

Encadrement Tarifaire des Access Haut Debit au Grand-Duche de Luxembourg

Summary of key findings and recommendations

13 July 2023

Frontier Economics was commissioned by the ILR to assess its approach to regulating access to fixed broadband infrastructure in Luxembourg, with a focus on wholesale access pricing. The findings of this assessment will be used to inform the ILR's upcoming market review of the Luxembourg broadband market, although our analysis will be without prejudice to the ILR's decisions with respect to future regulation.

Our review has comprised three phases:

- **Phase I:** Review of the measures currently in place and identification of potential changes / improvements to the existing framework
- **Phase II:** Survey of stakeholder views on the current approach to regulating wholesale access prices in Luxembourg and potential changes
- **Phase III:** Full assessment of the existing framework, taking on board stakeholders' views as well as our initial findings from Phase I and final recommendations

Below we summarise the key findings from our review and our recommendations for the ILR's upcoming review of the Luxembourg broadband market.

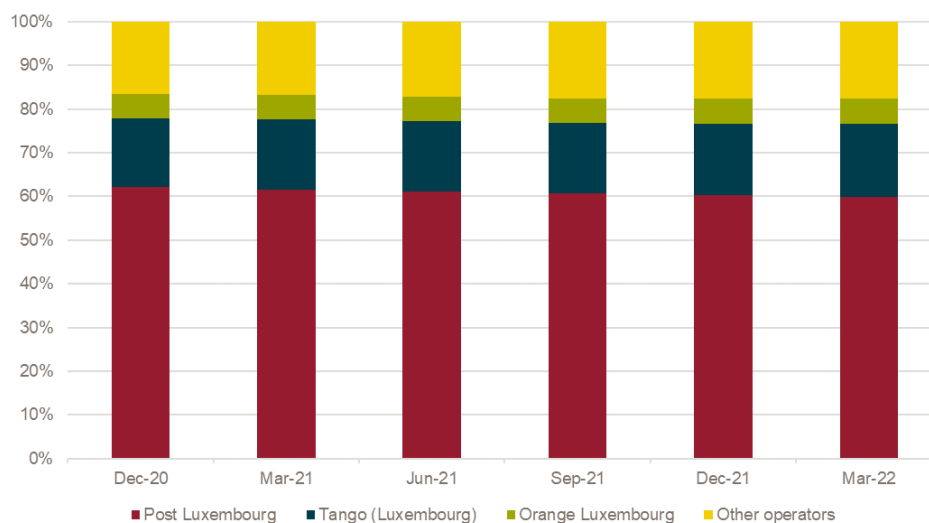
Assessment of the measures currently in place

We have analysed the evolution of competition and market outcomes in Luxembourg under the existing framework for fibre access regulation. We have also considered the extent to which the current approach will be effective at delivering what we consider to be the key objectives for regulation, over the course of the upcoming 5-year review period – namely, supporting investment in fibre infrastructure; protecting consumers from excessive prices; supporting retail competition; and facilitating the timely transition from legacy copper infrastructure to fibre. Our assessment takes into account of views shared by key stakeholders, POST (the incumbent) and OPAL (the association of alternative operators in Luxembourg).

Our key findings are as follows:

- **There has been significant investment in fibre infrastructure by the incumbent under the current framework**, with FTTP coverage in Luxembourg being amongst the highest across Europe. The pace of rollout has slowed in recent years, though this is likely (at least in part) due to the higher costs and operational challenges associated with deploying new infrastructure in more rural areas.
- **There has been significant growth in access-based competition over the past decade, but POST's market share remains very high.** The implementation of Equivalence of Inputs (EoI), in combination with an economic replicability test (ERT) for fibre, has been followed by growth in access-based competition. However, POST still has the highest retail market share in fixed broadband of any incumbent across Europe at around 60% and growth in alternative operators' market shares has slowed in recent years.

Market share of fixed operators in Luxembourg 2020 - 2022



Source: Frontier analysis of ILR data

- **There is a risk that the current pricing flexibility + ERT approach will act as a barrier to further growth in access-based competition** – in particular, the lack of transparency for access seekers and uncertainty around future price changes, could in turn undermine alternative operators' ability and incentive to invest in their networks and compete. OPAL highlighted transparency issues with the ERT, noting that it had limited visibility on how ILR assesses margin squeeze in practice (particularly where alternative operators have raised complaints that have not been upheld). OPAL also expressed concerns around potential discriminatory behaviour from POST- for example, it considered that POST

prioritised its own needs over those of access seekers when it comes to implementing changes to its tools / processes.

- **The copper anchor is unlikely to be an effective constraint on wholesale and retail fibre broadband prices going forward.** This is because the take up of copper LLU services is low and declining, whilst demand for higher speed fixed broadband has been growing rapidly, with more than 70% of households in Luxembourg now taking a fixed broadband service with a speed of 100 Mbit/s or greater. High-speed broadband services offered over the competing cable television network (which has near-national coverage) would be expected to provide a more effective constraint, though these services account for a relatively small share of the retail market currently.
- **Migration from copper to fibre-based services in Luxembourg is progressing well.** Fibre has been the predominant technology for broadband since 2020 and accounted for over half of all subscriptions by the end of 2021. This represents a very high proportion of the households to which FTTP services are available (c. 80%).

Stakeholder views on potential changes

We gathered stakeholders' views on the following key areas of potential change for wholesale fibre access regulation in Luxembourg:

- **Moving away from pricing flexibility with a copper anchor to some form of price control on FTTP.** As outlined above the constraint from the copper anchor on fibre prices is likely limited and weakening over time. We therefore sought stakeholders' views on the merits and shortcomings of introducing some form of ex-ante price control, to protect consumers from the risk of excessive prices and also provide access seekers with greater transparency / certainty around wholesale pricing.
- **Potential changes to the ERT.** Given the concerns relating to the current implementation of the ERT, in particular those expressed by OPAL, we consulted stakeholders on whether there might be any potential improvements that could be made to the current approach to the ERT.
- **Potential changes to non-discrimination regulation.** We sought views on: i) whether the current EoI regime should be kept in place; and ii) potential improvements to the current implementation of EoI and in particular introducing an EoI obligation for WLA, requiring POST's retail arm to purchase unbundled fibre (rather than bitstream fibre access as it does currently) would be proportionate, taking into account of the costs involved.
- **Future regulation of the WCA market.** We sought views on future regulation of the WCA market, and in particular the scope for de-regulation in light of – i) the EC's recent

decision to remove WCA from the list of markets susceptible to ex ante regulation; and
ii) the potential shift in focus of regulation in Luxembourg towards unbundled fibre.

Key messages from the stakeholder survey were as follows:

- **POST highlighted the potential adverse impacts of introducing a cost-based price cap.** POST considered the current framework has been effective at supporting both competition and investment and warned that setting too low a cap would risk further deployment (to cover the remaining 20% of the country) becoming economically unviable. POST also considered there are still considerable demand-side risks associated with fibre rollout.
- **OPAL was open to the possibility of introducing a cost-based charge control.** However, it said that it would need to see the proposed methodology before taking a definitive stance – in particular, the method used to determine the underlying costs. OPAL was concerned that a charge control could result in an increase in prices and would also want to understand how a “reasonable” return for POST would be assessed.
- **POST and OPAL both considered that it would not be appropriate to de-regulate WCA at this time.** POST considered that there is limited substitutability between bitstream and unbundling services, due to the additional investments that access seekers must make to use unbundled fibre lines. POST also noted that more than 75% of access lines in Luxembourg currently are based on bitstream offers (including lines from POST), with a large number of alternative operators still relying on it heavily. OPAL also highlighted that bitstream is widely used by alternative operators and that some do not have the economies of scale necessary to use unbundled fibre.

Our recommendations

Below we summarise our recommendations relating to potential changes to the current framework. These recommendations reflect:

1. **The findings from our assessment of the current framework** – our recommendations seek to address concerns that we identified with the existing approach, that could arise over the course of the upcoming market review period;
2. **Stakeholder views** - we have considered the range of views on the potential changes to the existing framework, gathered through our stakeholder survey; and
3. **International evidence** – we have also drawn on experience from our international case studies where relevant.

Introducing a charge control for unbundled fibre

It may be appropriate to introduce a charge control for fibre in the upcoming review period

We consider that the current circumstances in the Luxembourg market could support the introduction of a charge control for unbundled fibre, to protect customers from excessive pricing and provide greater transparency / certainty for access seekers in relation to wholesale pricing:

- As noted above, high and growing demand for high-speed services means that the copper anchor will unlikely be an effective constraint on fibre access prices going forward. Luxembourg consumers would therefore be exposed to a significant and growing risk of excessive prices, if ILR were to continue with its pricing flexibility approach based on a copper anchor. The weakening constraint from copper could be mitigated to some extent by growing competition from the national cable network, which offers high-speed products that are a closer substitute to fibre-based services. However, given the relatively minor (albeit growing) role that cable plays in the broadband market currently, it is unclear the extent to which it will act as an effective constraint to copper going forward.
- There is a risk that the issues inherent in the ERT approach – in particular, lack of transparency and certainty around the evolution of wholesale charges - will act as a barrier to access-based competition going forward. Introducing a price cap will provide much greater certainty to access-seekers, as the price would be set in advance for each year of the five-year review period, making it easier for operators to plan ahead. It would also mitigate the need for an ERT by significantly reducing POST's ability and incentive to engage in margin squeeze.

At the same time, the main rationale for allowing POST pricing flexibility - to support investment in NGA under uncertainty - appears to be less relevant now, with fibre deployment at an advanced stage:

- Over time, the uncertainty and hence risk associated with fibre deployment has diminished significantly, as take-up of higher speed services has grown – as noted above, more than 70% of households now subscribe to ultrafast services (>100 Mbit/s); and
- To the extent that there are residual concerns around POST's ability to recover the costs from its investments in fibre, a charge control could be designed in a way that allows it to earn a reasonable return.

Maintaining Eol

As part of a broader shift in focus of regulation towards unbundled fibre, which is the key bottleneck for competition, it will also be important to address any potential non-price discrimination issues relating to unbundled fibre access.

It is generally accepted that Eol is the most effective way of protecting against the risk of discrimination, since it allows access seekers to compete using exactly the same set of wholesale products as the incumbent, at the same prices and using the same processes. On the other hand, Eol can be more costly to implement than alternative non-discrimination measures – in particular, equivalence of outputs (EoO).

Since POST has already made significant investments to comply with the current regime, we would expect limited / no cost benefits from moving from Eol to EoO for bitstream. Therefore, to the extent that ongoing bitstream regulation is deemed necessary, we recommend that ILR continues with the current Eol approach.

The ILR could consider whether there is a case for introducing an Eol requirement for WLA, which requires that POST itself to use the same process for unbundled fibre internally as used by access seekers. This would make it easier for ILR to ensure that access to POST's physical fibre network was being provided on a non-discriminatory basis to access seekers that use unbundled fibre.

ILR would, however, need to weigh the incremental benefits in terms of ensuring non-discrimination against the additional costs to POST of complying with such an obligation, which will likely be material.

Potential de-regulation of WCA

As part of its market analysis, the ILR will need to consider the extent to which regulation of WLA – in particular, unbundled fibre access – will address potential competition concerns in the downstream WCA market. Introducing a price control for unbundled fibre could mitigate the need for WCA regulation to some extent:

- Fibre unbundling provides downstream operators with access to the main economic bottleneck for FTTP networks and the key wholesale input for WCA.
- Unbundled fibre is the most popular form of fibre access in Luxembourg currently for alternative operators and take-up has been on a steady upward trend, with over 70% of alternative operators supplying fibre using it. At the same time, usage of bitstream services has been declining.
- To the extent that there is still demand for bitstream services, a cost-based cap on unbundled fibre would serve as a constraint on wholesale bitstream prices. This is

because there is a high degree of substitutability between retail products based on unbundled fibre and retail products based on fibre bitstream services which should in turn constrain wholesale bitstream prices. In addition, operators that buy unbundled fibre would be in a position to start offering bitstream services to compete directly with POST at the wholesale level – indeed we understand that some alternative operators are already offering wholesale bitstream services in competition with POST (albeit on a much smaller scale currently).

We note the concerns from POST and OPAL that it may be too early to de-regulate WCA, given that bitstream services are widely used by alternative operators in Luxembourg – nearly 34,000 (around 40%) of access seekers' lines are bitstream currently and around 30% of lines access seekers' fibre lines are bitstream. We also note that it will take some time for operators' using bitstream to transition to using unbundled fibre (which requires the installation of equipment and transmission at the local exchange) and will involve significant costs. In addition, it is likely that operators will continue to rely on bitstream in areas where POST has not yet rolled out fibre, since unbundling copper in these locations is unlikely to make economic sense given the trend towards higher speed services.

It will therefore be important for the ILR to consider the impact of relaxing / removing WCA regulation on alternative operators that rely on bitstream currently – in particular, when determining the appropriate timing for any de-regulation and also whether a geographically differentiated approach may be appropriate.