwide fixed network communications infrastructure available to access buyers in a wholesale market. GlobalConnect was of the view that when this premise is changed, it requires Nkom to ensure there are relevant replacement products when copper access lines disappear, including for copper based operator access in Market 3a. The company was also of the view that if the product shall only be offered at locations that Telenor considers to be technically viable, this will enable Telenor to discretionarily decide where competitors can receive access to the regulated products and, in so doing, undermine the access obligation. GlobalConnect could not see that there were technical reasons for the product not being available nationwide.

NextGenTel emphasised that Telenor must grant access to replacement products at locations where the copper network is being closed down.

Telenor made reference to the fact that the decommissioning of the copper network means that the company no longer has a nationwide network and therefore also cannot offer wholesale customers access to a nationwide network. Telenor were of the opinion that Nkom's grounds for imposing an access obligation do not appear to correlate with the facts. Local competition, end user preferences, the need for investments, mobile network capacity etc. will be decisive to where Telenor can offer FMBB. Telenor also noted that the characteristics of an FMBB product and the capacity on the mobile network mean that there will continually be a need for changes in the overview of the addresses that such a product can be provided to.

Nkom would note that this decision only applies to the access obligation in the areas where Telenor themselves choose to offer FMBB and not other areas where providing the product may be technically feasible. Nkom finds that Telenor has the freedom to choose the locations where they will offer their different products to end users. The fact that the limited coverage area for FMBB is partly due to technical factors and partly due to commercial considerations relating to the service's coverage area, does not change this. However, the obligation of non-discrimination entails that Telenor's choice to offer the product to a specific address cannot be influenced by whether a request/order originates from an access buyer or from Telenor's retail operations. Telenor is therefore required to provide access buyers with access to a continually updated list of addresses/locations where Telenor offers wholesale access to FMBB. This list must be the same as that used by Telenor's own retail operations. Nkom also expects that changes to the same list will be made available to the access buyers at the same time as for Telenor's own retail operations. The product's limited coverage when viewed in relation to the decommissioning of the copper network, which is partly due to commercial decisions on Telenor's part, is addressed in section 3.2.

1.3.6 Non-discrimination with respect to price

NexGenTel emphasised that, pending potential price controls, there is a need to specify that the obligation of non-discrimination entails that Telenor must treat similar situations equally in terms of prices, information and terms in general.

In this decision, **Nkom** has emphasised that the obligation of non-discrimination with regard to price applies irrespective of when and how more exact price controls are determined, cf. Section 5.1 below.

1.3.7 Publication of reference offers

NextGenTel assumed that the notified obligation implicitly implies that Telenor must prepare and publish a reference offer in accordance with the requirements that are otherwise stipulated in the Market 3b Decision.

Nkom would note that, due to the competitive conditions in the market for access and call origination on mobile networks (Market 15), it has not been considered expedient to require Telenor to publish its prices for access to mobile networks. Equivalent assessments apply for FMBB, and Nkom will therefore not impose an obligation to publish prices that are part of Telenor's reference offer. However, this does not impact on Telenor's obligation to prepare a reference offer and publish this offer, with the exception of the price schedule, or obligation to have non-discriminatory terms. Like Market 15, Telenor must provide information on prices for access to FMBB when requested by potential access buyers.

1.3.8 Quality of service and access point

GlobalConnect asserted that the speed classes and usage limits are not due to technical limitations or other factors related to the service, but that Telenor has determined these based on commercial considerations. GlobalConnect was of the view that Telenor also offers tailor-made services with characteristics that are different to those stipulated for "Fixed Mobile Broadband". The Draft Decision should reflect this. GlobalConnect was also of the view that it is technically possible to improve the service quality for individual users on a 4G network by giving them a prioritised speed class and assumed that Telenor themselves make use of this option. In principle, GlobalConnect also requested local access points in order to be able to utilise their own fibre network and avoid having to purchase traffic transport services from Telenor.

Nkom is of the view that the defined speed classes and usage limits are the result of a combination of technical factors and commercial considerations. When the mobile network shall be used to provide services that will, to some degree, replace fixed network based services, it is expedient to have mechanisms that provide end users with predictability in terms of available speed in line with the fixed network. It must also be ensured that mobile users in the area are taken into consideration. However, there is still no doubt that the usage limit and reduction to 5 Mbit/s after reaching the product's data allowance will mean that the product will not be viewed as a substitute for all users, cf. Section 3.2. However, the general obligation of non-discrimination imposed on Telenor in this decision entails that the access product shall enable access buyers to offer their retail customers products which are equivalent to Telenor's retail products, including with regard to services to business customers.

Nkom is not aware of Telenor assigning priority when supplying FMBB for their own retail customers and therefore cannot see that there are grounds for imposing this in the wholesale market. Nkom has also not received any documentation of Telenor offering tailor-made services with characteristics that are different to those stipulated for "Fixed Mobile Broadband". If Telenor was to use prioritisation or offer tailor-made FMBB services which are not covered by the standard products, the obligation of non-discrimination imposed on the company in this decision will mean that they also have to offer the necessary functionality to access buyers.

With regard to the possibility of local/regional connection points, the centralised structure for the service platform on the mobile network based on the 4G/LTE core network will require that a new mobile switching centre is set up to be able to deliver traffic locally or regionally. However, in order to clarify that the assessment of whether an access request for FMBB is reasonable may change over time, for example, due to changes in the mobile network, Nkom has directed Telenor to develop a documented process for managing requests for access that go beyond the features of the current product and which must be referred to in the reference offer.

1.3.9 Form of access

Telenor notes that an access buyer on the MNVO interface has its own core network and only uses Telenor's radio network. The key features of the FMBB product are administered in core network components and IT systems and it will therefore not be possible for Telenor to provide a wholesale product for FMBB on the MVNO interface. In Telenor's view, this entails that the requirement for access to FMBB based on MVNO access should no longer apply.

Nkom finds that the technical management of FMBB features may also be ensured through contractual regulation between MVNO and Telenor and the follow-up of such contractual regulation. However, Nkom has decided not to require Telenor to develop a wholesale product for FMBB based on MVNO access at the present time, cf. section 4.2.2 below.

1.3.10 Price controls

GlobalConnect agreed that the regulation cannot allow for special setup costs or other cost elements, for example, monthly rental for co-location, traffic transport services or connection to the mobile network. At the same time, GlobalConnect was of the opinion that the wholesale prices must be at a level which makes it possible to compete, and Nkom must impose sufficiently detailed price controls to avoid price discrimination and excessive pricing. It must be ensured that Telenor does not add extra cost components between customer access and the point of handover for traffic. To avoid delaying the decision and to provide the necessary predictability, GlobalConnect encouraged Nkom to either impose cost orientation or set a provisional price cap based on Telenor's retail prices, minus a minimum stipulated percentage of 50 per cent. The price cap must also include the corporate business segment.

Telenor referred to Nkom's conclusion in section 4.2.2 of the Draft Decision. With regard to this, Nkom would note that, for access buyers who have an agreement for access to Telenor's fixed network for broadband, but do not have an agreement for access to Telenor's mobile network, Telenor cannot require that the access buyers must pay a setup fee to obtain access to fixed mobile broadband. Telenor is of the view that it would be unreasonable to introduce a regulation which entails that Telenor cannot accept payment for the work that has to be done to implement

a new access buyer on the mobile network, and that this also results in detrimental socioeconomic incentives.

With regard to the comments from GlobalConnect, **Nkom** makes reference to the fact that there will be a separate consultation process concerning price controls and the potential need for accounting separation, cf. section 5.3. Nkom does not consider it appropriate to establish temporary price controls, as proposed by GlobalConnect. Nkom needs to have some basis for any form of price control, and such work would result in the work on designing a permanent framework for potential price controls and/or accounting separation being postponed.

In light of Telenor's comments, and taking into account that the assessments of replacement products for copper based access, including any special price terms linked to this, primarily will take place outside of this decision, and that price and accounting controls will be addressed in a separate consultation process, Nkom has decided not to set the requirement that the price must be zero for entering into an access agreement for wholesale access to FMBB. Nkom will instead require Telenor to offer the setup of access at a reasonable price, cf. section 5.3 below.

1.3.11 Deadline for completion of a new wholesale product

GlobalConnect noted that it is important that competitors are ensured quick access to alternative input factors in light of Telenor's decision to close down the copper network.

NextGenTel considered it to be a matter of urgency to establish access to FMBB at wholesale level and made reference to Telenor having had "*almost explosive growth*" in subscriptions for fixed broadband provided over the mobile network.

Telenor was of the view that the company will not be able to provide an FMBB product that is not limited to projects with state aid by the originally notified deadline for the completion of the service, i.e. 1 February 2020. Telenor referred to the need to develop a system where the access buyer can obtain information about the addresses where FMBB can be purchased, with associated speeds and any equipment requirements.

Nkom has been informed that Telenor has now developed a system for providing access buyers with information regarding addresses where FMBB can be sold on non-discriminatory terms when viewed in relation to Telenor's own retail operations. Based on Nkom's knowledge of the FMBB wholesale access service launched on 1 June 2020, this decision otherwise only includes minor adjustments to the text in the offer and certain adjustments to internal administrative processes. In light of this and in light of there being a need for a service in line with this decision to be available as quickly as possible, Nkom has concluded that a service that is in line with this decision must be available one month after the date of this decision.

2 Brief overview of "Mobile Broadband at Home" and "Fixed Mobile Broadband"

"Mobile Broadband at Home" is a retail product that is supplied over Telenor's mobile network. The end user equipment consists of a broadband router designed to receive signals over the mobile network and possibly an external antenna for customers living in areas with weak mobile coverage. See the Figure below. A specific HBM subscription may only be used from the end user's address or in the immediate vicinity of it because the product has a "geo-lock" that makes it connect to a small number of base stations covering the area in question.



Fig 1: Broadband router and external antenna used with "Mobile Broadband at Home". Source: Telenor

Telenor has reported that the preconditions for the company's customers being offered HBM are that broadband via fibre or HFC is not available and that the mobile network in the geographical area can withstand the additional strain this service will place on capacity.

According to Telenor's website, HBM subscriptions are offered at NOK 599 per month for download speeds of up to 10 Mbit/s, NOK 699 per month for up to 30 Mbit/s, and NOK 799 per month for up to 60 Mbit/s.

These speeds will be maintained up until usage of 1,000 GB per month. The speed will then be reduced to 5 Mbit/s until the end of the current month. However, in connection with the Corona situation, Telenor has increased the limit to 2,000 GB per month.

Telenor plans to develop HBM in multiple phases. During the current phase of development, Telenor will, among other things, add a function that allows HBM to be automatically locked to specific base stations.

In the business market, Telenor will initially offer the "Fixed Mobile Broadband" product to a limited number of customers. This product has similar features to HBM, but slightly different download speeds, data allowances and prices compared to HBM. "Fixed Mobile Broadband" is offered with download speeds of up to 20 and 40 Mbit/s. The speeds are maintained up until usage of 1.5 TB per month. The speed is then reduced to 5 Mbit/s in the same manner as for HBM.

3 Market analysis

3.1 Introduction

At the time of the Market 3b Decision, Nkom was aware that Telenor had developed and tested a product which was provisionally named "Fixed Mobile Broadband" and was based on 4G technology on Telenor's mobile network. Nkom stated the following regarding this product in paragraph 225 of the decision:

"Since 'Fixed Mobile Broadband' is currently in the testing stage, Nkom has not assessed whether such a product will be included in Market 3b. This will be necessary, however, if Telenor offers the product on a commercial basis. It would then also be necessary to assess whether Telenor must be subject to an access obligation for such a product, among other things, in light of how the product could replace copper-based accesses that, as of today, are subject to an access obligation."

As Nkom referred to above, Telenor now offers "Mobile Broadband at Home" and "Fixed Mobile Broadband" on a commercial basis. In light of this, Nkom will assess whether the products are included in the retail market for standardised broadband and whether a corresponding wholesale product is included in Market 3b.

3.2 Decommissioning of the copper network, partial substitutes and relevant replacement products

Nkom has seen the need to make changes to the decisions in Market 3a and 3b that relate to Telenor's decision to close the copper network, cf. "Decision to amend the decisions in Markets 3a and 3b – Obligation to maintain access to copper-based access networks" of dd/mm/yy¹. Nkom considers it most appropriate to primarily consider the access obligation for fixed mobile

¹ The associated draft decision is notified to ESA at the same date as this decision.

broadband in the current decision in light of Telenor's significant market power in Market 3b, and to a lesser extent in light of Telenor's decision to close down the copper network. The principle of technology neutrality suggests that the remedies should not depend on the technical platform on which Telenor chooses to offer their broadband products.

As Nkom noted in sections 3.1.2.1-3.1.2.3 of the draft decision for national consultation on 20 December 2019 to amend the decisions in Markets 3a and 3b, Nkom does not presently consider access to HBM to be a relevant replacement product for the access products that are offered based on the copper network. Since Telenor has given notice that it will close the copper network by 2023 and is marketing FMBB as a replacement product, the notified decommissioning of the copper network is still also an element in Nkom's assessment of whether it would be proportionate to impose access for FMBB.

In Nkom's view, stricter requirements should be set for a relevant replacement product for copper access at wholesale level than a replacement product having sufficient similarities to copper access for being included in Market 3b. If a significant proportion of the retail customers in the residential market should consider HBM to be an equally good or better alternative to the copper based product which they previously had, it would be natural to include the relevant access product in Market 3b. However, such an access product in Market 3b will not provide the same flexibility for access buyers as what the access products on the copper network within Market 3a have provided. Some end users in the residential market will find the product to be of better quality because they experience that the average speed is better than the copper based service which they had. For other end users, and for access buyers that offer services for these end users, when the stability of the speed or symmetry in the upstream and downstream speed is a more important qualitative parameter than average speed, it will more often be the case that a mobile network based service without reserved spectrum will not be considered to have the same quality as a fixed network based service. In connection with this, Nkom makes reference to Telenor having stated that the speed for the FMBB products is "up to" x Mbit/s.

The coverage area for Telenor's current FMBB service is significantly smaller than for the copper network. The price and lead time for establishing wholesale access for FMBB are also at a completely different level than for access to fibre or copper-based access networks. This can, particularly together with limited coverage, result in some access buyers not finding access to FMBB to be an adequate substitute for certain forms of access to the copper based access network.

There will also be some end user/end user segments, both in the residential and business markets, that will not consider FMBB to be an adequate substitute for a copper-based product. Even though access to FMBB is considered to be part of Market 3b, it will also be necessary to consider these customers/segments when assessing relevant replacement products in

connection with the decommissioning of the copper network. Decommissioning of the copper network was part of the basis for the Draft Decision. Since Nkom has seen a need for a more comprehensive assessment of the decommissioning of the copper network rather than in connection with an individual access product, the issue concerning relevant replacement products in connection with the decommissioning of the copper network will now be dealt with in “*Decision to amend the decisions in Markets 3a and 3b – Obligation to maintain access to copper-based access networks*” of dd/mm/yy².

3.3 Assessment of whether “Mobile Broadband at Home” and “Fixed Mobile Broadband” are included in the retail market for standardised broadband access.

3.3.1 Introduction

In section 2.3.3 of the analysis of Markets 3a and 3b, Nkom concluded that broadband access based on fixed radio access is part of the retail market for standardised broadband access. In the conclusion, Nkom placed particular emphasis on fixed radio access having local application in line with the cable based access technologies (copper, fibre and HFC networks), as opposed to mobile broadband access.

3.3.2 Previous correspondence with Telenor

In a letter of 29 June 2018, Telenor asked Nkom to clarify the relationship between the test product “Fixed mobile broadband” and the market regulation which applied at that time (former Markets 4 and 5). In the letter of 17 October 2018, Nkom concluded that “Fixed mobile broadband” was to be considered fixed radio access.

In their response to questions from Nkom, Telenor stated that “Mobile Broadband at Home” is a fixed broadband product. Nkom refers to Telenor’s letter of reply of 30 April 2019, which stated the following:

“In Telenor’s view, ‘Mobile Broadband at Home’ is a fixed broadband product, which was also Nkom conclusion in the letter of 17 October 2018. Telenor agrees with Nkom’s assessments that very limited mobility, download speed and pricing of the product are important for the relevant substitution assessments. As is always the case when defining a market in accordance with competition law methodology, the actual

² The associated draft decision is notified to ESA at the same date as this decision.

preferences and choices of the retail customers will of course be important for a correct market definition.”

3.3.3 Nkom’s assessment

It is Nkom’s view, the fully developed HBM product does not differ markedly from the “Fixed mobile broadband” product that was assessed in 2018. Like “Fixed mobile broadband”, HBM will also be locked to specific base stations. The service will therefore be local.

The download speeds have changed slightly. Telenor planned to offer "Fixed mobile broadband" with download speeds of 30 Mbit/s and 60 Mbit/s. The HBM product was initially offered with download speeds of 10 Mbit/s and 30 Mbit/s, and the product is now also offered with a download speed of 60 Mbit/s. However, Nkom cannot see that the change in the download speeds is of significance to the assessment of whether or not HBM is a partial substitute for fixed broadband. In Nkom’s view, the decisive factor must be that HBM is offered with data speeds that are comparable with speeds offered on copper, HFC and fibre networks. Nkom also makes reference to the conclusion in section 2.3.2.7 of the market analysis that there is no break in the substitution chain between different speed categories for fixed broadband.

The data allowance for HBM has also increased from 500 GB to 1,000 GB in comparison with “Fixed mobile broadband”. The new allowance will now correspond with the limit of 1,000 GB per month that was set in connection with State broadband support. In practice, most end users will use less data than this per month. Based on this, Nkom is of the view that the data allowance for HBM will be at a high enough level that most end users will, in practice, find that the product is a substitute for a fixed broadband product concerning this aspect.

Nkom further notes that Telenor markets and offers HBM as a replacement product for DSL-based broadband for the company’s customers. Telenor’s HBM prices are also at the same level as the company’s prices for DSL-based broadband. According to Telenor’s provisional estimates, HBM or equivalent products will be replacement products for about **Exempt from public disclosure** of the end users who are currently using copper based broadband. In Nkom’s view, these factors also indicate that HBM is part of the retail market for standardised broadband access.

Nkom has concluded that HBM has product characteristics and prices which, like other types of fixed radio access, make it appear substitutable for fixed broadband access (copper, fibre, HFC) to many end users. HBM is therefore included in the retail market for standardised broadband access.

With regard to the business product known as “Fixed Mobile Broadband”, the features of this product are largely the same as for HBM. “Fixed Mobile Broadband” will also be locked to specific base stations and the download speeds are comparable with HBM. The data allowance is slightly higher for “Fixed Mobile Broadband” than for HBM. The difference is most probably due to a company with several users potentially requiring a total amount of data which exceeds that of a household. Telenor offers “Fixed Mobile Broadband” as a replacement product for DSL-based broadband for businesses.

Based on this, Nkom has concluded that “Fixed Mobile Broadband” also has product characteristics which, like other types of fixed radio access, makes it appear substitutable with fixed broadband access to many end users. “Fixed Mobile Broadband” is therefore included in the retail market for standardised broadband access.

3.4 Delineation at wholesale level

In section 2.6 of the market analysis, Nkom concluded that the market for wholesale local access (Market 3a) and the market for wholesale central access (Market 3b) are two separate markets, that both markets are technologically neutral and that they are derived from the retail market for standardised broadband access.

With regard to Market 3a, Nkom has concluded that the market comprises access to physical wholesale products, as well as equivalent or comparable virtual wholesale products on the copper and fibre networks that have the following characteristics: 1) local access, 2) service-independent, “uncontended” connection, and 3) the access buyer has control of the connection.

For Market 3b, Nkom has concluded that the market comprises wholesale access at regional or centralised levels, and wholesale access offered at local level, but does not fulfil the other requirements for products in Market 3a. Nkom finds that wholesale products based on copper, fibre, HFC and fixed radio-access networks are included in Market 3b.

In section 2.4.4.2 of the market analysis of Markets 3a and 3b, Nkom made reference to the fact that it is possible to have wholesale central access on fixed radio access networks. Nkom also makes reference to the letter of 30 April 2019 in which Telenor reported that they were in the process of developing a wholesale product for HBM for use in connection with the national state aid scheme for broadband. Telenor has furthermore reported that the company intends to launch an equivalent wholesale product on 1 June 2020, including in areas outside of state aid projects, but limited to areas where Telenor themselves offer the product to their end users.

In light of the fact that, at the time of the analysis, the distribution of fixed radio access networks was significantly less than the distribution of HFC networks, Nkom found that the potential for direct competitive pressure from fixed radio access networks was significantly more restricted than the competitive pressure from HFC networks. Even though Telenor has plans to replace a high number of copper accesses with FMBB, Telenor's decision not to offer the product to customers that are offered broadband based on fibre or HFC, means that the price-disciplining effect on services delivered across these platforms will be limited. However, given that the offer has been developed with the aim of replacing copper based connections, this decision from Telenor cannot result in the access product for FMBB not being included in the market.

Based on the above, Nkom has concluded that wholesale access to fixed mobile broadband which enables access buyers to supply retail products equivalent to "Mobile Broadband at Home" and "Fixed Mobile Broadband" is a form of fixed radio access that is included in Market 3b.

4 Access obligation

4.1 Need for access obligation

4.1.1 Nkom's assessment

The general provision in the Electronic Communications Act regarding access is defined in Section 4-1 of the Act. We refer to section 7.2.1 in the M3b Decision for a description of the statutory basis for imposing an access obligation.

In section 7.2.2 of the M3b Decision, Nkom found that there was a need to continue the wholesale central access obligation for Telenor's access network. Among other things, Nkom noted that continuing such an obligation would ensure that providers which do not, or only to a limited extent, have their own access networks, will also have the opportunity in the years ahead to offer nationwide services in the retail market and that such providers constitute an important competitive factor in the retail market. In connection with this, Nkom stated that even though a growing share of the retail offering of broadband access is based on access infrastructure other than Telenor's network, central access to Telenor's copper-based access network will continue to be important for competition in the years ahead.

At a status meeting between Telenor, the Ministry and Nkom on 17 April 2020, Telenor outlined their plans for migrating customers from the copper network to new infrastructure. In connection with this, Telenor reported that their current estimate shows that the distribution of "copper

accesses” that will be replaced by fibre/HFC and FMBB, will be **Exempt from public disclosure** [REDACTED] respectively. In the press release of 5 May 2020³, Telenor stated that approximately 46,000 customers have now chosen to replace copper-based broadband with FMBB. Telenor’s migration plans and customer response until now therefore appear to entail that many copper accesses will be replaced with FMBB.

Access to FMBB will not be a full-fledged substitute for access to the copper network, cf. section 3.2. However, Nkom finds that both the principle of technology neutrality and the consideration of competition in the broadband market argue in favour of it being necessary to require Telenor to meet reasonable requests for access to fixed mobile broadband.

In order to ensure verifiability with regard to requests for access, including requests that go beyond the applicable reference offer, Telenor is required to prepare a documented process for registering and assessing requests for access to fixed mobile broadband. A reference to this process must also be included in the reference offer.

4.1.2 Conclusion

Pursuant to Section 4-1 of the Electronic Communications Act, Telenor is directed to meet reasonable requests for access to fixed mobile broadband, cf. section 8.

4.2 The access obligation

4.2.1 Access on non-discriminatory terms

In the M3b Decision, Telenor imposed a requirement on Telenor to offer access on non-discriminatory terms, cf. paragraph 545 of the M3b Decision. Nkom is of the view that this requirement must also include access for being able to offer FMBB products, cf. section 5.1 below. In order to comply with the obligation to meet reasonable requests for access to fixed mobile broadband, Telenor must offer a wholesale product. This wholesale product must be designed in a manner that enables access buyers to offer retail products that are equivalent to Telenor’s “Mobile Broadband at Home” and “Fixed Mobil Broadband” retail products and any future FMBB products Telenor may decide to offer.

Telenor’s decision to offer an FMBB product to a specific retail customer is based on whether the coverage conditions are in place for being able to provide a service with the sufficient quality. However, at present, the products are not offered to retail customers that have

³ <https://www.mynewsdesk.com/no/telenor/pressreleases/fartsqlade-nordmenn-omfavner-ny-mobilloesning-2996032>

alternative offers based on fibre or HFC. This restriction of coverage, viewed in light of Telenor's decision to close the copper network, is not assessed in this decision, cf. section 3.2.

An obligation to offer access on non-discriminatory terms entails that Telenor must provide access buyers with access to a continuously updated list of addresses where Telenor's own retail operations will, either at their own initiative or at the request of retail customers, offer an FMBB product. The list must also be available upon request for potential access buyers if Telenor does not decide to make the list readily available on their website.

If Telenor makes changes to the product specification for their retail products, Telenor must make corresponding changes to the wholesale product to enable access buyers to launch an equivalent retail product at the same time as Telenor's own retail operations.

4.2.2 Forms of access and access points

Telenor presently offers MVNO access and service provider access to their mobile network for providers without their own radio access network. Nkom is of the view that requests for access to fixed mobile broadband on the service provider interface must be considered reasonable. Unlike standard access for service providers on the mobile network, the access must enable access buyers to transfer data traffic to and from their own network at a central delivery point.

With regard to MVNO access, Nkom finds that such access for providing FMBB will require both complex contractual regulations and close operational coordination/follow-up. Due to the expected limited demand for such access and the expectation that the core network will be upgraded to 5G in the near future, Nkom does not consider it a proportionate measure to require Telenor to prepare for such access at the present time by developing an access product based on MVNO access. However, Telenor is still required to negotiate in good faith with any operators that should request such access.

The national roaming form of access gives rise to some specific issues. Nkom will address these in dialogue with the involved operators if this should become applicable.

5 Other obligations

5.1 Non-discrimination

In the M3b Decision, Nkom imposed an obligation on Telenor to have non-discriminatory terms. Requirements for non-discrimination will apply for FMBB access in the same manner as for other access products in Market 3b. Paragraphs 546 and 547 of the M3b Decision have been

amended to reflect this, cf. Section 8. Nkom stresses that the obligation of non-discrimination also includes an obligation for Telenor to have non-discriminatory prices, both between their own operations and access buyers and between different external access buyers, cf. also section 5.3.

5.2 Publication and reference offers

Requirements to prepare reference offers and the content of these will also apply for Telenor's wholesale services for fixed mobile broadband. However, there will be no requirement to publish the price schedule in the reference offer, cf. section 1.3.7.

5.3 Price controls and accounting separation

Nkom is of the view that Telenor has incentives to set a disproportionately high price for implementing the interface for access to FMBB. A disproportionately high price for establishing access is liable to act as a barrier to entry for potential access buyers and thereby undermine the purpose of the access obligation. In order to remedy this potential competition problem, Nkom considers it necessary to set the requirement that Telenor's prices for implementing the interface for access to FMBB are reasonable.

In order for a requirement for reasonable prices to satisfy its objective, it is necessary to set guidelines for the assessment of reasonableness. In Nkom's view, the purpose of the access obligation for FMBB indicates that the price for implementation should not be set higher than what is necessary for covering the additional costs Telenor actually incurs from implementing the access. Nkom is also of the view that the implementation price must be the same for different access buyers and that it must not vary in accordance with any variations in Telenor's costs for implementing access for different access buyers.

When assessing what is a reasonable price, Nkom will place emphasis on the same factors as for equivalent assessments of other regulated access products based on the mobile network⁴:

- Relevant underlying costs. On request, Telenor must be able to document relevant underlying costs for establishment of access for the relevant operator. If Telenor also requires a fixed monthly price to cover ongoing operating costs associated with the access agreement, Telenor must be able to document which costs are covered by this ongoing charge, so that the same cost is not covered by multiple price elements.
- That the price is not be an unjustified obstacle to efficient operators becoming established in the market.

⁴ cf. Section 7.5.10 of Nkom's decision in Market 15 of 14 May 2020.

Telenor must, no later than within four weeks from when this Decision enters into force, provide Nkom with reasoned estimates for the price for implementing FMBB wholesale access. Furthermore, Telenor must provide Nkom with documentation of the actual costs associated with the implementation of FMBB wholesale access the first time the service is implemented, without undue delay. The cost of implementing the general service provider interface should be included.

With regard to the prices for other price elements for FMBB wholesale access, and particularly the prices for connection setup and subscription at wholesale level for each connection, Nkom is of the view that the same competition problems as for access implementation will apply. However, Nkom considers it appropriate to conduct a separate consultation process on these types of price controls and any requirements regarding accounting separation pursuant to Section 4-9 of the Electronic Commerce Act.

However, by virtue of this decision, Telenor's access charges for establishment and subscription for each customer connection will be subject to a requirement that the prices are non-discriminatory, cf. Section 4-7 of the Electronic Commerce Act and section 5.1 above. In particular, the requirement entails that the access prices must not be set higher than the level at which Telenor's own retail operations would have achieved a reasonable margin given Telenor's own retail costs and that the retail operations purchased access from Telenor's wholesale operations at the terms Telenor offers to external access buyers.

6 Deadline for completion of a new wholesale product

Telenor has informed the industry and Nkom that the company is launching a wholesale product for access to FMBB on 1 June 2020. Based on Nkom's knowledge of this product and viewed in relation to the obligations stipulated in this decision, Nkom is of the view that a relatively brief deadline would be sufficient for completing the product in line with this decision.

Based on this, Nkom is of the opinion that the reference offer for the new access product must be available no later than one month after the date of this decision and that the product must be available for agreements to be entered into from the same date.

In connection with this, Nkom would note that it could weaken competition if Telenor is able to launch retail products that can be viewed as a partial substitute to copper-based broadband, without there being an access product and without Nkom having assessed the need for also launching access and retail products. Nkom has therefore regulated this in cf. *Decision to*

amend the decisions in Markets 3a and 3b – Obligation to maintain access to copper-based access networks” of dd/mm/yy⁵.

7 Proportionality

7.1 Concerning the access obligation

Nkom has concluded above that regulated access to a wholesale product based on "Mobile Broadband at Home" and "Fixed Mobile Broadband" will be important for sustaining competition in the market.

Telenor has already been working for a period of time on developing a wholesale product for FMBB. This is in connection with Telenor having been directed to provide access to third parties at the locations where Telenor has been granted state aid for broadband deployment. Telenor also announced on 1 June 2020 that the company has launched a wholesale product for access to FMBB in areas outside of state aid projects. In light of this, Nkom does not find that it would be particularly resource-intensive for Telenor to offer a wholesale product that will comply with the obligation to offer access to fixed mobile broadband in Market 3b in line with this decision.

Access will be based on Telenor's existing offer of service provider access to the mobile network, but with the possibility of the access buyer itself being able to take over the data traffic on its own network. This functionality is already available for the access product linked to government supported projects.

Based on this, Nkom finds that it would be proportionate to impose an access obligation on Telenor for this type of fixed radio access. It is Nkom's view that the benefits to competition of imposing such an access obligation on Telenor clearly exceed the disadvantages such an access obligation would have for Telenor.

7.2 Other obligations

As regards the proportionality assessment for other obligations, we refer to the assessment of proportionality in the M3b Decision.

⁵ *The associated draft decision is notified to ESA at the same date as this decision.*

8 Decision

8.1 Access

Nkom hereby requires Telenor to meet any reasonable request for access to fixed mobile broadband. New paragraphs 298b-e are included in section 7.2.15 of the M3b Decision:

“298b. Pursuant to Section 4-1 of the Electronic Communications Act, Nkom requires Telenor to meet any reasonable request for access to fixed mobile broadband. Requests for access to fixed mobile broadband with an equivalent interface to what Telenor offers for service provider access on their mobile network are considered reasonable. As a supplement to service provider access on the mobile network for supplying fixed mobile access, the access buyer must be able to exchange data traffic between Telenor’s network and its own network.

298 c. Telenor is also required to prepare a documented process for registering and assessing received requests for access to fixed mobile broadband, including such requests that go beyond the features of the applicable reference offer. The reference offer must have a reference to this process.

298 d. Telenor is required to make a continuously updated overview of addresses where fixed mobile broadband is available for sale, available to access buyers. The overview must include information regarding what product speed can be offered. Addresses available for the sale of fixed mobile broadband must be the same for access buyers and for Telenor’s own retail operations. If the overview is not published, it must also be made available to potential access buyers upon request.

298 e. Telenor’s requirements for end user equipment that shall be used for fixed mobile broadband, must also be included in the reference offer. The reference offer must be available no later than one month after [date of this decision].”

8.2 Price controls

Based on section 5.3 above, a new section 7.3.7b of the M3b Decision is included after paragraph 446:

7.3.7b Wholesale access to fixed mobile broadband

446 a. Telenor must have reasonable prices for implementation of the interface for access to FMBB.

446 b. The price for implementation of the interface for access to FMBB must not be set higher

than what is necessary for covering the additional costs Telenor actually incurs from implementing the access.

446 c. The price for implementation of the interface for access to FMBB must be the same for different access buyers and must therefore not vary in accordance with any fluctuations in Telenor's costs for implementing access for different access buyers.

Three new paragraphs, 476 b-d, are included in section 7.3.10 of the M3b Decision:

476 b. Pursuant to Section 4-9 of the Electronic Commerce Act, Nkom directs Telenor to offer implementation of the interface for access to FMBB at reasonable prices, cf. section 7.3.7b.

476 c. Pursuant to Section 4-9 of the Electronic Commerce Act, Nkom directs Telenor to provide to Nkom, within [four weeks from when this Decision enters into force], reasoned estimates for the price for implementing FMBB wholesale access, cf. section 7.3.7b.

476 d. Pursuant to Section 4-9 of the Electronic Commerce Act, Nkom directs Telenor to provide to Nkom, without undue delay, after the first actual implementation of the FMBB wholesale interface, documentation of the actual costs associated with the implementation. The documentation of costs associated with implementing the general service provider interface should be included.

8.2 Non-discrimination

The non-discrimination obligations imposed in the M3b Decision also apply for fixed mobile broadband.

The final sentence in paragraph 546 is amended to:

“The non-discrimination requirement applies between internal use and external provision, as well as between different external buyers of access. The obligation applies to wholesale products based on both copper and fibre on Telenor’s access network, as well as for access to fixed mobile broadband.” (New text underlined).

The final sentence in paragraph 547 is amended to:

“Pursuant to Section 4-7 of the Electronic Communications Act, Nkom imposes a non-discrimination obligation on Telenor concerning co-location and other similar services intended to facilitate access, in connection with wholesale products based on both copper and fibre on Telenor’s access networks, as well as for fixed mobile broadband, in line with section 7.4.2.” (New text underlined).



Paragraphs 548 and 550 apply without amendments, including for access to fixed mobile broadband.

8.3 Publication and reference offers

The following is added to paragraph 667 of the M3b Decision:

However, the obligations relating to the publication of the reference offer do not apply for the price schedule for access to fixed mobile broadband.

The following is added to paragraphs 670 and 672 of the M3b Decision:

This requirement does not apply to the price schedule for access to fixed mobile broadband.

9 Right of appeal and deadline for initiating legal proceedings concerning individual decisions

The decision may be appealed, cf. Section 11-6 of the Electronic Communications Act, and Section 28 of the Public Administration Act. The deadline for appealing decisions is normally three weeks, cf. Section 29, first paragraph, of the Public Administration Act. For this decision, the deadline for appealing is set at *[date]*. Section 11-8, paragraph one of the Electronic Communications Act stipulates that legal proceedings concerning individual decisions handed down pursuant to or in accordance with this Act must be initiated within six months after the decision was handed down. The deadline for initiating legal proceedings will be interrupted by an appeal of the decision and will not run for the duration of the appeal process, cf. Section 11-8, paragraph two of the Electronic Communications Act.

With kind regards

NN1
Head of Section

NN2
Senior Advisor