Comments on BIPT Draft Communication regarding the request to impose mandatory contributions by internet platforms to telecom operators for the use of their networks in Belgium

Response to BIPT's Public Consultation

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Introduction

I welcome the opportunity to submit comments on the draft communication regarding the request to impose mandatory contributions by internet platforms to telecom operators for the use of their networks in Belgium ("Draft Communication").[1]

I submit my comments as a professor of law and, by courtesy, electrical engineering at Stanford University whose research focuses on Internet architecture, innovation, and regulation. I have a Ph.D. in computer science and a law degree and have worked on net neutrality for the past 23 years.

My book "Internet Architecture and Innovation," which was published by MIT Press in 2010, is considered the seminal work on the science, economics, and politics of network neutrality. My papers on network neutrality have influenced discussions on network neutrality all over the world.

I have testified on matters of Internet architecture, innovation, and regulation before the California Legislature, the US Federal Communications Commission, the Canadian Radio-Television and Telecommunications Commission, and BEREC.

The FCC's 2010 and 2015 Open Internet Orders relied heavily on my work. My work also informed the 2017 Orders on zero-rating by the Canadian Radio-Television and Telecommunications Commission, and the 2016 Order on zero-rating by the Telecom Regulatory Authority of India.

I have not been retained or paid by anybody to participate in this proceeding.[2]

I would welcome the opportunity to discuss these important issues further.

As part of my comments, I submit my explainer that I submitted to the European Commission's recent exploratory consultation on the future of the electronic communications sector and its infrastructure ("Explainer").[3] The explainer discusses the questions raised by the Draft Communication. To prevent duplication, I refer to the more detailed discussion and sources cited in the Explainer throughout my comments here.

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1 https://www.ibpt.be/operators/publication/draft-communication-regarding-the-request-to-impose-mandatory-contributions-by-internet-platforms-to-telecom-operators-for-the-use-of-their-networks-in-belgium.

2 Additional information on my funding is available here: http://cyberlaw.stanford.edu/about/people/barbara-van-schewick.

3 van Schewick, 2023, Comments to the European Commission's Exploratory Consultation on Mandated Network Access Fees (May 19, 2023), https://cyberlaw.stanford.edu/sites/default/files/van_Schewick_2023_Comments_EU_Network_Fees_Consultation_Online.pdf (hereinafter "Explainer").

Network fees and net neutrality

The Draft Communication discusses net neutrality throughout the document.

I agree with the Draft Communication that blocking applications that do not pay the mandated fee would violate Art 3(1) of the Open Internet Regulation.

Art. 3(1) protects Europeans' right to use their internet service to access the applications of their choice. The rule protects Europeans' ability to access all of the content available on the Internet, not just the apps and sites that have paid their ISPs.

Apps and sites that do not pay the required fee would not be accessible to an ISP's subscribers, preventing its subscribers from accessing the content, applications, and services of their choice. This violates Art. 3(1).

Similarly, slowing down or otherwise technically discriminating against applications that do not pay the mandated network fee would violate Art. 3(3), subparagraph 1 of the Open Internet Regulation.

However, the Draft Communication seems to assume that selective network fees only violate the Open Internet Regulation if the ISP either blocks applications that do not pay the fee or technically discriminates against them.

That is not correct. Charging only some apps, but not others, always violates Art. 3(3), subparagraph 1 of the Open Internet regulation, regardless of whether the ISP takes technical measures against applications that do not pay the mandated fee.[4]

Net neutrality seeks to ensure that we, not the companies we pay to get online, get to decide what we do online. Users determine what apps and services are successful, not ISPs.

Art. 3(3), subparagraph 1 of the Open Internet Regulation ensures ISPs cannot interfere with our choices by prohibiting ISPs from discriminating among applications, content, and services.

In 2020 and 2021, the European Court of Justice held that this rule prohibits ISPs from treating applications differently either technically or economically. That means an ISP may not slow down Netflix or put its own video service in a fast lane; that would be technical discrimination. An ISPs may not charge a different price for the data used by WhatsApp than for the data used by the ISP's own messaging app, either; that would be economic discrimination.

The network fee proposal seeks to charge selected content providers but not others. This treats content providers that have to pay differently from those that are exempted. This kind of economic discrimination directly violates Art. 3(3), subparagraph 1.

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[4] This section is adopted from Barbara van Schewick, 2023, Here's How the European Commission Proposal to Force Websites to Pay ISPs Violates Net Neutrality (May 29, 2023), https://cyberlaw.stanford.edu/blog/2023/05/heres-how-european-commission-proposal-force-websites-pay-isps-violates-net-neutrality.

BEREC's submission to the Consultation came to the same conclusion (Appendix 4, pp. 14-15).

For a more detailed legal analysis, see the Explainer, pp. 6-8.

Section 3. Does the current system pose a problem?

Section 3.1. Unilateral use of network or beneficial interaction

The introduction to this section cites a passage from the ETNO/Axon study, which in turn cites the Frontier Economics report. It is worth pointing out that the number quoted in that passage is misleading.

A look at the Frontier Economics study shows that the quoted number ("traffic driven by OTTs could generate costs of up to €36-40 billion per year for EU telcos") does not actually refer to the purported costs of traffic associated with content, applications, and services by the few companies targeted by ETNO's network fee proposal.

Instead, the Frontier Economics study simply calculated the costs of all OTT traffic, not just the traffic associated with the largest OTT providers:

"While the majority of traffic on telecoms networks is now OTT traffic, a material proportion of traffic is generated within networks, e.g. peer to peer traffic or wholesale traffic carried for other operators. To reflect this we only allocate a proportion of total costs to OTT traffic." (Frontier study, p. 7)

"Then, using the proportion of busy hour bandwidth that can be attributed to OTT versus other traffic that is routed over that network section (e.g. other retail and WCA traffic)." (Frontier study, p. 11)

In other words, the Frontier study seems to determine traffic attributable to OTT by excluding "other retail traffic" or "wholesale traffic carried for other operators." But there seems to be no additional step that distinguishes between the traffic associated with the services by large companies targeted by the fee (as opposed to OTT traffic not subject to the fee).

Content providers' incentives to design their apps and services efficiently.

In several places, the Draft Communication discusses content providers' incentives to design their apps and services so they are as bandwidth-efficient and energy-efficient as possible. It is correct that content providers do not need network fees to do so.

First, they pay to store the data associated with their services in data centers and deliver the data requested by their customers to the doorsteps of the ISP, either by doing so directly or by paying another provider to do so. These costs create an incentive to keep their services as data- and energy-efficient as possible.

Second, they know that many of their customers are on internet access plans with data caps. This creates an additional incentive to be bandwidth efficient, since apps that eat up people's data caps will not be successful.

See also Explainer, p. 5.

Section 3.1.2. The costs of additional network traffic

I agree with the discussion in this section of the Draft Communication. The evidence already discussed there should be complemented with the evidence from other available sources.

ISPs' claims that rising traffic is overwhelming their networks are false, and ISPs do not need payment from online companies to meet EU connectivity goals.

Despite claims in studies paid for by the largest telecoms, EU networks are not being overrun with traffic. Traffic is growing at a predictable and steady rate (see Explainer, p. 3), while the technology to handle more traffic becomes cheaper every year (see Explainer, pp. 3-4).

Increased traffic does not result in higher costs.

Network fee proposals assume that the fees are necessary to finance network upgrades due to increased user demand for content from large CAPs. But the data shows that increased traffic has minimal impact on ISP costs.

Even as traffic has nearly tripled over the last three years, ISP costs have remained roughly the same. In a 2021 presentation to investors at the height of pandemic usage, Vodafone told investors that "Usage has grown rapidly [but] Capital intensity has absorbed this AND Cost per GB has fallen faster," saying that its cost per GB had fallen 70% in 5 years from 2017 to 2021.

This has been the pattern for decades as cost savings from advances in protocols and networking equipment capabilities offset increased traffic. In 2016, AT&T's CFO said that AT&T's move to network virtualization let it add 2.5 times more capacity at 75% of the prior capital cost. The transition to fiber will make ISP costs even less traffic-sensitive by expanding capacity far beyond what is required.

For a more detailed discussion with links to these and additional sources, see my Explainer, pp. 4-5.

Section 3.1.3.2. Investments

Content providers already contribute massively by investing in content, applications, services, and infrastructure.

Large content providers spend billions of dollars on network infrastructure each year to bring data from their headquarters right to the ISP's door. They operate data centers, transport data across the world with undersea cables, store copies of that data close to customers in CDNs, and interconnect with ISPs to get that data into the ISP's network – or pay a third party to do some or all of this. These investments make it easier and faster for ISPs to get that data to their customers. They total over $883 billion worldwide over the last decade, including over $201 billion spent in Europe.

The Draft Communication should also highlight content providers' significant investments in content and applications: content and apps are the reason why people buy internet access service in the first place.

ISPs have customers because content providers took significant risks to develop new content and apps that have changed the world. ISPs reap the benefits without taking any risk of their own, but act as though they have been harmed by having to take on new customers and make more money.

Section 3.2. The financing of network investments

The problem with broadband deployment is not lack of funding.

While there are issues in some EU member states with deployment of 5G and fiber-to-the-home, telecoms do not lack the funds to build out new infrastructure and don't need additional money to handle increased traffic (see Explainer, pp. 2-3).

The consultation suggests there is a funding gap for deployment, but current infrastructure spending is already on track to exceed the estimated €174b needed to achieve Europe's Digital Decade goals. ETNO's own report makes clear that, if ETNO members' level of investment continues, the current level of telco investment by 2030 will more than double the estimate at €350b. Other players, like upstart ISPs and tower companies, are contributing as well.

Successes in places like Spain and challenges in places like Germany show next generation broadband deployment isn't limited by funding. When regulators address complex permitting processes, spectrum allocation, duct access, and a lack of digging capacity, deployment increases rapidly.

If the Europe truly wants to expand deployment quickly, it should focus on removing barriers to infrastructure. While there will be rural areas that will require subsidies, there are proven methods to incentivize otherwise uneconomical build-outs.

For a more detailed discussion with links to these and additional sources, see my Explainer, pp. 2-3.

Section 4. Direct contributions: impact analysis

Section 4.4.2. Expected downside

Section 4.4.2.2. Impact on the Open Internet architecture

I agree with the Draft Communication that the introduction of mandated network fees will create many harms.

Network fees would undo decades of successful Internet economics and allow ISPs to charge monopoly termination fees.

I agree with the Draft Communication that the introduction of mandated network fees would fundamentally reverse how the internet has operated for the past 30 years.

Requiring content providers to pay ISPs fees that have never existed before would be a disastrous return to the economic model for telephony where telecom companies leveraged their termination monopolies to make long-distance telephone service prohibitively expensive (see Explainer, p. 10).

As the Draft Communication recognizes, the Axon study wants to legally require content providers to pay a termination fee, but says the size of the fee should be left to negotiations between the content providers and the ISPs. That leaves ISPs free to charge monopoly termination fees.

Thus, if the law forces content providers to pay ISPs, but leaves the size of the fee unregulated, ISPs will charge rates that are inefficiently high and detached from the costs of interconnection.

The only way to prevent monopoly rates is to regulate the termination fees, but as we've seen in mobile telephony, this is a regulatory nightmare.

The proposal in the Joint Telecom Industry Response to the EU consultation submitted by ETNO and GSMA is afflicted with the same problem.

While the Draft Communication recognizes the existence of a termination monopoly, it does not yet stress the critical connection between the termination monopoly, the charging of monopoly termination fees, and the resulting need for rate regulation of the termination fees.

In addition to learning from the experience with termination fees in the telephony context, European regulators and policy makers can also learn from the experience in the US from 2013 to 2015. As we saw there, the largest ISPs were able to leverage their termination monopoly into monopoly fees.

In the US, the FCC's 2010 Open Internet Order explicitly prohibited termination fees as a violation of the 2010 Open Internet Rules (see Explainer, p. 6). Nevertheless, termination fees emerged in 2012 when the five largest ISPs in the US found a loophole in the 2010 rules and began forcing online companies to pay them by refusing to alleviate congestion at interconnection points where data enters the ISPs' networks.

Any online app or transit provider that refused to pay was rendered nearly unusable. ISPs would simply stop upgrading the connections into their network. Tens of millions who were paying for fast internet could not use the internet reliably during peak hours for years. Remote work was seriously disrupted. Videos wouldn't play. Online games stuttered.

The congestion only ended when companies paid the requested tolls, which went far beyond the cost of widening the connection. The size of the requested fees reflected the ISPs' termination monopoly. For example, transit provider Level 3 told the FCC that these ISPs

frequently demanded as much in payment for access to a single ISP's subscribers as Level 3 was charging its own clients for access to the entire Internet.[5]

This didn't harm the biggest online platforms because they quickly paid, realizing it cemented their dominance. Small and medium-size companies that wouldn't pay or couldn't afford to were throttled at the door.

The payment demands and congestion only stopped in 2015 when the FCC prohibited circumventing net neutrality at the point of interconnection, while continuing to ban termination fees. California adopted the same prohibitions to prevent the return of the disruptions. (See Explainer, p. 6.)

Network fees distort competition among ISPs.

As the Draft Communications recognizes, termination fees would distort competition in the market for internet access services.

Large ISPs will get more money from network fees than smaller ones, simply because they have more subscribers. Large ISPs will get this large influx of money, regardless of whether they (or the country) already reached their deployment goals or whether other companies are more efficient in deploying new infrastructure. This disadvantages challengers and new entrants. This problem is not currently highlighted in the Draft Communication.

Compounding the problem, larger ISPs can demand a larger fee per subscriber, as we saw in the U.S. In the 2016 FCC Charter/TWC Order, the FCC found that among the five large internet access providers that were charging termination fees, the per-user termination fees increased with an ISP's overall number of subscribers. In other words, the more subscribers an ISP has, the higher the fee it charges for access to a single subscriber.[6] This gives larger ISPs an even stronger advantage over their smaller competitors.

Moreover, small ISPs lack the bargaining power or personnel to negotiate with large platforms. In the U.S., only the five largest ISPs were able to leverage their control over access to their subscribers into forcing interconnection partners to pay termination fees.[7]

While the Draft Communication currently discusses this problem as something that might happen, it is worth including the actual evidence from the U.S.

Thus, the largest ISPs will benefit disproportionately from a network fees mandate. This directly distorts competition among ISPs and gives large ISPs an incentive to buy out smaller

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[5] Level 3, 2017, Comments, GN Docket No. 17-108 (filed: July 17, 2017), p. 9, https://www.fcc.gov/ecfs/filing/107171850225629.

[6] FCC Charter/TWC Order, paras. 99, 115, Order linked at https://www.fcc.gov/document/commission-approves-charter-twc-and-bright-house-merger.

[7] FCC Charter/TWC Order, para. 99, Order linked at https://www.fcc.gov/document/commission-approves-charter-twc-and-bright-house-merger.

ISPs to increase their bargaining stance. Ultimately, this will favor ISP consolidation and reduce ISP competition, resulting in higher prices and worse service for European internet access customers.

Again, the only way to prevent larger ISPs from charging higher per-customer fees than smaller ISPs is to regulate the termination fees, but history shows that that's a nightmare; in addition, this would not solve the problem of larger ISPs receiving more money simply because they have more customers.

Forcing some apps to pay network fees distorts competition in markets for online content, applications, and services.

Selective network fees present serious competition problems, which are only partly discussed in the Draft Communication.[8]

First, selective network fees distort competition in many markets for online content, applications, and services. This problem is not currently reflected in the Draft Communication.

By charging only some companies and not their competitors, selective network fees would operate as a "tax" on the most popular businesses in a wide range of markets. This would distort competition in many markets that are currently highly competitive. Netflix would be forced to pay, while Disney+, TRT İzle, myCanal, and Tubi can compete at a much lower cost. No matter which video service users prefer, those exempted from the tax will have a competitive advantage solely because of their lower costs.

This makes no sense. Packets are packets: streaming video from a less popular provider burdens the network just as much as video from a popular service, and the users of all of those services have already compensated their ISP for carrying that data.

Additionally, online services compete for people's attention across categories and even against offline services.

That is, Twitch, a streaming video service, competes for online attention with TikTok, a social network, as well as with tens of thousands of other options including online games, podcasts, puzzle sites, community forums, and more.

And online services compete against offline services: online video lets people get rid of cable TV; online calling helps people lower their phone bill.

People looking for entertainment, diversion, or personal connection have lots of choices, and selectively charging some services, but not others, distorts competition across all of those markets.

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[8] This section is adopted from Barbara van Schewick, 2023, Here's How the European Commission Proposal to Force Websites to Pay ISPs Violates Net Neutrality (May 29, 2023), https://cyberlaw.stanford.edu/blog/2023/05/heres-how-european-commission-proposal-force-websites-pay-isps-violates-net-neutrality.

Second, selective network fees directly distort competition among content providers that have to pay the fee and the ISPs they compete with, giving the ISPs' products a direct competitive advantage.

Network fees are even more egregious because many large ISPs offer cable TV services and run their own online video, music, and cloud services that compete with the services they want to tax.

ISP-owned online services like Telefonica's Movistar Música, Deutsche Telekom's MagentaTV, and Orange Cloud will all gain a huge advantage over competitors paying fees. In fact, they'll even get an extra boost because their parent company will be on the receiving end of these payments.

Thus, popular services like Netflix would be forced to pay fees directly to their ISP-owned competitors.

While the Draft Communication acknowledges the problem with respect to ISPs' cable TV or IPTV television subscriptions, they do not recognize the competitive advantage network fees would provide to ISPs' music, cloud, or other online services that compete with services subject to network fees.

Even if network fees are levied only on large US tech companies, European consumers, businesses, creators, and nonprofits will pay the costs.[9]

These harms are not currently reflected in the Draft Communication.

Network fees will harm European consumers (see Explainer, p. 9 for a more detailed discussion).

Network fees will increase the price or reduce the quality of popular online services. Because popular content providers will face significantly higher costs, many services Europeans like to use will be more expensive, whether that's gaming, video streaming, or online backups. ISPs can charge exorbitant network fees because of their termination monopolies: they exclusively control the pipes to their internet subscribers. As we've seen in the U.S., these monopoly fees get passed to users in the form of higher prices.

Alternatively, affected apps and services may restructure their EU offerings to lower the network fees. We have seen this happen in South Korea. For example, higher quality video requires more data. By limiting high-bandwidth services to paying customers or reducing the quality for everyone, content providers can avoid or reduce fees. Free photo and email storage

[9] This section is adopted from Barbara van Schewick, 2023, Europe's biggest telecoms are trying to trick the European Parliament into endorsing their proposal to force websites to pay them without proper evaluation and debate. MEPs shouldn't let them. (June 12, 2023), https://cyberlaw.stanford.edu/blog/2023/06/europes-biggest-telecoms-are-trying-trick-european-parliament-endorsing-their-proposal.

limits will drop. Ad-supported offerings like Twitch will reduce their quality or end their free tier in Europe. This would mean the end of free content and high-quality streaming in Europe.

Finally, the fees will reduce budgets for creating new movies, paying creators, and improving services, leaving Europeans worse off.

Network fees will harm European businesses, creators, and nonprofits (see Explainer, pp. 9-10 for a more detailed discussion).

Almost all EU organizations, large and small, and even individuals, use services provided by those companies, including cloud hosting and CDNs like Google Cloud, productivity services like Microsoft Teams, social media platforms like Instagram, and photo backups like iCloud.

EU businesses will pay higher prices for these services or will have to switch to low-quality alternatives. Even reaching Europeans with advertising online will become more expensive. Creators' share of ad revenue on popular platforms will fall.

Section 4.4.2.3. Transaction and regulatory costs

As the Draft Communications rightly points out, mandated network fees significantly increase transaction costs for ISPs, as well as for the content and application providers subject to the fee – all to solve a problem that does not exist.

In addition, the section on transaction and regulatory costs should also focus on the problems and costs associated with accurately identifying and measuring traffic and should stress the need for comprehensive regulation to address some of the worst consequences of selective network fees.

Accurate traffic attribution is impossible.

Network fee proposals must rely on accurately identifying and measuring sources of traffic, which is challenging, if not impossible to do. (See Explainer, p. 6 for a more detailed discussion.)

Most traffic is now encrypted, leaving only the sender's and the receiver's IP address visible.

If a CAP interconnects directly with an ISP or operates its own CDN, it is easier to attribute the traffic to that CAP.

However, if a CAP's traffic comes into the network through another network provider or a third-party CDN, its traffic is mixed in with other applications, making it much harder and often impossible to attribute.

Thus, traffic attribution will never be accurate, so disputes will be common and difficult to resolve.

In addition, companies subject to the fees might take steps that make it harder to identify their traffic, e.g., by no longer directly interconnecting with internet access providers or moving some of their offerings to third-party CDNs.

Finally, apps become popular and fall out of favor quickly on the internet, so traffic shares change continuously, making measurement and negotiation a costly, ongoing challenge.

Preventing some of the harmful consequences of network fees will require significant regulation.

As discussed above, mandated network fees would reverse 30 years of successful internet economics and return the internet to the age of telephony. The Sending Party Network Pays model is well known to regulators for its openness to abuse, perverse incentives, and massive bureaucratic headache of centralized rate setting necessary to prevent providers from exploiting their termination monopoly.

ISPs want to avoid rate regulation by asking legislators to require CAPs to pay them without rate setting and enlisting arbitration for disputes. This substitutes a clumsy abuse mitigation system with an opaque system that favors the largest companies.

The telcos' desired regime has no safeguards ensuring ISPs actually increase investment. Absent any requirement to increase capital investment or even report their yearly investments, ISPs have every incentive to simply keep capex spending at the same level and use the additional funding for other investments, stock buybacks, or CEO bonuses.

If the EU were to adopt network fees, it must adopt significant new regulations to avoid at least some of the harmful consequences of these fees. They include:

- Regulate network fees to prevent ISPs from exploiting their termination monopoly and prevent large ISPs from charger higher per-subscriber fees than smaller ones;
- Require funds from network fees to be spent for additional deployment on top of what ISPs would have spent otherwise;
- Verify that fees are indeed used for additional deployment;
- Impose open access obligations on networks deployed using network fees to ensure maximum benefits for consumers.

However, these measures:

- Would only partly remove the advantage of large ISPs: even if the rate is regulated, ISPs with more customers will receive more money overall, disadvantaging challengers and new entrants;
- Won't ensure that money goes to the most efficient ISP that offers the best services;
- Don't solve the problem that fees would go to ISPs purely based on size, including to those that have met the deployment targets, rather than to ISPs willing to deploy networks where they are needed most;

- Would not address the distortion competition among CAPs and create the same harms for European people, businesses, and creators resulting from the increased costs and reduced quality of services associated with selected network fees.

The regulatory framework necessary to limit at least some of the harms associated with selective network fees is substantial and costly, and would not address many of the harms associated with these fees. It's not worth these costs and harms to solve a non-existent problem.

Section 5. The indirect contribution

I agree with the Draft Communication that the case for an indirect contribution mechanism has not been made.

As the Draft Communication acknowledges, the mechanism for such a fund solution has not been specified, making it hard to evaluate this option. However, unlike the Draft Communication, I think that fund proposals assume that contributions to the fund will be limited to certain content providers, and that the contribution to the fund will be tied in some way to the traffic associated with these content providers' applications, content, and services.

As explained above and in the attached Explainer, the case for regulatory intervention has not been made (see Explainer, pp. 2-5). Large CAPs already contribute their fair share (Explainer, p. 5). There is no problem that needs solving (Explainer, pp. 2-5). Increased traffic has not increased costs. And to the extent there is a problem with network deployment in the EU, the problem is not a lack of funds to deploy broadband networks.

Most importantly, just like selective network fees, a fund that selectively targets certain popular CAPs based on traffic share would still distort competition among CAPs and create the same harms for European people, businesses, and creators (Explainer, pp. 8-10). These harms are not currently discussed in Section 5.2 of the Draft Communication and should be added to the discussion.

Limiting contributions to certain CAPs whose services are popular across the EU does not make sense. Just like selective network fees, any contribution mechanism that is limited to some CAPs distorts competition in many markets and violates principles of cost causation.

CAPs that have to contribute to the fund will have higher costs than their non-contributing competitors. European individuals and businesses that use the services of affected CAPs will face higher prices for the affected services, pay more for advertising to reach Europeans through these services, and receive less income from distributing content through affected platforms.

Any contribution mechanism tied to traffic share will create the same measurement problems as network fees (Explainer, p. 6) and motivate affected CAPs to restructure their services to lower their contribution, reducing the quality of affected services (Explainer, pp. 9-10). These problems are not currently discussed in Section 5.2 of the Draft Communication and should be added to the discussion.

A fund could avoid some of the worst abuses of mandated network fees discussed above. In particular, it could set a uniform contribution rate that avoids ISPs' termination monopoly and imbalances between large and small ISPs. It could support network deployment in areas that need it most, use competitive bidding to identify the most efficient ISP or network building company, verify deployment, and impose open access obligations on funded networks.

However, the regulatory infrastructure necessary to administer such a fund is substantial, and the remaining harms outweigh the benefits. It's not worth these costs and harms to solve a non-existent problem.