



Europe

GSMA Comments to the Draft RSPG Report on Efficient Awards and Efficient Use of Spectrum

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About the GSMA

The GSMA represents the interests of mobile operators worldwide, uniting nearly 800 operators with more than 250 companies in the broader mobile ecosystem, including handset and device makers, software companies, equipment providers and Internet companies, as well as organisations in adjacent industry sectors. The GSMA also produces industry-leading events such as Mobile World Congress, Mobile World Congress Shanghai and the Mobile 360 Series conferences.

For more information, please visit the GSMA corporate website at www.gsma.com. Follow the GSMA on Twitter: @GSMA.

Executive Summary

The GSMA welcomes the RSPG's report on efficient awards and efficient use of spectrum. Spectrum plays a vital role in the communications value chain and the continued scarcity of mobile spectrum means that efficient use of spectrum and efficient processes for the awards for mobile spectrum licences is a policy priority for all European administrations. In particular, the GSMA:

- believes that a digital single market for European customers requires a consistent investment environment and therefore a **consistent policy environment** for spectrum
- agrees **auction objectives** should include efficient use of spectrum and increasing access to mobile broadband services, but believes that positive discrimination towards possible new entrants should be avoided and governments should consider the longer-term impact on the economy (and associated treasury receipts) of raising excess revenue from licence fees
- insists that greater alignment on **timing of licences** across the Union is necessary to facilitate the Digital Single Market and achieve economies of scale
- supports the RSPG view that **open, simultaneous, multi-round auctions** (whether SMRA or CCA) are the most efficient way to assign new spectrum
- encourages European authorities to seek greater coherence on the purpose of **reserve prices** - to establish the opportunity cost of the next-best use
- supports the RSPG view that **licences terms** should be lengthened and consideration given to creating **perpetual licences**, in order to promote ongoing investment and upgrades in mobile broadband networks
- advocates a more investment-friendly approach to **licence expiry**, with greater clarity and certainty on the renewal process and giving licensees an option to renew active spectrum
- supports the RSPG view that **spectrum charging** methods require transparency and certainty, and seeks greater consistency between up-front fees and annual fees
- insists that consistent **market pricing of spectrum across all users** would address under-utilisation of spectrum and incentivise rebalancing, causing inefficient users to release spectrum for more efficient purposes
- supports the RSPG view on the importance of **technology neutrality**
- supports the applications of reasonable **caps**, but cautions against spectrum **set-asides** for possible new entrants, which may be discriminatory and inefficient
- supports reasonable **coverage obligations**, which should not be changed unilaterally a licence has been issued
- believes that **regulated wholesale access** is not appropriate where competition exists among mobile network operators
- supports **spectrum trading, leasing and sharing**

GSMA's Detailed Response

Importance of efficient awards and use of spectrum

The GSMA fully supports the RSPG view that spectrum plays a vital role in the communications value chain and the continued scarcity of mobile spectrum means that efficient use of spectrum and efficient processes for the awards for mobile spectrum licences is a policy priority for all European administrations.

A market-based approach to spectrum award and use should be introduced to all spectrum users. This will help to establish an equilibrium between spectrum users, and address the ongoing imbalance in supply and demand between spectrum user groups - in particular the spectrum shortage for mobile, evidenced by the higher spectrum charges currently paid by the mobile sector.

The benefit to Europe of harmonisation

The GSMA believes that Europe should benefit from a single market, where all customers have access to the same advanced mobile broadband services, regardless of where they live in the Union. This requires a consistent investment environment across Europe; and this in turn requires a more consistent policy environment, and in particular for spectrum, as one of the most significant regulated input costs. Without more predictable and consistent conditions for mobile spectrum licensing, investment will concentrate in pockets where conditions favour investment, and a single market will fail to be achieved.

In this context, the GSMA does not believe that the RSPG has presented convincing evidence that licensing approaches must vary between Member States. There may be variations in demand for spectrum between Member States (e.g. due to variations in geography or population distribution), but this, in itself, does not require differences in licensing approaches. Variations in licensing approaches are generally due to differences in national policy objectives, and in the historic habits of national regulators, and it is less clear why these should vary within Europe.

While the report examines the merits of different auction methods, and tabulates which methods have been adopted across Europe, the report does not establish a clear exclusive linkage between objectives and approaches, or between objectives and outcomes. It is not clear that regulators choose one licensing approach over another, for clear and consistent reasons, nor that in choosing one particular approach over another, they are more successful in achieving their policy outcomes. Variation in auction approaches is often better explained by regulators' own preferences or familiarity with one licensing approach over another.

Conversely, the report doesn't test whether a more consistent licensing approach across Europe could deliver similar or better results - despite the fact that licensing at a continental level has clearly delivered results in the US (having caught up and overtaken the European mobile market) and India.

The debate perhaps therefore needs to start with an assessment of whether a consistent licensing approach could deliver superior results for Europe and is therefore desirable, and then whether and how it could be achieved.

Auction objectives

In terms of appropriate auction objectives, the GSMA agrees these should include efficient use of spectrum and increasing access to mobile broadband services.

However, while there should be no barrier to new entrants in an auction, the GSMA is cautious about the suggestion that auctions should be used to “promote new entrants / facilitate market entry”. Positive discrimination towards possible new entrants means discrimination against existing players and should be avoided because it may result in: inefficient assignments of spectrum; spectrum left unassigned and fallow; higher costs for the industry and reduced benefits for customers. Recent auctions in the Netherlands, Portugal, Hungary and the Czech Republic bear witness to this. Auctions should provide a level playing field for all interested parties.

Financial objectives

The GSMA recognises the right of governments to raise revenue from spectrum licensing, but cautions against excessive spectrum fees. Governments should consider the longer-term impact on the economy of excessive fees. Spectrum is a critical input to the digital economy, and lower spectrum fees will result in lower input costs and enable greater sector investment, growing the digital economy and associated benefits to the wider economy.

The GSMA believes greater consensus is required among Member States on the fundamental purpose of an auction - to identify the most efficient users of spectrum. In this case, maximising the revenues raised for a national government must be understood to be a counter-productive objective.

Focusing on maximising licence revenue can have further unintended consequences - governments in some markets have sought to artificially restrict supply (i.e. hold back spectrum) purely in order to drive prices higher. This has a double impact on mobile services, where speeds and capacity are lower, while input costs are higher.

Timing of awards

The GSMA disagrees with the implication in the report that the timing of licence awards is best determined by national factors. European consumers, enterprises, as well as the mobile operators and manufacturing industries, will all benefit with greater alignment on timing across the Union, in order to facilitate the Digital Single Market and achieve economies of scale.

Multi-band auctions

The GSMA does not support the RSPG view that multi-band auctions are necessarily problematic for mobile operators - rather, multi-band auctions give bidders choice and flexibility and are therefore more likely to lead to more efficient outcomes.

However, it is precarious when expiring spectrum is included in an auction together with new mobile bands. Bidders who need to renew may face a threat to their existence, which other bidders can take advantage of; also there is a severe risk to market competition if the auction goes wrong and an operator is forced to exit. A much more effective approach is to provide licensees with the option to renew existing licences outside of an auction.

Award mechanisms

The GSMA supports the RSPG view that **simultaneous, multi-round** auctions (whether SMRA or CCA) are the most efficient way to assign new spectrum.

A variety of simultaneous, multi-round auction designs have been executed across Europe and, among the GSMA members, there is no consensus on which method is preferred - SMRA and CCA both have pros and cons, as described in the report (although there appears to be an increasing trend towards SMRA).

The GSMA supports the RSPG view that **sealed bid** auctions are inefficient, and can distort competition and are therefore inappropriate.

The GSMA also supports the RSPG's view that **good practice** in award design includes: clear articulation of objectives; transparency and involvement of stakeholders; and effective planning and design. In particular, since many of the details (on issues like reserve prices, packaging, caps, eligibility rules, withdrawal rules, information policy, etc.) are hard to get right, regulators should be open-minded about their designs. They should consult well in advance, and be prepared to revise detailed proposals significantly in the light of feedback, rather than pressing on regardless.

Detailed auction design considerations

Aggregation risk is traditionally associated with the SMRA format. In reality, though, bidders typically prepare a range of bid scenarios, and their network technology strategies allow them to accommodate multiple outcomes, so aggregation risk is perhaps less of an issue, particularly as the number of mobile bands increases. Also, withdrawals can give bidders some flexibility to respond to aggregation risk.

The GSMA advocates the auctioning of discrete spectrum blocks, rather than spectrum packages, and agrees that offering **generic blocks**, rather than frequency-specific lots, in the principal stage of the auction, is good practice to mitigate fragmentation risk.

The GSMA supports the view that **second price** rules will tend to lead to more truthful bidding.

Common value uncertainty can lead to a "winner's curse", where one or more players over-pay for their spectrum and are put at a competitive disadvantage (e.g. because they have less cash available for network build). A more efficient approach is to adopt an auction method that allows price discovery, which should lead to more consistent pricing.

The RSPG report suggests that provision of full bid round information could lead to collusion, yet noted that collusion can happen before an auction starts – the GSMA is therefore not convinced the proposed benefits of restricting bid round information outweigh the costs. Comparing auctions across Europe, the GSMA sees no evidence that withholding information leads to better outcomes, or is even effective; it simply forces bid teams to spend significant effort on reconstructing the hidden information - effort which would be better focussed on bidding objectives.

The GSMA therefore holds the position that bidders should be provided with **full bid round information**, which will allow more transparent and efficient auctions. Germany is a good example in this regard, where full bid round information is provided and where auction outcomes have been consistently positive.

While discussing collusion, the RSPG fails to consider the related issue of **conditionality** – where the value of spectrum to one bidder depends on whether spectrum in the same band is also won by another bidder, for example, where both bidders are network sharing partners. This is important when an operator is considering launching a new spectrum band, and the value of the spectrum depends on whether the costs of the new radio layer can be shared between two operators. This

aspect of conditionality was addressed by a seller during a recent spectrum trade in Europe, whereby the seller accepted conditional bids, contingent on other bidders' outcomes.

The GSMA believes the risk of **price-driving behaviour** is reduced in multiband auctions (and where there is increasing substitutability between bands) and can be mitigated by transparency in bidding, by reasonably limiting the number of withdrawals (bidders will be less likely to drive prices if there is a risk they will be forced to keep what they have bid on), as well as appropriate application of eligibility rules and spectrum caps.

The GSMA agrees that **eligibility rules** need very careful design.

Reserve prices

The GSMA believes the RSPG report does not adequately address the question of reserve prices (other than commenting that higher reserve prices may mitigate strategic demand reduction). The underlying issue is that Europe's national authorities are unable to agree a coherent and defensible position on reserve prices, particularly where some authorities, or their governments, are focused on maximising rents from the mobile industry, while others regard spectrum as an input to the digital economy and focus on the greater benefits that result from its efficient and cost-effective assignment.

Reserve prices serve one purpose only - to establish the opportunity cost of the next best use, and therefore to ensure that, if spectrum is sold, it sells for a higher price than the value to the next alternative user; and if it remains unsold, it will still be of marginal value to that next best user, and can be assigned to them.

There are multiple examples of mobile auctions around the world where spectrum has remained unsold and yet it has not been assigned to, or even sought by, the alternative users – all as a consequence of the reserve price being set too high.

A well-designed and well-run auction will reveal the market value of the spectrum. Using an inflated reserve price to attempt to second-guess the market value reveals a crisis of confidence that an authority will be able to design and execute an efficient auction.

It is also common practice in some markets for authorities to take spectrum auction prices in other territories (in particular Europe) and use them to set their own reserve prices. This can result in a ratcheting up of prices over time, and a further departure from efficient pricing. European regulators should demonstrate consistently the correct use of reserve prices and auctions, and demonstrate their commitment to genuinely market-based awards and corresponding consumer benefits.

Deposits / guarantees

The GSMA supports the RSPG view that appropriate deposits and guarantees can have a useful role in deterring trivial or uncommitted auction participation.

Licence duration

The GSMA supports the RSPG view that licences terms should be lengthened and consideration given to creating perpetual licences (as already exist in the UK) in order to promote ongoing investment and upgrades in mobile broadband networks.

Licence renewal

Mobile networks need to undergo regular upgrades, if they are to deliver the highest speeds and support the latest broadband services. Uncertainty over renewal towards the end of a licence term

creates considerable investment uncertainty, and threatens business continuity if the licence cannot be extended. The GSMA therefore advocates a more **investment-friendly approach**, giving licensees an option to renew, rather than have active spectrum put up for re-auction.

Existing licensees should have clarity and certainty on renewal in good time, and the amount of time between payment of fees and access to spectrum needs to be fair and not excessive.

Addressing the increasing complexity, uncertainty and risk associated with licence renewal becomes even more critical as the number of mobile bands increases, and points towards the need for a more effective approach.

The GSMA is also not convinced that any useful purpose is served by re-auctioning spectrum where it has already been assigned under a market mechanism, and where there is clear evidence that it continues to be used efficiently. Reasonable annual fees may assist in this regard.

The GSMA does not support the RSPG suggestion that renewal can be used as a tool to introduce competition. On the contrary, licensees forced to defend existing spectrum through auction can find that they face higher spectrum costs, as a result of predatory bidding by a possible new entrant taking advantage of an existing player's need for business continuity. A more credible approach is to facilitate a market for spectrum trading, so that market players can align their investment in spectrum licences with their investment in network.

Annual spectrum fees

The GSMA supports the RSPG view that charging methods require transparency and certainty, but believes greater discipline is required to ensure consistency between up-front fees and annual fees, so that total fees are reasonable, and double-charging is avoided.

There is a possible role for appropriate annual fees as an incentive to ensure ongoing efficient use of licences that are perpetual, or term-based but renewed on an administrative basis. Fees set on this basis should be at the minimum level to secure efficient use (i.e. to incentivise return or trade of an under-utilised licence), and should not be used as a revenue-raising instrument.

Mechanisms to enable spectrum refarming

The huge difference in prices between mobile spectrum and most other spectrum is evidence that wider spectrum market has not yet reached an equilibrium – further rebalancing of spectrum is still required to better match supply and demand across industries. The GSMA thinks consistent market pricing of spectrum across all users would help to incentivise this rebalancing, causing inefficient users to release spectrum for more efficient purposes. A normalisation of spectrum input costs for mobile operators would result in a more efficient mobile industry and greater benefits to customers.

Technology, service neutrality and standardisation

The GSMA supports the RSPG view on the importance of technology neutrality, and the increasing importance of promoting compliance to standards, in order to minimise the risk of interference, particularly where poor equipment design (for example, WiFi modems, cable TV modems) fails to provide adequate rejection of adjacent mobile frequencies.

Spectrum caps and set-asides

The GSMA supports the applications of reasonable caps, as long as they do not restrict operators from making reasonable trade-offs in the amount and mix of spectrum they require to operate efficient networks.

However, the GSMA does not support the concept of spectrum set-asides for possible new entrants, which it regards as discriminatory and inefficient. Historically, this practice has often resulted in failed new entry and/or premium spectrum lying fallow for many years.

Coverage obligations

The GSMA supports reasonable coverage obligations in order to maximise access to mobile broadband services and recognises that requirements may vary by Member State depending on geography and population distribution. Coverage obligations should not be changed once a licence has been issued, except by genuine mutual agreement.

Wholesale access obligations

Every regulator's priority should be to ensure effective competition among mobile network operators, and therefore parties requiring wholesale access should seek this through commercial negotiation with competing providers and on appropriate commercial terms. Changing mobile licences to incorporate a wholesale access obligation would be an infringement of the property right of licence, and contradictory to the predictable regulatory environment required to encourage investment.

Spectrum trading and leasing

The GSMA supports the promotion of spectrum trading and leasing across Europe. Further analysis is required to understand why there has been so little trading of mobile spectrum so far, and what needs to be done to encourage this. For example, uncertainty over whether existing licences can be re-secured on expiry may make operators reluctant to dispose of surplus spectrum, preferring to retain it as a contingency – administrative renewal or perpetual licences might mitigate this behaviour. Greater clarity on the roadmap for licensing new mobile spectrum (and increasing the overall supply of mobile spectrum) might enable operators to concentrate network investment on a preferred subset of bands and trade surplus frequencies.

Management of under-utilised spectrum

The GSMA welcomes the work of regulators in the spectrum inventory programme to identify underused spectrum. It recognises that a "use it or lose it" measure may be required as a "safety net", but it must be recognised that full and immediate utilisation of mobile spectrum is not always within the control of mobile operators, because it is contingent on capex budgets, network roll-out programmes and availability and take-up of suitable handsets.

The GSMA's preferred approach to addressing under-utilised spectrum would be for all spectrum (mobile and non-mobile) to be priced on a market basis and to be tradable, so that licensees not making efficient use of their spectrum would have an incentive and mechanism to transfer the spectrum to a more efficient use.

Spectrum sharing and pooling

The GSMA does not support the suggestion that sharing conditions could be considered as part of a licence award process, for example, to support rural coverage. A better approach is to continue with dedicated licences and allow licensees to consider opportunities to share on their merits and under commercial agreement and subject to a competition "backstop".

The exception may be 5G frequencies above 6GHz, where frequency reuse might be optimised through multi-licensing.

Further information

Further information on the GSMA's policy positions on auctions, licensing, award distortions and licence renewal is contained in the following publications:

- [GSMA Position Paper: Spectrum Auctions](#)
- [GSMA Position Paper: Spectrum Licensing](#)
- [GSMA Position Paper: Renewal of Spectrum Usage Rights](#)