Telecom Italia response to

Draft Commission Recommendation on

regulated access to Next Generation Access Networks (NGA)

(24 July 2009)

1. Executive summary

Telecom Italia acknowledges that the draft Recommendation contains some fundamental elements that represent a step beyond the previous version.

Nevertheless, for some aspects, we deem this draft "unsatisfactory" in respect of the complexity that NGA challenges will bring in the next future.

Shareable areas

a. Equivalence

Telecom Italia supports the introduction of a clear-cut non discriminatory framework in the wholesale access to NGA.
In particular, Telecom Italia is already voluntarily committed, by means of legally binding undertakings, to introduce equivalence conditions as regards both the copper network and the future NGA.
However, Telecom Italia is concerned that the draft Recommendation does not consider that the introduction of fully equivalent conditions in the access to the incumbent's NGAN would entail significant regulatory consequences. In fact, in such circumstances, we believe that the imposition of additional intrusive obligations, such as the cost orientation one, would not be required.

b. Moving towards softer regulatory schemes

Telecom Italia agrees with the general principle that, in areas where a set of conditions regarding network joint deployment and downstream market development are met, the absence of SMP in market 4 and 5 can be assumed and in any case it is not necessary to impose cost-orientation obligations.
The concept of not imposing the obligation of providing a regulated wholesale bitstream access over the NGAN where specific conditions are met in market 4, is also agreed with.
Nevertheless, we point out the need to consider broader co-investment models in addition to those envisaged by the draft Recommendation in order to ease certain obligations.
In absence of cost orientation, we agree to leave the task to individuate distortions of the competition to fit-for-purpose margin squeeze tests.
The European Commission should clarify the appropriate methodology for the price squeeze tests in order to be consistent with the introduction of long term and volume discounts agreements.
Finally, the relation between the margin squeeze tests on markets 5 and 4 should be clarified in order to avoid any regulatory uncertainty.

c. Risk premium and risk sharing

As far as the setting of access price to the NGA network is concerned, TI welcomes the new regulatory approach of the Recommendation that, considering the uncertain factors interfering with the investment, takes into due account any additional and quantifiable investment risk incurred by the SMP operator.
At the same time, it's questionable to consider additional and quantifiable investment risk only in a few FTTH access services.
We contend in fact that investment risk is also relevant in the deployment of new civil infrastructures and that NRAs should accordingly include a risk premium also when setting the price for access to new civil engineering infrastructure for the purpose of NGAN.

As regards the introduction of innovative risk sharing pricing schemes, TI welcomes the possibility for SMP operators to vary access prices on the basis of binding commitments (length or volume) agreed among parties, that would lead to a reduction of the risk assumed by investors.

Not Shareable areas

a. **Asymmetric Approach**

Telecom Italia is very concerned that the Recommendation scope is set to impose obligations exclusively to SMP operators, as the transition to NGAN is only dealt with an asymmetric approach. The EC should widen the extent to which the Recommendation embraces symmetric regulation practice and clarify in details, under which circumstances NRAs should impose symmetrical obligations.

b. **Imposition of remedies in markets 4 and 5**

We consider that the approach followed by the Commission regarding the imposition of remedies in markets 4 and 5 is more than prescriptive: the NRAs are de facto called to impose the entire set of access obligations irrespective of any competitive analysis of the specific circumstances surrounding the deployment of NGAN in a given region/geography. The gradation of remedies should strictly be based on the prospect of competition over NGAN in different regions within a given country, that is, by assuming a geographical approach to regulation. Indeed, we note that a geographical approach is also at the core of the draft guidelines concerning state aids in the case of NGAN. Accordingly, the Recommendation should follow a similar geographical approach, in order to create a much more consistent framework between competition law and regulation.

c. **Regulatory treatment of multiple fibre architectures**

In the Draft Recommendation the multiple fibre architecture is the only preferred technological architecture able to automatically remove the cost orientation obligation or the SMP status. We do not believe that only a specific NGAN (multiple fibre) architecture can become the trigger for increased competition and, hence, should be the only one fostered by the Recommendation by means of a clear-cut deregulatory approach. Ultimately, these evaluations should be left to the market reviews as established by the European regulatory framework.

d. Spare capacity obligations

Telecom Italia completely disagrees with the obligation for SMP operators to install or deploy spare capacity for other operators. As a matter of fact, the SMP operator should implement solutions which could lead to more (unused) capacity than needed, with higher average costs and a higher environmental impact.

These remedies, where needed, should at least be compulsorily associated with an obligation on access seekers to subscribe a binding commitment to acquire the spare capacity installed or deployed by the SMP operators.

2. Introduction

Telecom Italia welcomes the European Commission invitation (in so far EC) to express comments and views in relation to the draft Recommendation on regulated access to Next Generation Access Networks (NGAN).

We agree with the view of the EC that deems the development of high-speed broadband services a key point to produce economic growth and that Next Generation Access (NGA) networks based on optical fibre require substantial investments in the coming years.

It is in fact widely recognised that the development of Information and Communication Technology (ICT), and broadband in particular, can bring deep economic and social welfare.

Therefore, we agree with the view of the EC that deems the development of high-speed broadband services a key element to increase economic growth and strengthen the position of the European Union in the knowledge economy, as settled by the Lisbon Strategy.

Accordingly, it is essential that the deployment of Next Generation Access (NGA) networks based on optical fibre takes place in a timely manner. However, NGAN projects are highly risky long term investments and therefore a predictable regulatory framework is required.

Ensuring regulatory predictability

Telecom Italia believes that the Recommendation should offer a "reasonable and balanced guidance" to the NRAs in order to properly address the transition from the current copper-based regulation to a new generation of fibre-based regulation (whereas appropriate).

In our view, reasonable and balanced guidance means that, on the one hand, an approach that ultimately forecloses the NRAs' ordinary decision making in the market reviews, as stated by the European regulatory framework, should be avoided; on the other hand, an approach that leaves the NRAs with complete discretion in emerging regulatory areas (i.e.: the implementation of a new generation of margin-squeeze tests in case the wholesale access services provided over the NGA are not under a cost orientation obligation) should be avoided. In other words, these two "extremes" approaches should be avoided in order to achieve a "reasonable and balanced guidance".

However, the current draft Recommendation on NGAN does not seem to be well balanced. Indeed, we feel that there are a number of areas where the Recommendation is too prescriptive and other areas where the opposite applies. We will now briefly address these areas.

Areas where a more prescriptive approach is needed

- <u>NRAs' approach to the evolution of NGAN regulation</u>

  We recognise that point 10 of so-called *whereas* and article 6 of the draft Recommendation aim to promote the introduction of a consistent regulatory approach over appropriate review periods. To this end, the draft Recommendation states that "*Where possible, NRAS should explain in their decisions how they intend to adapt remedies in markets 4 and 5 in future market reviews in reaction to likely changes in market circumstances*". We support the introduction of this principle but, at the same time, we are concerned that it would be

applied only "*where possible*". Clearly, this limitation substantially weakens the principle: the adaptation of remedies over time may therefore remain completely uncertain at national level.

Additional guidance is needed in the Recommendation specifically with regards to the approach of the setting of regulated wholesale prices. We argue that long-term economic models should be adopted by NRAs in order to increase the predictability about future changes of regulated wholesale prices. Unfortunately, this point is completely missed out by the draft Recommendation.

- Introduction of a new generation of margin-squeeze tests

The Recommendation establishes that in case cost orientation obligation is not imposed on a given SMP operator, than retail offers provided over NGAN by the SMP operator should be assessed by means of a margin squeeze test. Although TI supports this principle, we invite the Commission to enforce the concept that in case the wholesale access service are cost oriented, the margin squeeze tests are not required. In particular, we believe that the Commission should further clarify that in case both long term access prices and volume discounts access prices are regulated by means of a cost orientation obligation (to be clear, a regulatory approach that we would not support), then the margin squeeze test obligation would become completely inappropriate and unjustified.

Besides this relevant point of clarification, we believe that the Commission should further elaborate this aspect, starting from the implementation of the new generation of margin squeeze tests. In particular, we believe that such tests in a NGAN setting will be different from the current generation of squeeze tests, since they will be based on either long term access prices or volume discounts access prices. Due to the relevant novelty in the transition towards the new generation of margin squeeze tests, we believe that this area should be further addressed by the Commission in the Recommendation.

Areas where a less prescriptive approach is needed

- Imposition of remedies in markets 4 and 5

We consider that the approach followed by the Commission regarding the imposition of remedies in markets 4 and 5 is more than prescriptive: the NRAs are *de facto* called to impose the entireset of access obligations, irrespective of any competitive analysis of the specific circumstances surrounding the deployment of NGAN in a given region/geography. The gradation of remedies should be strictly based on the prospect of competition over NGAN in different regions within a given country, that is, by assuming a geographical approach to regulation. Indeed, we note that a geographical approach is also at the core of the draft guidelines concerning state aids in the case of NGAN. Accordingly, the Recommendation should enforce the guidance on this matter in order to create a much more consistent framework between competition law and regulation.

- Regulatory treatment of multiple fibre architectures

The regulatory treatment of multiple fibre architectures is the only preferred technological architecture in the Draft Recommendation, able to automatically remove the cost orientation obligation or the SMP status. We do not believe that only a specific NGAN (multiple fibre) architecture can become the trigger for increased competition and, hence, should be fostered by the Recommendation by means of a clear-cut deregulatory approach.

Ultimately, these evaluations should be left to the market reviews as established by the European regulatory framework.

3. Aim and Scope

We support the EC in providing guidance to NRAs aimed to foster convergence and harmonization of regulatory approaches by National Regulatory Authorities (NRAs) in challenging the transition from copper to fibre-based networks, as "*consistency of regulatory approaches taken by NRAs is of fundamental importance to avoid distortions of the single market and to creating legal certainty for all investing undertakings*" (§ draft recommendation Whereas 2).

We also welcome the attention of the EC in recommending NRAs to take into due account agreements between operators where they could potentially promote competition, diversifying the risk of deploying optical fibre networks to connect homes or buildings.

Symmetric approach

Telecom Italia is very concerned that the Recommendation scope is set to impose obligations exclusively to SMP operators, as the transition to NGAN is only dealt with an asymmetric approach in this Recommendation.

On this matter we advocate that National Regulatory Authorities should consider the case of imposing the obligation of reciprocal facilities or property sharing on undertakings operating an electronic communications network, also in consideration of the fact that the first mover to connect a customer to the high-speed network is not necessarily the incumbent.

As a matter of fact, Article 12 of the Framework Directive deals with this relevant issue and the scope of the NGA Recommendation should envisage the application of this article.

To this aim, we invite the EC to widen the extent of the Recommendation to embrace symmetric regulation practice, as well as to clarify in details under which circumstances NRAs should impose symmetrical obligations.

Platform competition

As the objective of the Recommendation is to foster the application of a consistent regulatory approach throughout the EU in the relevant markets, we consider that a reconsideration of current relevant markets in presence of NGA plans or deployments would be justified.

We think that market analysis should embrace a wider set of technologies than the ones already included in the markets for wholesale network infrastructure access (Market 4) and wholesale broadband access (Market 5), in order to take into account the development, inter alia, of cable TV and mobile network potentiality in providing ultra broadband solutions.

Platform competition in broadband access networks is a reality in Europe. Cable DSL and wireless operators currently compete in most European cities and towns. Up to date, around half of the European homes and businesses have the choice of broadband services delivered via several DSL operators and either a cable or (in some areas) a fibre operator, and even several fibre ones

in some metropolitan and industrial districts. Furthermore, in some cities like Milan (Italy), Cologne (Germany) or Stockholm (Sweden) fibre networks have also been deployed in residential areas.

As it was already noticed, "*it is likely that the most effective strategy for NGA deployment will employ a mixture of technologies to deliver these (new) services depending on specific local characteristics. Conditions are likely to differ greatly among Member States and within different regions of Member States leading to a more heterogeneous market structure as the NGA roll-out may not happen everywhere*"[1].

In the last two years the wireless platforms have entered the broadband market. Wireless operators are exploiting the enhanced capacities of their networks to enter the broadband market, competing head on with current DSL and cable offers. In addition to the higher value of mobility, wireless dual play prices are also compelling for users from a fixed location. They are becoming increasingly attractive for the average fixed broadband customers.

The economics of broadband access networks show that the European policy goal to reach sustainable competition between infrastructure-based telecommunications operators is feasible, both with current technologies and with NGA.

Infrastructure competition will continue to be sustainable when new generation networks are deployed. Actually, the first fibre deployments show that alternative operators are in many cases the first movers and, overall in Europe, they have deployed roughly as many fibre lines as the incumbents. The main drivers of competition will be the ARPU levels, the features (speed, mobility, etc.) demanded from services, total service penetration and the availability of civil infrastructure.

In conclusion, we suggest EC should give clear guidelines to NRAs on how to take into account the presence of alternative ultra broadband access networks (cable, mobile …) when assessing NGA based access market.

4. Consistent Approach

We completely agree that the review of markets 4 and 5 should be performed in a coordinated and timely manner by each NRA and that remedies to be applied in markets 4 and 5 have to be consistent with each other, as "remedies applied in Market 4 are likely to have a significant effect on Market 5 and vice versa" [§ Whereas (7) of Draft Recommendation].

On the other hand, we think that new remedies to be imposed, like a new combination of active and passive access remedies on Markets 4 and 5, may risk over-regulating emerging markets, while it should be preferable to assess if some of the existing remedies may be removed or amended.

Gradation of remedies

The imposition of obligations to SMP operators should respect the principle of "gradation of remedies" in order to promote infrastructure-based competition at the deepest level inside the network.

[1] FTTH Council Europe Reply to ERG Consultation on Regulatory Principles of NGA (ERG (07) 16)

Access to physical infrastructures should be considered as the first option in terms of remedies, being ducts the building block of NGAN, as copper was for traditional platforms. Under those conditions, access to ducts, which also represent the main part of the costs to be sustained to implement a next generation network, is an essential passive remedy.

Telecom Italia has committed itself to provide an offer for the access to its ducts. If this access is neither technically nor economically viable, Telecom Italia will provide an alternative solution based on access to dark fibre.

In case of in-house wiring, a “symmetric” approach should be applied since “vertical cabling” can be considered a “natural monopoly”.

Active remedies, such as NGAN Wholesale Bitstream Access, should be imposed only in certain geographical areas, where remedies imposed in market 4 (access to infrastructures) are not sufficient to ensure the development of fair competition.

Adaptation of remedies

At the same time, we support the opinion of the EC that deems important to ensure legal certainty for market players in a timely manner, and the necessity of a public policy by NRAs in adapting remedies in markets 4 and 5 in future market reviews according to likely changes in market circumstances, to maintain a consistent regulatory approach over time.

Nevertheless, as we agree that Regulatory certainty is a key element in promoting efficient investments by all operators, and that the uncertainty associated with periodical market reviews must be minimized, we suggest to indicate in this Recommendation the procedures by which NRAs should clarify how changes in market circumstances might affect remedies, and to ensure a truly consistent regulatory approach over appropriate review periods.

In other words, the possibility to adapt remedies without waiting for a new round of market reviews, recommending NRAs to release a policy statement of the model to be applied in revising the remedies, should be outlined.

Finally, we agree with the opportunity to provide existing copper products or services over fibre in case fibre access network is deployed in Greenfield sites. Clearly, we think that, in such circumstances, universal service obligations and all the obligations in general should be revised to take into account the characteristics and peculiarities of the new technologies.

5. Definitions

The draft Recommendation focuses only on two technical solutions to provide optical fibre based fixed broadband access: Fibre to the Node (FTTN) and, above all, Fibre to the Home (FTTH). Based on these solutions, the Recommendation identifies all the possible remedies to be applied by NRAs in the new market analysis, without taking into full account the new market context and characteristics. We note that alternative solutions, such as the cable TV based and the wireless ones, are not considered.

Thus, in our view, the definition provided by the Draft Recommendation is too focused on the fixed architectural solutions and is somehow vague and not satisfactory as regards the definition of NGAN.

Quite surprisingly, with a slightly different approach, the draft “Community Guidelines for the application of State aid rules in relation to rapid deployment of broadband networks” (as to public consultation dated 19th May 2009) in par. 48 gives a different - and, by contrast, too detailed - definition which, again, can not be considered satisfactory.

Telecom Italia believes that NGA should not be defined starting from the network elements, but rather from the service provided to the end user.

To be more precise, as already stated also in Telecom Italia’s response to the consultation on State Aid guidelines, Telecom Italia deems that the definition of NGA should be technologically neutral, and this approach should be reflected also in the regulatory analysis, market definition and possible remedies evaluation. Therefore, Telecom Italia believes that regulation of NGA should be differentiated based on downstream (e.g. 25 Mbit/s) and upstream (e.g. 2 Mbit/s) bandwidth levels provided to the end-user when not viable with traditional solutions. These values should be upgraded over time, in order to take into account the technological development: currently, just to give an example, 25Mbit/s downstream and 2Mbit/s upstream should be considered the boundary between broadband and ultra broadband services, but of course these figures may be updated over time.

All Access Networks that constantly support these speeds can be defined as NGAN. This amount of bandwidth (referred to the FTTCab architecture) must be provided from the customer premises through the access segment network and must be available to all potential customers in a given area. Accordingly, broadband services provided from central offices do not fall within the definition of NGAN.

This definition should also encompass any wireless technology, provided that the performances offered to the customer and the provided characteristics are equivalent to those ensured by fixed NGAN in terms of actual offered capillarity, quality and bandwidth.

Telecom Italia therefore suggests to take into consideration a wider technological scenario in order to consider technological alternatives. Such an approach should be rightly reflected into NGA definition that, on the basis of technological neutrality, has to consider all possible technologies. In this scenario, the SMP position of the fixed operators and/or bottlenecks in the NGAN have to be demonstrated.

6. Access to wholesale physical network infrastructure

Telecom Italia fully supports the Commission’s objectives to promote competition, innovation and investments above all in new and enhanced infrastructures. At the same time, Telecom Italia is concerned about the risk of a raw transposition of existing ex-ante regulatory regime into the new fibre-based environment.

We think that the imposition of all available remedies in market 4 might pre-empt the analysis of the market that should be performed on a case by case basis, depending on the different market situations in the different countries.

It’s also important to make out whether the deployment of the NGA is carried out through a “total replacement” of the existing networks or through “overlay” solutions.

Where the existence of both overlapping networks for a certain time is foreseeable, legacy regulation ensures competition on “not-NGA-based” services.

As a matter of fact, in case of overlay solutions, all the obligations on the existing copper networks are sufficient to fully guarantee the competition on retail markets related to voice and Internet access services.

Additional regulation should be considered only when new retail services based on the new network cannot be provided over the NGA by means of traditional wholesale services.

Only in these particular cases, physical access products should be made available as remedies, and, according to the view of the Commission, where remedies in this market lead to effective competition in the corresponding downstream market, other remedies could eventually be phased out.

The application of such remedies should in any case take into account the architectural and technological environment, so we do not agree on the Commission’s view to ignore the network topology when applying possible remedies. The uncertainty of the type of wholesale products to be planned and implemented could lead to a detriment of the development of the networks; on the other hand, the imposition of wholesale products, not feasible with the current technology, can interfere with the possibility to compete in the retail markets.

6.1 Access to civil engineering infrastructure of the SMP operator

We agree with the Commission that infrastructure is crucial for the deployment of fibre networks, hence remedies related to access to civil engineering applied to SMP operator within Market 4 should be deeply analysed.

In this case, we agree that, as for the analysis of relevant market 4 in NGA context, NRAs obtain the necessary information on the location and the availability of civil engineering facilities to assess whether and where ducts and other local loop facilities are available for the purpose of deploying NGA networks, considering real ducts availability in the different geographical areas, owned by all the possible holders including, for instance, public utilities or cable operator.

Assessment of demand in new pre-defined procedures

Given the very high costs of deploying parallel fibre access networks, we agree with the Commission on the importance of an assessment of the demand coming from all operators before mandating access, but we think that the peculiarity of the NGAN development should not lead to directly transpose the experience in developing procedures and tools implemented for local loop unbundling.

As an example, in terms of maintenance service level indicators, it’s difficult to define restoration times as they are influenced by many external factors such as permissions by local authorities to open a road yard.

So we support that, when they establish infrastructures that can be used to deploy NGA networks, NRAs should consult interested parties, to assess the demand for access and the cost of access provision, as well as to establish operating procedures and parameters.

Principle of equivalence

As regards the principle of equivalence, Telecom Italia agrees with the necessity of strengthen the concept of non discrimination, but we think that the application of such principles should exclude the application of cost orientation models, especially if the equivalence is also delivered at the economic level. More details regarding the application of the equivalence principles are developed in comments to annex II.

With reference to cost orientation for civil infrastructure prices (see §17), TI doesn't share the EC's view. Detailed remarks are reported in comments to Annex I.

Spare capacity

Moreover, we completely disagree with the obligation for SMP operators to install or deploy capacity for other operators. In this case, SMP would unnecessarily be forced to realise solutions which could bring to more (unused) capacity than needed, with higher average costs and a higher environmental impact.

As a matter of fact, when assessing the opportunity of hosting other operators in its own non active network elements, it is necessary to consider two possible cases: (i) existing elements; (ii) new elements.

i. Existing elements: in this hypothesis, an SMP operator can host another operator in its ducts (or other non active elements) only when some of these elements contain an available unused capacity that can be resold. If no capacity is available, it means that the SMP operator, should build new network elements for its needs or if there is demand from other operators (which leads us to case ii)

ii. New elements: in this case, operators, really interested in sharing the investments, should agree on the details of the deployment. The obligation to foresee spaces for other operators, which however would not accept to participate in the same way to the investments, would lead to a concrete barrier and disincentive to NGA investments, because of the increase either of costs and risks or of complexity of projects and permissions required from local administration (e.g. wider cabinets on the sidewalks).

    On the contrary, we think that sufficient space in ducts should be designed for other operators to deploy their fibre lines, in accordance with market demand, only if there is a binding commitment from other operators to acquire the spare capacity installed or deployed by the SMP operators. This type of arrangements could be based on "Risk Sharing" models.

    Telecom Italia has just published its "Proposal for Investment and Cost sharing in the creation of new ducts supporting the development of FTTX networks". In Telecom Italia proposal, the Operators share information about new areas to cover and participate to the planning of the project, finally obtaining the property of the requested number of pipes and routes.

In general terms, Telecom Italia suggests that sharing or building ducts should be left to commercial agreements amongst operators to improve the efficiency and to share the risks.

In any case, providing unlit fibre should be the last measure applicable in case of infrastructure saturation and it should be related only to the access local network segment having saturation problem.

Geographic segmentation

Finally, we think the draft Recommendation should provide detailed guidance for NRAs on how to proceed in market analysis cases where either the definition of sub-national geographic markets or the local differentiation of remedies in a national geographic market are appropriate.

Telecom Italia maintains that the NGA Recommendation should put stronger emphasis on geographic segmentation measures (clearly identifying the methodological approach of market definition and the implications on remedies) also in the light of the broad support received by the EU Parliament and the Council in the discussion on the regulatory framework review.

In other words, it's important that the EC gives to the NRAs appropriate guidelines in assessing the market at a regional level, taking into account the progressive development of the network in the different areas.

6.2 Access to the terminating segment in the case of FTTH

We disagree with the opinion of the Commission to impose the remedy only to the SMP operator.

The Recommendation, before defining the specific obligations to be imposed on SMP operators in markets 4, should at least recall the principle that NRAs should primarily foster a symmetric approach, based mostly on commercial agreements, for the sharing of the infrastructures necessary for the development of the NGA (ex.: ducts, in-wire line cabling), with a model open to all the operators which have invested or which are interested in investing in new networks.

In-house wiring solution

Telecom Italia remarks that the wiring inside an end-user's residence depends on the agreement between the end user and the single service provider, so it cannot be subject to any regulation. Consequently, we refer the term "in-house wiring" merely to the cabling of the building necessary to reach end user's house.

As regards to in-building wiring solutions, covered by the terminating segments, which represent a natural monopoly, a "symmetric" approach must be applied, as it is unviable that a multiplicity of operators can provide "in building" cabling for technical and economic reasons, neither it is extendable to the fibre in-building cabling a possible dominance in the market of legacy copper access network.

All operators should share their in-house wiring with other operators on transparent and symmetrical basis in order to avoid the duplication of the network and investments.

NRA should sustain commercial and technical agreements among network operators, which grant a symmetric access to in-building wiring of FTTH. For this purpose, NRAs should oblige all operators to provide information on its access network architecture. Moreover, the in-building wiring of FTTH solution is a matter of standardisation activity not yet in place. It is not reasonable to wait for a standard definition before starting to provide possible FTTH based services. In the absence of a coherent and comprehensive approach it is unavoidable that operators developing

FTTH networks would adopt “ad hoc” solutions, depending on access network topology and other technical, economic and commercial elements.

In perspective, all operators who intend to build these kinds of infrastructures should be subject to specific rules (type of fibre, spare capacity, only fibre cables or also copper cables etc.) The establishment of technical tables, organised under the supervision of NRAs, where the business plans presented by the operators should be taken in utmost account, is therefore needed.

Spare capacity

As regards the distribution points of the terminating segment of the access network, it would be unfeasible for any operator to plan and install distribution points able to host end user connections provided by other operators, without being sure of which operators are really interested, and without agreeing the details of the deployment.

In order to comply with the obligation to install or deploy capacity for other operators, SMP should realise solutions which could lead to have more (unused) capacity than needed, with higher average costs and a higher environmental impact, or tailored solutions with higher associated costs.

In other words, the determination by the NRA, of where the distribution point of the terminating segment of the access network, including inside-building wiring, should be for the purpose of granting access, would impose to SMP operators architectural choices that should be part of the free entrepreneur preferences.

Principle of equivalence

As regards the application of the principle of equivalence, Telecom Italia agrees with the necessity of strengthening the concept of non discrimination, but we think that the application of such principles should render the imposition of the cost orientation obligations unnecessary, especially if the equivalence is extended to economic figures. More details regarding the application of the principles of equivalence are developed in comments to annex II.

The opinion of Telecom Italia regarding the criteria for assessing such pricing schemes and for setting a risk premium are explained in comments to Annex I.

Multi-fibre for terminating segment solutions

Finally, regarding the deployment of fibre in the terminating segment, we do not support the recommendation to NRAs to use their power to facilitate a specific solution as multi-fibre lines (see §18). We therefore completely disagree on the opportunity to recommend to NRAs to encourage, or, where legally possible under national law, oblige the SMP operator to deploy multiple fibre lines in the terminating segment.

The spare capacity associated with multi fibre lines deployment should be justified only if associated with an obligation on access seekers to subscribe a binding commitment to acquire the extra deployed fibre lines by the SMP operators.

6.3 Unbundled access to the fibre loop in the case of FTTH

The open access to civil infrastructures grants an equal investment starting point for all operators and industrial actors in the market.

Therefore, an obligation related to Unbundled access to the fibre loop, if any, should be taken in consideration just in the case other obligations related to civil infrastructure are not sufficient for the development of competition.

The need for a Geographic Approach in the market analysis process

Unbundling Obligations, in our opinion, cannot be directly extended to fibre loop, as NGA networks competitive setting will be very different with respect to the context of the copper loop.

The copper local loop is an essential facility already in place, while NGAN is going to be deployed *ex novo* by a plurality of operators – both incumbents and newcomers, also using passive infrastructures (e.g. ducts, dark fibre) installed by municipalities and other public utilities - using different technological solutions and different networks (e.g. fixed or wireless networks).

In particular, NGA will be developed, at least initially, in the main metropolitan areas, where it is likely that alternative operators have similar or greater market shares in traditional copper-based ADSL broadband access than those got by incumbent operators.

It is therefore appropriate, in Telecom Italia view, that NGA regulation be based on a geographic approach for relevant markets analysis and SMP evaluation, in order to avoid possible unduly imposition of remedies even in areas where the incumbent operator could have SMP in the market 4 related to the copper access infrastructures but not related to the NGA context. This is an essential key point to support and encourage investment in NGA.

The need for a technologically neutral approach

In any case, implementation procedures for unbundled access to the fibre loop depend on the technologies and architectures in place, so the imposition of such a remedy cannot be applied regardless of the choice made by the operators who deploy fibre based solutions, irrespective of the network architecture and technology implemented by the SMP operator.

Telecom Italia intends to remark that any architectural choice should be equally considered in the final Recommendation, since network implementation solutions have several technical and economical aspects to be considered for deployment and it is not appropriate that regulation supports *a priori* a particular solution. The final Recommendation should indeed follow technological neutrality in all considered issues. Operators should evaluate the appropriate solution for NGA and invests on it.

Moreover, remedies like fibre line unbundling, co-location and backhaul should be compulsory associated with an obligation on access seekers to subscribe a binding commitment to acquire the capacity installed or deployed by the SMP operators. If not, such an imposition could encourage a wait-and-see strategy by the competitors that want to use spare capacity at cost-oriented conditions.

As regards the cost orientation obligation, we agree with the Commission that, in case of cost-orientation, any additional and quantifiable investment risk should be taken into account when setting the price of access to the unbundled fibre loop.

In our opinion, it is questionable to take into account additional and quantifiable investment risk only in a limited number of cases. In particular, we contend that investment risk is also relevant in the deployment of new civil infrastructures. The opinion of Telecom Italia regarding the criteria for assessing such pricing schemes (see §22 Recommendation) and for setting a risk premium are explained in comments to Annex I.

However, we believe that not only multiple fibre architectures but also other co-investment models should be assessed by the Recommendation. More detailed comments on these aspects are developed in the section of the contribution by Telecom Italia regarding Annex III.

Margin squeeze test

Telecom Italia does not hold opposite views on the proposal, in the absence of a cost-orientation obligation , of applying a properly specified margin-squeeze test under certain conditions to ensure that a sufficient margin remains between wholesale and retail prices to allow for market entry by an efficient competitor (see §25).

We think that, in this case, the same EC should promote a specific consultation to agree in advance with the industry on the imputation test, the parameters for the margin-squeeze test and the remedial mechanisms in case of established margin-squeeze.

Indicative conditions of SMP absence

Telecom Italia welcomes the introduction of a set of criteria to indicate the absence of SMP, but we are of the opinion that this set should include a wider group of conditions, that must be based on the principle of technology neutrality and consequently must embrace a more general collection of possible technical solutions, and not only the areas where joint deployment of FTTH networks based on multiple fibre lines takes place.

At the same time, we think that the Recommendation should clarify in details the methodologies by which:

a. NRAs have to monitor whether these conditions are met during the period covered by the market review;
b. how to update the application of remedies when effective competition is reached on the downstream market in a specific area.

6.4 Access obligation in the case of FTTN

Telecom Italia wishes to point out that solutions based on FTTN are economically convenient only in the particular cases where the sub loop length is short enough to avoid generating an excessive attenuation, and when the addressable customer base does not suggest to project fibre to the home based solutions.

Consequently, the opinion of the EC that the replacement of copper by fibre up to an intermediary distribution point represents an investment entailing a lower risk than for FTTH networks is questionable.

In these particular cases, in countries where sub loop unbundling is already offered as a wholesale product by copper line SMP operators, Telecom Italia agrees with the opportunity to update the assessment by NRAs of the costs of sub-loop unbundling.

Consequently, we contend the opinion that the pricing of all items necessary for the provision of sub-loop unbundling may be in line with current methodologies used for pricing access to the unbundled copper loop, as FTTN solutions should be to all extent a possible new wholesale solution related to specific and limited areas, to which the average methodology applied for the national wide LLU wholesale service cannot be applied.

Moreover, we think that a possible reference offer has to be a specific offer not included into the offer of traditional copper based LLU solutions (see §31).

We completely agree with the opportunity to organize a consultation among all operators potentially interested in sharing street cabinets, not only to determine where street cabinets should be adapted and how costs should be allocated, but principally to reach possible investment agreement among operators. These agreements should include possible requirement of other ancillary services like backhaul and co-location.

As regards backhaul measures that, according to the draft Recommendation, should supplement the sub loop unbundling remedy, Telecom Italia believes they are justifiable just in the case backhaul segment constitutes a bottleneck.

Moreover, if an obligation on backhaul is needed, the principle of gradation of remedies should apply in this case also and so, for example, access to fibre backhaul and Ethernet backhaul should be imposed just in the case access to civil infrastructures is not sufficient to address competition problems.

Spare capacity

Regarding co-location, we point out that:

- The deployment of spare space into the cabinet means to plan street cabinets large enough to host several operators. This will certainly be unviable as it will be impossible to obtain permissions to locate huge cabinets on the sidewalks and it could not actually be possible to reserve enough room for other operators, especially if wholesale service demand is uncertain and deployment plans of operators are unknown.
- As a matter of fact, the LLU experience pointed out that unbundling was not required by alternative operators for all local exchanges but for a limited portion of them, causing inefficiencies which proved to be detrimental to the whole market. We can assume that such a situation could be replicated also with regards to NGA. Therefore, requiring SMP operators to reserve space in their own street cabinet would not guarantee efficiency.
- In fact, the number of operators which an operator could host per cabinet will necessarily vary in relation to the area involved (cabinet in an urban area will certainly be more attractive to a large number of operators rather than cabinets in rural areas due to a grater density and consequently to the possibility to reduce connection costs). This implies that a one-size-fits-all solution cannot be adopted since – otherwise – there would be cabinets with more (unused) capacity than needed, and more capacity means higher costs and a higher environmental impact, which not all municipalities could accept. On the other hand, differentiating the number of operators each cabinet could host would be inefficient for the operator who could not rely on economics of scale with regard to the planning and buying of new cabinets.

Consequently, we highlight that the deployment of spare space in the cabinets is not viable unless a specific commitment of other operators for co-location and sub loop is present, before installing the new cabinet.

Regarding cost orientation, we think that such an obligation should be considered just in case negotiations among operators fail, and in any case it should be applied only to not replicable access network segments.

7. Wholesale Broadband Access

Wholesale products availability

Telecom Italia does not agree that NGA based services, including wholesale broadband access over VDSL, can be considered as chain substitutes to existing wholesale broadband access over copper-only loops: as proposed by the EC itself, broadband access products based on fibre may be technically configured in ways that allow for more flexibility and enhanced service characteristics compared to copper-based bitstream products, and consequently they should be considered as emergent services.

Consequently, it would hamper innovation to restrict the launch of an emergent retail service on the availability of the correspondent wholesale solution.

Moreover, Telecom Italia believes that in principle the economic conditions concerning possible wholesale broadband solutions should be left to commercial negotiations among operators.

As a matter of fact, given the huge flexibility of NGA based solutions, only a freely negotiated agreement among interested operators would carefully specify, with respect to technical protocols and interfaces, new applicable solutions.

In this sense, the application of cost-oriented access prices to wholesale bitstream set by NRAs would negatively affect free negotiations among operators, and could in addition discourage investment in infrastructures, since “network-less” operators could compete at advantageous conditions with operators intentioned to invest in NGA.

Just in case remedies in wholesale market 4 do not ensure a sufficient competition in the retail broadband access market, and agreements among operators fail, NRAs should consider remedies to be applied in wholesale broadband access relevant market.

Criteria for obligation removal

Telecom Italia welcomes the introduction of a set of criteria to weaken the imposition of certain remedies (see §37,40,41), such as removing cost orientation imposition in case of granting an equivalent access to other undertakings.

Nevertheless, Telecom Italia’s opinion is that an effective competition in the downstream market can be reached not only in case of effective access to the unbundled fibre loop, but also in case efficient and not discriminatory accesses to civil infrastructures ensure a level playing field to all operators.

We also share the view that when the principle of non discrimination achieves a high level of implementation, as is the case when functional or different forms of operational separation are applied in order to ensure equivalent access, downstream wholesale products should be left in general to commercial agreements.

Accordingly, the flexibility suggested for market 5 by the following Recommendation statement appears an appropriate measure:

"Where there is a proven track record that functional separation or similar arrangements have resulted in fully equivalent access to NGA networks by alternative operators and the downstream arm of the SMP operator, and where there are sufficient competitive constraints on the SMP operator's downstream arm, NRAs have more flexibility when designing remedies for wholesale broadband access. In particular, the price of the bitstream product could be left to the market" (see where as 45).

Telecom Italia also welcomes the option of not imposing wholesale bitstream access if arrangements for co-investment are in place and lead to a situation of effective competition, and hence to the absence of SMP in market 5.

At the same time, we do not support that the assumption of the absence of SMP is limited to the joint deployment of FTTH networks based on multiple fibre lines, thus excluding other forms of joint developments.

Moreover, we think that the Recommendation should clarify in details the methodologies by which the NRAs have to monitor whether these conditions are met during the period covered by the market review, and how to update the application of remedies when effective competition is reached on the downstream market in a specific area.

We also agree that careful monitoring and margin-squeeze tests (see §39) would be appropriate to avoid anti-competitive outcomes, but we consider important to clarify the relation between the margin squeeze test on market 5 and the margin squeeze test on market 4, in order to avoid any regulatory uncertainty and over regulation.

To this end, we believe that the EC should address the methodology to perform the margin squeeze test, and we reiterate that the application of this type of test should be mandatory only in case the wholesale access services provided over the NGA are not under a cost orientation obligation.

8. Migration

Telecom Italia does not hold opposite view to the opportunity to give operators currently enjoying access time to prepare for the changes, and agrees with the necessity of a commercial agreement among operators on an appropriate migration path as advocated by EC (see §43). We also agree with the opinion that NRAs should ensure that there is an appropriate migration path just in case an agreement among operators is not in place.

At the same time, we think that the EC should recommend NRAs to monitor possible opportunistic behaviours by operators aiming, essentially, at harming the transition towards the NGAN.

We also suggest that possible obligations in terms of information related to network migration paths should not be levied only on the SMP operator, but that all operators should provide such information for coordination.

Moreover, the period of previous notification to operators of any point of interconnection/handover de-commissioning should not be fixed by the EC, but, rather, be defined at national level because

strongly dependent on the level of development of new platforms and on the different architectures adopted in national plans.

We also stress that information on NGA migration paths is extremely complex since it should at least include the following elements:

- information about the migration in terms of central office or metropolitan sites interested by NGA deployment;
- definition and implementation of all technical steps along with associated timing to introduce new wholesale services over NGA, if any;
- design and operation of new network systems and procedures (such as for example the operating support systems) related to the migration operation.

Telecom Italia's opinion is that all this complex information cannot be given five years in advance. In addition, such information would risk to become rapidly obsolete.

Besides, the appropriate period for advising other network operators about points of interconnection/handover de-commissioning should also be based on the recognition of the actual depreciation period of the investment for co-location. This relevant factor should be evaluated at national level and therefore could lead to country-specific patterns of migration policy. Accordingly, a single migration period established by the Recommendation could be completely inappropriate at the level of specific European countries.

9. Pricing principles and risk (Annex I)

Common principles for the pricing of NGA access

We completely agree with the EC in stating that cost calculations imply a reasonable return on the capital employed and NRAs need to ensure that access prices reflect the costs effectively borne by the SMP operator, including due consideration of the level of investment risk.

As EC itself states, *"the deployment of FTTH will normally entail considerable risks, given its high deployment costs per household and the currently still limited number of retail services requiring enhanced characteristics (such as higher throughput) which can only be delivered via fibre"*.

We neither oppose to the general consideration that a consistent regulatory approach may use different cost bases for the calculation of cost-oriented prices for replicable and non-replicable assets.

Margin squeeze test and related commitment arrangements

Telecom Italia welcomes the proposal of the Commission to recommend NRAs to take account of co-operative arrangements, considering the capital-intensive nature of NGA deployment and the risk involved.

Telecom Italia deems that lower access prices to the unbundled fibre loop in return for up-front commitments on long-term or large volume contracts, will not be an unduly discrimination when prices reflect an actual reduction of the investment risk.

As stated in the previous paragraphs, TI agrees to leave to margin squeeze test to prevent inefficient market entry, in case the wholesale access services provided over the NGA are not under a cost orientation obligation. The margin squeeze test, applied ex post, is the "most effective" measure to be adopted in the phase of the NGAN development, considering the innovative services involved.

We deem it necessary that EC clarifies, in specific guidelines, the new methodology on margin squeeze test. On this ground, the choice of the method, the specification of the imputation test, the parameters to be used and the remedial mechanisms in case of established margin squeeze, may be decided by NRAs.

On this issue, Telecom Italia supports the idea to perform a multi-period assessment of cash flows over time, using the wholesale prices negotiated with the Alternative Networks (Altnets). On the other hand, the multi-period approach is typically applied by every competitor in setting retail pricing, especially in presence of innovative services.

The wholesale above mentioned prices refer to the agreement available for Altnets. These contracts will represent the economic values the SMP will apply internally, in the same conditions, to its commercial division and therefore to the margin squeeze test.

In a setting retail price, the incumbent will always refer to risk sharing contracts (i.e. both long term contracts and volume discounts contracts) in order to choose the most efficient economic values available applied for AltNets.

The one period (or static) test is suitable for mature services. For innovative networks, a "dynamic" test is more suitable and a convenient pay-back period to calculate the margin should be considered as suggested by the draft recommendation.

The condition is that the retail pricing, applied by the incumbent, has to be superior to a) the network essential facilities evaluated on the more efficient wholesale prices negotiated with the AltNets plus b) the coverage of not essential network facilities and c) the non network facilities (retail commercial costs), both of the latter (b and c) replicated de facto by AltNets.

P > network essential facilities + network not essential facilities + non network facilities

Referring to not essential network facilities and the non network facilities, TI points out the necessity to adopt an equally efficient competitor approach (EEO), because on top of being coherent with EC approach, the pricing test based on cost incurred by the incumbent can be reasonably applied as the incumbent knows its own costs.

Pricing of access to civil engineering infrastructure

Cost accounting methodology

In our opinion, a different treatment should be applied between existing and new infrastructures. In order to deter "wait and see" attitudes, the price should reflect investment sharing. As a consequence, we support rules which welcome commercial agreements on investment sharing and allow commercial pricing on new infrastructures.

Risk profile of investments in non-replicable physical assets, such as civil engineering infrastructures, has to be considered radically different from that of existing copper infrastructure, when dedicated to the deployment of NGA networks.

As a matter of fact, since the civil works are estimated to be a relevant amount of the investment in NGANs, allowing for an incorrect civil engineering price would have a relevant effect on cost oriented wholesale prices.

On the contrary, the Draft Recommendation states that, "*NRAs should regulate access prices to civil engineering infrastructure consistently with the methodology used for pricing access to the unbundled local copper loop*".

As was suggested in a recent speech by Commissioner Reding, the cost orientation applied mechanically from copper to fibre may not be the appropriate regulatory incentive.

We recall here Commissioner Viviane Reding indications[2]: *"The difficulty I have with this argument is that it ignores the fact that new high-speed networks are not there yet and need to be built in the first place. Investors in these networks therefore need to be able to make financial returns commensurate with the risks they incur. Cost-oriented access as in today's copper world may under these new circumstances need to be modulated, subject of course to the continued possibility of market entry and sustainable new entrant business models".*

Nevertheless, the Commission assumes in the current draft Recommendation that the methodology used for pricing ULCL (Unbundled local copper loop) should be applied in regulating

2 Viviane Reding EU Telecoms Commissioner Towards a European Strategy of High Speed Broadband for All: How to Reward the Risk of Investment into Fibre in a Competitive Environment ECTA conference Brussels, 25 June 2009

access pricing to civil engineering. TI underlines that across Europe, NRAs have used different costing methodologies to evaluate the ULCL, such as Historical Costs, Current Costs or Long Run Incremental Costs. Broadly speaking, NRAs have chosen ULCL costing methodologies in compliance with "regulatory priority objectives", selected on the basis of local competitive situation. In particular, the Italian NRA, with the aim to encourage the ULCL diffusion through low ULCL monthly rental, has adopted the HCA methodology; for different reasons or regulatory priority objectives, other NRAs have chosen CCA or LRAIC. In Italy access prices to civil engineering infrastructure should be determined on the HCA basis; in UK and in France Current Costs should be adopted; in Ireland, LRAIC.

Therefore TI believes that the Commission should modify point 2 of Annex I as the choice of the costing methodology must be made coherently with the "nature of the service" using the network element and with the "regulatory priority objectives" for the development of NGAN.

NGAN supports innovative services, characterized by a high level of risk: in this context, we believe that the costing methodology to be preferred is the LRAIC, and in any case a cost accounting methodology able to provide significant economic value (based on a perspective current cost) to all assets (new assets and existing assets) used for the deployment of NGAN.

We also recall what the same EC states in the "whereas", (2) "… It is therefore important to provide guidance to NRAs aimed at preventing any inappropriate divergence of regulatory approaches": Telecom Italia believes that the Commission should be more effective in its action and asks for the harmonization of the methodologies for the evaluation of wholesale prices throughout Europe.

Therefore, Telecom Italia invites the Commission to modify point 2 of Annex I, by recommending the use of Current or Long Run Incremental Costs, the most used methodologies across Europe for pricing ULCL. If not, the Commission won't reach its objectives: to recognise the innovative nature of the NGAN services and to prevent divergences of regulatory approaches across Europe.

Telecom Italia also believes that in general an asset risk profile depends on the use of the asset itself[3].

The risk is the main component of the cost of capital and it is related to uncertainty on the future ARPU or on the evolution of the demand. Consequently, the risk is not related to the "asset" itself, as network component. Accordingly, Telecom Italia believes that the concept of risk depends neither on the nature of the asset, nor on the existing or new asset, but it stems from the provided services using that asset.

The overall level of risk is influenced by the probability for a service to generate a future return and not by the physical structure of the capital (an asset). Given that, the same asset, if used in providing different services (from the point of view of the returns etc.) has different range of risk.

So Telecom Italia is of the opinion that both investments into fibre and in civil engineering infrastructure depend on their depreciation on the take-up of new services provided over NGA networks in the short and medium terms, without any possibility of risk diversification.

In particular, Annex I, point 6, is coherent with Telecom Italia view: *"… Systematic risk should be estimated on the basis of future NGA penetration scenarios. Factors such as existing broadband*

[3] Bearing in mind that the risk of an investment is the probability that the returns do not reach convenient values and that uncertainty is the width of the distribution of possible values, the profitability of the fibre based services is far to be well known by the operators.

penetration, demand for additional bandwidth, consumers' willingness to pay, the degree of infrastructure-based competition and the likelihood of alternative operators migrating their clients to fibre loops should be taken into account and properly weighed against other factors such as new wholesale revenues – including captive sales - from physical infrastructure access, revenues from migration charges, and revenues from connection charges to access points, backhaul and co-location".

Telecom Italia then suggests to consequently modify Annex I, point 2, deleting the paragraph: *"When setting the price for access to civil engineering infrastructure, NRAs should not consider the risk profile to be different from that of copper infrastructure"*.

In the light of the above considerations, TI agrees that in the case of access to the unbundled fibre loop, the costs of capital of the SMP operator for the purpose of setting access prices should reflect the higher risk of investment compared to investment into current copper based networks.

Pricing of access to the terminating segment in case of FTTH

Telecom Italia agrees with the proposal to reflect the costs effectively borne in the access prices, including a higher risk premium to reflect any additional and quantifiable risk incurred. At the same time, we are concerned about the indication of setting prices for access to the distribution point consistently with the methodology used for pricing access to the unbundled local copper loop.

If the investment risk is strictly associated to the service and not to the network component, as pointed out in the above paragraph, the costs for distribution points or fibre loop have to reflect the higher risk premium.

In our opinion, a dedicated pricing methodology should be deployed and applied in pricing wholesale NGA based services.

Pricing of access to fibre at the MPoP in case of FTTH (unbundled fibre loop)

We agree with the EC to consider the inclusion of a higher risk premium to reflect any additional and quantifiable investment risk, if and when setting cost oriented access prices to the unbundled fibre loop, and we do not have a divergent view regarding the principle of non-discrimination.

Pricing of access to the copper sub-loop in the case of FFTN

As regards the pricing of items necessary to allow sub-loop unbundling, including backhaul measures and ancillary remedies, TI maintains that the imposition of cost-based criteria should follow an assessment of what item is actually replicable or not. As an example, the installation of a VDSL cabinet is an activity that every operator can do, regardless its power in the market of the copper loop access. The same case could occur in a set of cases to backhaul links, dedicated to FTTN solutions. Consequently, we partially agree with the necessity to apply cost orientation to all access network items related to FTTN solutions without, indeed, assessing the alternative operators chances to replicate.

Furthermore, we do not agree with the approach of imposing co-location in any case, owing to the technical constraints the SMP operator should tackle (see comments on "access obligation in the case of FTTN").

We are also concerned about the consideration regarding the risk profile of the access to the copper sub-loop, which according to the EC should not to be different from that of existing copper infrastructure.

In our opinion, as already explained in the previous chapters, the FTTN will have an associated risk proportional to the risk of the innovative NGA based services (and not related to the asset in itself).

Criteria for setting the risk premium

We welcome the proposal to add a premium over the pay-back period of the investment, by reflecting the systematic risk of the investment, on the internal rate of return (and WACC) currently applied for calculating the price of access to the unbundled copper loop, and by taking into account all dimensions of capital employed for NGAN.

The deployment of a NGAN leads to positive externalities; positive externalities require a high NGAN penetration; high NGAN penetration requires huge investments; huge investments mean higher risk.

Therefore, systematic risk should be estimated on the basis of future NGA penetration scenarios. Relevant factors should be taken into account:

a) commercial environment, such as existing broadband penetration, demand for additional bandwidth, consumers' willingness to pay, commercial take up;

b) regulatory environment, in terms of certainty and transparency, degree of infrastructure-based competition and likelihood of alternative operators migrating their clients to fibre loops.

These factors should be properly weighed against other factors, such as new wholesale revenues – including captive sales - from physical infrastructure access, revenues from migration charges and revenues from connection charges to access points, backhaul and co-location. All items above mentioned represent de facto uncertainties in the deployment of NGAN that requires an adequate remuneration of capital employed or, in other words, requires an adequate incentive or premium to invest. Accordingly, in our opinion the NRA's should adopt a different and flexible pricing control approach , aiming to ensure incentives to geographic penetration and long term remuneration.

As far as the long term remuneration is concerned, TI deems that it should be estimated on the basis of a long term business plan able to ensure the adequate "internal rate of return" (based on the above considerations) and a "period pricing" (or long term pricing) in order to compensate the initial losses with future revenue.

In this context the NRA's could limit its intervention by:

- approving a remuneration cap for the internal rate of return, consistent with the necessity to ensure a premium to the development of NGAN on the basis of defined penetration scenarios;
- fixing a price cap to the "period pricing" in order to avoid excessive pricing.

Criteria to assess long-term access pricing in case of FTTH

Telecom Italia agrees with the consideration that *"access prices adjusted for risk based on long-term access may vary as a function of time over which access commitments are made. Long-term access contracts with defined minimum volume requirements would be priced at a lower level than short term access contracts"*.

We support the view that long term access prices should only reflect the reduction of risk for the investor, but we are of the opinion that in case of cost orientation defined on mandated methodologies, the price to determine a lower boundary to which compare the long term price has to consider "long term" elements in order to include the evolution of risk over time.

At the same time, we support the EC approach that the possible higher price of short-term contracts shall reflect the option value attached to the flexibility of such form of access which benefits the access seeker. Possible abuses by the SMP operator over time in the application of long-term access pricing should be managed by Antitrust Authorities by way of ex-post analysis and remedies impositions.

Furthermore, in case no cost orientation obligation on wholesale access services provided over the NGA is present, we support the use of margin squeeze tests, but we also point out the necessity to introduce, through a public consultation process, new margin squeeze test mechanisms able to reflect the "long term" pricing perspective in both retail and wholesale dimensions.

Criteria to assess volume discount in case of FTTH

Telecom Italia welcomes the interest of the EC in the introduction of access prices adjusted for risk based on volume discounts, on the basis of the decreasing investment risk stemming from the total number of fibre loops already sold in a given area.

We support the view that volume discounts should only reflect the reduction of risk for the investor, but, as reported before, we believe the price to be compared with the volume discounted price, to determine a lower boundary, has to contemplate "long term" elements to include the evolution of risk over time.

We think that the extension of the area on which basis volume discount are calculated should be determined by the single NRA taking into account the specificity of the market and the customer density.

10. Application of the equivalence principle on civil engineering infrastructure (Annex II)

Equivalence Principle

Telecom Italia supports the introduction of a clear-cut non discriminatory framework in the wholesale access to NGA.

Telecom Italia is already voluntarily committed, by means of legally binding undertakings, to introduce equivalence conditions as regards both the copper network and the future NGA. In particular, Telecom Italia added to the current remedies a set of Undertakings aimed at introducing fair "equivalent" conditions in providing access services and information regarding fixed line access

network development. In addition, the undertakings will be extended automatically to new wholesale services in which Telecom Italia will be defined as SMP, including, NGAN based wholesale services (only in case of asymmetric regulation)..

Information on the civil engineering infrastructure and the distribution points

Telecom Italia also agrees with the EC on the importance of engineering infrastructure for the deployment of NGA networks: it is of the utmost importance that regulation encourages sustainable competition without diminishing the incentive to innovate and invest in its network.

We wish to stress that ducts to lay fibre cables or pipes are passive infrastructures which could belong not only to SMP operators but also to other TLC Operators as well as other utilities (i.e. water, energy, gas, public lighting, sewer system etc.).

If the aim of the Recommendation is to support a fast creation of an open new generation network, a wide access to information of all infrastructures is needed.

Such information is also essential to ensure that market analyses are properly conducted on the basis of underground geography of the area and on the presence/absence of alternative routes to lay fibre cables or pipes.

The availability of information regarding civil engineering infrastructure should be requested to all infrastructure owners. Such a register could be created with the help of local administrations and utilities to give a complete set of information on all available infrastructures in a certain area, not only those planned for TLC use. The register could also contain planned infrastructures and the maintenance plans in order to capitalize on the opportunity to lay pipes or fibre cables. As all duct owners should participate with their consistencies to the register, it should contain the minimum common set of information needed to plan new routes.

Ordering and provisioning of access

In case a SMP Operator is identified on these services, Telecom Italia agrees it should provide access to its civil engineering infrastructures under the same conditions to internal and third party access seekers.

Telecom Italia has already presented a public offer which provides equivalent access to infrastructures (e.g. allowing access to information and avoiding the reservation by internal departments of empty ducts) and assures the access to requested routes with a very high percentage of success. Such a result is obtained allowing the laying of many pipes in the existing ones (e.g. up to five small pipes in the existing ones) and in ducts already used for TI cables.

Service Level Indicators

Telecom Italia agrees on defining and calculating service level indicators on access and maintenance of civil engineering infrastructures.

A specific focus should be set on civil engineering infrastructures to enter in the buildings and for vertical infrastructures (dark fibre) as they represent a natural monopoly. In those cases, NRAs should impose transparent and symmetrical conditions of access and technical tables among operators, under the NRAs' supervision, should define engineering and commercial rules to be set.

Telecom Italia also agrees in extending to civil engineering access requests the current rules of "non disclosure" defined for current "copper" SMP services.

Reference offer

We agree with the EC on the necessity of publishing the information needed to provide access to the civil engineering infrastructures.

As an example, Telecom Italia ensures, in areas in which it is considered SMP, the same service level, technical conditions, assistance and quality of service for network services to TI retail and other Operators (Equal Treatment principle), and, as stated in the Undertakings, transparency of the fixed access technical network and plans regarding development and quality are ensured.

Monitoring by the NRA

We agree regarding the opportunity of a monitoring activity by the NRA on the equivalence measures put in place by the SMP operators.

As an example, Telecom Italia's undertakings include the creation of an Independent Board to monitor the compliance with the undertakings, thus ensuring the full tracking to monitor that they are correctly implemented in areas in which TI is considered SMP. These measures are in addition to the previous ones, including:

a) Equal Treatment Compliance report submitted to Agcom every six months (including QoS indicators for services provided to competitors)

b) the Annual Report, certified and approved by an independent party, submitted to AGCOM on the respect and completion of the obligations of operational separation, already in place before the introduction of the undertakings.

Asymmetry of information

We agree with the necessity of preventing the misuse of information. As an example, Telecom Italia organisation includes:

- the separation of the employees & management of the Access Network from both the Retail and Wholesale functions;
- the separation of the employees & management of TI wholesale from TI retail;
- a logical/physical separation of network/wholesale systems from retail systems aiming at avoiding access to Operators data by the retail units.

11. Access to the unbundled local loop in case of co-investment into FTTH (Annex III)

Telecom Italia completely agrees with the EC that the imposition of cost-orientation even in the case of deployment of an FTTH network based on multiple fibre lines could be a disincentive to deploy multiple rather than single fibre lines.

Accordingly, we support the consideration that imposing cost-oriented access would normally be disproportionate when the SMP operator is providing effective and fully equivalent physical access to one or several alternative operators competing on the downstream market.

We also agree with EC view that in such context, *"price differentiation between initial access seekers on the one hand, and those operators purchasing access at a later stage on the other, should in principle not be considered as sufficient evidence for anti-competitive behaviour"* (see §..)

We also agree that possible arrangements between the SMP operator and those undertakings enjoying access, leading to anti-competitive coordinated effects, should be analysed and if the case inhibited by Antitrust Authorities.

We are of the opinion, of course, that co-investment into NGA networks can reduce costs and risks incurred by undertakings, fostering the deployment of FTTH and *that "the arrangements entered into by co-investors to diversify risk should not be regarded as instances of discriminatory behaviour with regard to operators seeking access at a later stage"*.

Nevertheless, we are very concerned about the advantages of multi fibre FTTH networks in fostering the competition in building NGA infrastructures. To be clear, we do not believe that only a specific NGAN architecture (multiple fibre) can become the trigger for increased competition and, hence, should be the only one encouraged by the Recommendation by means of a clear-cut deregulatory approach. Ultimately, these evaluations should be left to the market reviews as established by the European regulatory framework.

In other words, the profile of the network envisaged (multi fibre) is too stringent in this initial phase of the market. Furthermore, the Commission links the benefits of exemption from stringent regulation on the basis of a specific technology: it follows that regulation would infringe the neutrality principle. It is also questionable that the removal of cost orientation applies only to the case of unbundled fibre loop.

Finally, Telecom Italia wishes to point out that the overall approach to co-investment of the Recommendation should be substantially revised also from another point of view. It is in fact required a substantial improvement in the regulatory incentive scheme designed by the EC: in order to become really attractive from a "deregulatory" point of view, the Recommendation should clearly state that a given SMP operator in the current access copper network that decides to enter in a co-investment venture could "immediately" enjoy a number of regulatory exemptions. In other words, the "premium" should be available at the beginning of the co-investment project and not delayed over time, eventually to the following market review.

The availability of the "deregulatory" premium in a reasonable time frame could really promote the adoption of co-investment schemes, at least in a number of geographic areas. Instead, the current approach proposed by the draft Recommendation is based on the concept that there already exists a given SMP operator in markets 4 & 5 also with regard to the NGAN. Such a regulatory assumption is in our view wrong and could de facto significantly inhibit co-investment initiatives.