

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)
) AU Docket No. 12-25
Mobility Fund Phase I Auction Scheduled for)
September 27, 2012)

COMMENTS OF AT&T

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Pursuant to the Public Notice released February 2, 2012,¹ AT&T Inc., on behalf of its wholly owned subsidiaries (“AT&T”), hereby comments on the competitive bidding procedures for Auction 901 and on certain program requirements.

I. INTRODUCTION AND SUMMARY

Auction 901 will be the first time that the Commission will conduct a reverse auction, and the auction will serve as a test bed from which the Commission can learn important lessons for the design of the Connect America Fund (“CAF”) Phase II and Mobility Fund Phase II auctions. For these reasons, it is important that the auction be carefully designed. First, it should be simple so that bidders can calculate appropriate bids and the Wireless Telecommunications Bureau and the Wireline Competition Bureau (“Bureaus”) can determine winners in a manner that is transparent to all interested parties. Second, it should be efficient, so that the limited funds will be distributed in a way that maximizes the number of unserved areas that will receive 3G or 4G mobile broadband services. Finally, and related to the second criterion, the auction design should minimize the opportunities for strategic behavior and gaming.

AT&T supports the use of a single-round, reverse auction for Phase I of the Mobility Fund, in which winning bids are selected so as to maximize the road miles covered by 3G or better wireless service without exceeding the \$300 million budget. We believe this basic design can be made relatively simple, so that wireless providers will be able to develop reasonable bids and the Bureaus will be able to determine the winners. Because there should be many bids competing against each other, it should not be necessary to set a reserve price or maximum bid amounts. While AT&T agrees with the Commission’s determination that the census block should be the minimum geographic building block for which support is provided, it believes that

¹ *Mobility Fund Phase I Auction Scheduled for September 27, 2012: Comment Sought on Competitive Bidding Procedures for Auction 901 and Certain Program Requirements*, Public Notice, AU Docket No. 12-25 (rel. Feb. 2, 2012) (“Public Notice”).

eligible census blocks should be aggregated into pre-defined groups at the census tract level.

This aggregation is necessary because census blocks on average are smaller than the coverage of a single cell tower and because separately auctioning off nearly 500,000 eligible unserved census blocks² will unnecessarily complicate the calculation of bids by prospective bidders and the determination of winners by the Bureaus.

AT&T disagrees with the Bureaus' preferred proposal that bidders be allowed to aggregate census blocks as they see fit and then submit bids on packages of census blocks within a Cellular Market Area ("CMA"). As discussed below, while theoretically an efficient approach, it is likely to have significant practical drawbacks. First, the methodology is likely to lead to significant numbers of partially overlapping bids. As a result, areas that, based on cost, should have received support, may not receive it because of a partially overlapping lower bid. Second, the lack of transparency into the method of selecting winners under this methodology may discourage wireless providers from participating in the auction – leading to reduced competition and higher prices. The possibility of providing support to multiple providers serving the same area also will likely cause bidders to raise their bids, because build-outs in areas where there is an additional supported provider are likely to be less profitable than where there is a sole supported provider. Moreover, user-defined bidding likely will lead to strategic behavior and gaming. In short, allowing user-defined aggregations is likely to complicate the development of bidding strategies, discourage some potential bidders, and encourage inefficient gaming. Although the Bureaus have proposed some measures to deal with these problems, the proposed remedies do not solve the problems completely and, in fact, create new problems.

² Public Notice at 5, ¶11.

Instead, AT&T favors aggregating all eligible census blocks within a census tract, and then permitting wireless providers to bid for the right to deploy 3G or 4G services to at least 75 percent of the road miles in the eligible census blocks within that census tract. This aggregation will allow an easy and transparent determination of winners, and, because census tracts are large enough, they should internalize the majority of geographic complementarities. Moreover, this approach should simplify the bidding calculations by providers, in part because there will be less gaming and strategic bidding from competing bidders.

AT&T also supports the Bureaus' proposal that they should establish default penalties for both auction defaults and performance defaults, though it believes that the performance default penalty as proposed is too severe. With respect to demonstrating reasonable comparability of rates, we propose below a simple method for providers to demonstrate that the rates they charge for services in supported areas are reasonably comparable to those in urban areas.

II. DISCUSSION

Auction 901 faces significant challenges. It will be the first time that the Commission will use an auction to allocate universal service support, and it will be the first time that the Commission will use a reverse auction. Moreover, because census blocks will be the minimum geographic building block for which support is provided and, according to the Public Notice, there are over 490,000 unserved census blocks, this auction has the potential to involve incredibly complex bid submissions. At the same time, Auction 901 can provide important lessons that the Commission and Bureaus can use in designing the CAF Phase II and Mobility Fund Phase II auctions. Accordingly, it is critical that Auction 901 be designed so that it can succeed.

In order to be successful, AT&T believes that the auction must satisfy at least three criteria. First, the design must be simple enough that mobile providers can develop reasonable

bids that reflect their expected incremental costs and revenues and that the Bureaus can easily and transparently identify the winners. Second, the auction should result in an efficient allocation of limited funds consistent with the goal of expanding mobile wireless broadband deployment. Third, the auction design should minimize the opportunities for gaming. Given the unprecedented task confronting the Bureaus, it seems prudent to err on the side of simplicity and practicability so as to maximize the chances that the auction will succeed.

A. Auction Design

AT&T supports the Bureaus' proposal to use a single round, reverse auction for Phase I of the Mobility Fund because it is relatively simple and fast. AT&T agrees with the Bureaus' conclusion that, assuming an appropriate auction design is employed, bid decisions will depend on a particular provider's own assessment of its cost structure, existing infrastructure, attitude towards risk, and other provider-specific considerations, which means that multiple bidding rounds should not be necessary for providers to make an informed bid. Moreover, because every bidder will compete against all other bidders, regardless of the area for which they are submitting a bid, multiple rounds are not necessary to ensure that rivalry is recognized, bids are competitive, and the result is efficient. If a bidder attempts to inflate its bid, it runs a risk that it will not receive otherwise sufficient support.

AT&T also agrees that some aggregation of census blocks is necessary, however. As the Bureaus note, the average census block is smaller than the coverage of a single cell tower. This means that there will be strong geographic complementarities³ between adjacent census blocks. These complementarities arise from geographic economies of scale and scope that make it cheaper on a per-unit basis to serve multiple adjacent census blocks than a single census block.

³ As Cramton, *et al.* explain, “[i]tems are complements when a set of items has a greater utility than the sum of the utilities for the individual items” Peter Cramton, Yoav Shoham & Richard Steinberg, *Introduction to Combinatorial Auctions*, in COMBINATORIAL AUCTIONS 4 (Peter Cramton, Yoav Shoham & Richard Steinberg, eds., 2006).

If the Bureaus were to conduct a reverse auction in which providers had to offer separate bids for each individual census block, this would not only complicate providers' calculation of bids by requiring them to make many more individual bids, but it would create a significant exposure problem. Specifically, if a provider is bidding on individual adjacent census blocks that exhibit geographic economies of scale and scope, there is a possibility that it will win some but not all of those census blocks. In that event, the provider faces the difficult choice of submitting a higher bid that reflects the higher stand-alone cost of extending its network to a single census block or submitting a lower bid that reflects the potential economies of scale and scope of building to adjacent blocks, but which depends on its winning all the blocks.⁴ This exposure problem not only complicates the bidder's calculation, but it also can have significant adverse consequences for auction efficiency.⁵ As discussed below, AT&T believes that the simplest and least problematic way to aggregate eligible census blocks is to aggregate all eligible census blocks within a census tract and then allow providers to bid for support for specific census tracts.

1. Bidder-Defined Aggregations

The Bureaus propose to allow individual bidders to aggregate census blocks and submit all-or-nothing package bids on those aggregations.⁶ Under this proposal, a bidder could specify a set of census blocks to be covered and a total amount of support needed to cover the road miles in the eligible census blocks. The Public Notice states that "the auction system would consider all the bids submitted and determine which combination of bids could be awarded so as to cover

⁴ Moreover, if the bidder submitted a bid that reflected the actual cost of building a single cell tower, this would result in a higher cost per road mile if one counted only the road miles in a single census block, compared with a bid that reflected all the road miles in adjacent blocks that would be reached by the tower.

⁵ See Peter Cramton, Spectrum Design 6 (August 11, 2009), <http://www.cramton.umd.edu/papers/spectrum/>.

⁶ Public Notice at 10, ¶¶30-31.

as many eligible road miles as possible.”⁷ In order to simplify the process of determining the winners, the Bureaus propose to require that all census blocks included in a package bid be within a single CMA, and it further proposes to limit each bidder to a maximum of three package bids per CMA.⁸

AT&T has significant concerns with this proposal. First, it is not clear exactly what optimization algorithm the Bureaus plan to use to determine winners. Without access to the algorithm, commenters cannot be sure whether the algorithm was executed properly so that it works or that it achieves its aims. Thus, it is critical that the Bureaus make the actual optimization algorithm available to commenters so that they can evaluate it before they bid. In addition, it is important for the Bureaus, after winners are selected, to publish submitted bids so that bidders and other interested parties can run the bids through the Bureaus’ ranking algorithms to assure themselves that the proper winning bids were selected.

Second, the Bureaus’ proposal to allow bidders to define their own packages of eligible census blocks significantly complicates both the development of bids and the determination of the winners. In fact, for some combinatorial auctions, there exists no algorithm that can determine the winning bid. Although the Bureaus propose various measures to simplify the process, such as limiting the number of permissible packages per CMA to three, these measures do not completely solve the problems, and they create new problems.

Third, the fundamental problem with allowing package bidding is that it likely will result in numerous partially overlapping bids. This complicates the optimization problem. More importantly, it is likely to result in certain eligible areas that should receive support based on cost, not receiving it because of a partially overlapping lower bid. Again, although the Bureaus

⁷ *Id.*, at 11, ¶34.

⁸ *Id.*, at 10-11, ¶32.

propose a way to address this problem, their proposal does not fully solve the problem for reasons we discuss below.

Finally, the Bureaus' proposal, and the consequent likelihood of partially overlapping bids, creates incentives for strategic bidding and inefficient gaming that is likely to result in an inefficient distribution of support. We explain these concerns in more detail below.

Package Bidding and Combinatorial Auctions.

Where items to be auctioned exhibit significant complementarities, independently auctioning the items may lead to inefficiencies.⁹ For this reason, there has been increasing interest in combinatorial auctions, in which bidders can form packages of bids that take into account complementarities.¹⁰ Unfortunately, package bidding introduces significant complexity into auction design. To illustrate, if there are n items to be auctioned and no constraints on the kinds of package bids that bidders can submit, then there are a possible $2^n - 1$ combinations of bids. Moreover, as n grows large, there may be no algorithm that can determine the winning bid.¹¹ Assuming that there are 491,000 unserved census blocks in 603 CMAs, this works out to an average of 815 unserved census blocks in each CMA (though some CMAs will have many more than this figure).¹² Thus, assuming no constraints on the possible number of package bids, there would be $2^{815} - 1$ theoretically possible bid combinations in each CMA – an unimaginably large number.

Because of this complexity, those designing auctions frequently attempt to constrain the number of permissible combinations in various ways, but this can reduce efficiency and create

⁹ See, e.g., Peter Cramton, Spectrum Design, *supra* note 5, at 6.

¹⁰ See generally, Crampton, *et al.*, *supra* note 3, at 4.

¹¹ See generally Daniel Lehmann, Rudolf Muller & Tuomas Sandholm, *The Winner Determination Problem in COMBINATORIAL AUCTIONS* 297-317 (Peter Cramton, Yoav Shoham & Richard Steinberg, eds., 2006).

¹² Public Notice at 5, ¶11 and at 11, ¶32.

new problems. The Bureaus, clearly aware of the complexity of unconstrained package bidding, attempt to limit the number of package bids, by requiring that the eligible census blocks included in a package bid be from the same CMA, and by limiting bidders to a maximum of three package bids per CMA. As discussed below, this simplification does not fully solve the problem, and it creates new ones.

The Problem of Partially Overlapping Bids

By allowing bidders to combine eligible census blocks into package bids, the Bureaus create the likelihood, if not certainty, of numerous partially overlapping bids.¹³ Partially overlapping bids will create serious problems under any algorithm the Bureaus adopt. Depending on the rules adopted (including the rules determining when multiple providers will receive support for the same census block), these partially overlapping bids will result in certain census blocks not receiving support even though they would be relatively inexpensive to build out. Moreover, this approach is likely to lead to various types of strategic behavior and gaming, which will undermine the efficiency of the auction. We discuss each of these concerns in turn.

The most obvious problem with a bidder-defined approach to aggregation is that eligible census blocks that should receive support based on the cost of deploying mobile wireless broadband may not receive such funding, because they were included in a package bid that partially overlapped another lower package bid. This can be seen by the following simple example. Suppose that in CMA 1, there are three eligible census blocks, A, B, and C, each with 100 road miles. Assume that Bidder 1 would be willing to deploy mobile broadband to *either* A

¹³ Unserved census blocks vary in population and road density. Because the auction design selected by the Commission seeks to maximize the number of road miles for each dollar of support, wireless providers will have an incentive to bid on unserved census blocks where the net present value of the difference between expected costs and expected revenues is smallest. Thus, there are likely to be multiple competing bids for the lowest-cost, highest density census blocks. Because of differences in wireless provider's license areas and existing network buildouts, however, providers are unlikely to offer bids on identical packages of census blocks, thus creating the partial overlap problem.

or B alone for \$1000 per census block (or \$10 per mile) or to deploy mobile broadband to *both* A and B for \$1800 (or \$9 per mile). Similarly, assume that Bidder 2 would be willing to deploy mobile broadband in *either* B or C alone for \$1100 per census block (or \$11 per mile) or to deploy mobile broadband to *both* B and C for \$2000 (or \$10 per mile). Further assume that the cut-off for support, as determined by the budget constraint, is \$12 per mile. Assume that Bidder 1 submits a package bid of \$1800 to serve A and B, while Bidder 2 submits a package bid of \$2000 for B and C. If the rule is that only 1 provider can be funded for any eligible census block, then census block C would receive no funding despite the fact that Bidder 2 would have been willing to serve it for less than the cut-off level of support of \$12 per mile.¹⁴

The possibility of partial overlaps under bidder-defined aggregations creates a second serious problem – that the auction design would encourage strategic behavior and gaming. In particular, bidders would have an incentive to bid for the smallest, least costly areas, even though geographic economies of scale and scope would justify broader bids.

In theory, the problems discussed above could be mitigated by allowing bidders to submit many, many alternative package bids that included smaller and larger aggregations of eligible census blocks. But this would complicate enormously the calculation of bids and the determination of winners, while not resolving the problem that bids for smaller, low-cost areas would likely dominate bids for larger areas that include both lower-cost and higher-cost census blocks.

¹⁴ While Bidder 2 could have won census block C if it had also submitted a bid for this singleton block at a price of \$1100, it is quite likely that the proposed limit of three bids per CMA would make it impossible for the bidder to submit such severely targeted bids, and remain a major factor in the auction. Indeed, in this example, if it submitted such a bid, it would have used two out of its quota of three bids just dealing with census blocks B and C in this CMA – leaving it with only one additional bid to address the rest of the hundreds of census blocks in the CMA.

The Bureau's Proposed Solutions

The Bureaus attempt to deal with the complexity problem by limiting packages to census blocks within a CMA and by limiting the maximum number of package bids to three per CMA. But this creates several new problems. First, limiting the number of bids to three per CMA, while the number of eligible census blocks in a CMA is on average 815, means that bidders will be severely constrained in the way they can aggregate census blocks and are unlikely to be able to package bids in a manner that reflects geographic cost complementarities across a full range of census block combinations. This severely undermines the efficiency rationale for holding a combinatorial auction. Moreover, due to gaming, the Bureaus' proposed limit on the number of bids per CMA would likely prevent bidders from offering alternative bids to address the possibility of competing overlapping bids. Instead, bidders are likely to offer bids on small, low-cost areas, involving just a few census blocks, and winning bids are unlikely to take advantage of possibly substantial geographic complementarities. This is also unlikely to result in an efficient distribution of support.

To address the problem of eligible areas not receiving support due to partially overlapping bids, the Bureaus propose to support more than one provider per eligible census block if it increases the total number of road miles served.¹⁵ Unfortunately, this proposed remedy would not completely solve the problem of partially overlapping bids, and it would create a new problem. The first example again illustrates why it would not solve the partial overlap problem. Again we assume that there are three unserved census blocks, A, B, and C, each with 100 road miles, and that Bidder 1 bids \$1800 to serve blocks A and B, while Bidder 2 bids \$2000 to serve B and C. Suppose that a third provider, Bidder 3, bid \$2400 on a census

¹⁵ Public Notice at 11, ¶34.

block in a different CMA that contains 200 road miles (or a bid of \$12 per road mile). This bid would be lower (in terms of dollars of support per road mile) than paying Bidder 2 \$2000 for building out to census blocks B and C, since the incremental cost of covering census block C would be \$2000 or \$20 per mile. If the cut-off threshold were \$12, Bidder 3 would win support and Bidder 2's bid would be rejected. This result is clearly inefficient, however, as Bidder 2, but for the package bid, would have been willing to build out only to census block C for \$1100 (or \$11 per road mile).

In addition, the Bureaus' proposed exception to the one-supported provider rule will introduce additional uncertainty into the calculation of bids and is likely to result in higher bids. The reason for this is that the revenues that a wireless provider expects to receive from providing wireless broadband service to an unserved census block is clearly a central factor affecting its bid, since the more revenue it expects to receive, the less support it will require. If there is the possibility that a second provider will receive support in the same census blocks on which a wireless provider bids, that will reduce the provider's expected revenues (since it may face more competition) and will cause it to raise its bid.

The Bureaus again recognize this potential problem and ask whether they should allow wireless providers to submit bids that are contingent on the "overlap being less than some percentage of the total road miles associated with their package."¹⁶ Unfortunately, this modification would only complicate the already complex calculations that providers must perform in developing their bids. Moreover, it suffers from two additional weaknesses. First, the raw number of road miles may not be the best proxy for measuring the effect on revenues. Rather, providers will be more concerned about the percentage of households in their package

¹⁶ *Id.*, at 11, ¶35.

bid where they are likely to face competition. Furthermore, because different road miles are likely to experience very different amounts of traffic, just expressing a threshold overlap in terms of a percentage of total road miles is inadequate. Overlap on lightly traveled roads will be of far less a concern than overlap on heavily traveled roads. Second, depending on how the threshold is set, the Bureaus' proposal would either significantly complicate the identification of winners or exacerbate the exposure problem. If the threshold for contingent bids is set too low, it would capture the majority of overlaps and likely create a situation where a large percentage of bids are contingent. This would seriously complicate both the development of bids by providers and the determination of winners by the Bureaus. If, on the other hand, the threshold is set too high, then it would not eliminate the exposure problem, since there would remain a risk that the winning bidder would face competition from another supported provider if the overlap is less than the designated percentage. Finally, it is not clear how helpful the option of making a contingent bid would be given the limit of three bids per CMA.

Increasing the Minimum Coverage Requirement

The Public Notice seeks comment on whether it should require recipients of support, under a bidder-defined approach to aggregation, to meet a coverage requirement of 100 percent (or 95 percent) of road miles associated with the blocks to which support is allocated. AT&T believes that a requirement of 100 percent coverage is clearly unrealistic. Even in urban and suburban areas that already are fully built out, there are likely to be gaps in coverage on roads due to geological formations or other obstructions that limit coverage. Requiring wireless providers to fill in all gaps would raise the cost of deployment enormously and reduce significantly the amount of unserved areas that could be addressed with the \$300 million dollar fund. Moreover, it could demand a quality of service in supported rural areas that exceeds that

of urban and suburban areas. Such a result clearly would go beyond the statute's requirement of reasonable comparability.¹⁷ Thus, if the Bureaus decide to adopt a bidder-defined approach to aggregation and increase the coverage requirement above 75 percent, AT&T believes that they should raise the coverage requirement to no higher than 90 percent of road miles contained in the supported census blocks.

In summary, although the idea of allowing bidders to aggregate eligible census blocks and submit package bids is superficially attractive, the likelihood of partially overlapping bids creates two serious practical problems. First, eligible areas that, based on their cost and revenue characteristics, should receive support may not receive it because of partially overlapping lower bids. Second, allowing bidders to define aggregations introduces the possibility of gaming, which will complicate the calculation of bids, possibly discourage some bidders from participating, and likely result in bids for narrower, relatively low-cost eligible areas beating out bids for larger areas. Although the Bureaus appear to have recognized the first problem, the remedial measures they propose do not solve it.

As a result of these multiple issues, developing bids is likely to be significantly more complicated and the results of the auction are likely to be less efficient. Given these problems, it appears too risky to introduce this aggregation method in the Commission's first reverse auction. Should the Bureaus, despite these problems, decide to adopt the bidder-defined approach to aggregation, they should not adopt a coverage requirement in excess of 90 percent of road miles within the supported census blocks.

¹⁷ See 47 U.S.C. § 254(b)(3).

2. Predefined Aggregations

As an alternative to bidder-defined aggregations, the Public Notice seeks comment on a proposal under which all eligible census blocks within a census tract would be grouped together for purposes of bidding, and a provider seeking support would offer bids for particular census tracts based on the dollars of support per road mile that it would require to serve the eligible census blocks within a particular census tract.¹⁸ According to the Public Notice, the auction would assign support “equal to the per-road mile rate of their bid multiplied by the number of road miles associated with the eligible census blocks within the tract.”¹⁹ However, if a winning bidder is required to build out to 75 percent of the road miles in the eligible census blocks, the actual amount of support distributed would depend on the number of road miles that the recipient actually covered.²⁰ In the case of tied bids for a particular census tract, the Public Notice proposes that the tie be resolved by assigning a random number to each bid and then awarding the support to the higher number.

This alternative would be more transparent and less subject to gaming, and it should result in a distribution of support funds that is likely to be more efficient than that produced by a bidder-defined aggregation auction. As the Bureaus recognize, this approach would lend itself to a “very simple method of determining winning bids.”²¹ In addition, because each census tract would be independently auctioned, it would also eliminate the problem of partially overlapping bids. This would therefore eliminate situations where areas that should have received support do not because of partially overlapping lower bids. Further, because bids would have to be for deploying service to at least 75 percent of all road miles in the complete collection of unserved

¹⁸ *Id.*, at 11-12, ¶¶38-39.

¹⁹ *Id.*, at 12, ¶39.

²⁰ *Id.*, at nn.48 & 50.

²¹ *Id.*, at 12.

census blocks in the tract, this would limit the incentives and opportunities for gaming. Finally, because the areas being auctioned are census tracts, which are significantly larger than census blocks, it should enable bidders to internalize the majority of geographic complementarities in determining their bids. Given the size of the census tracts, AT&T does not believe that there would be a significant exposure problem if a provider wished to bid on several adjacent census tracts, since the majority of geographic complementarities should be able to be captured within a single census tract.

The Bureaus also seek comment on whether to allow a wireless provider to submit a package bid consisting of multiple census tracts and whether the packages should be limited to a bid on three contiguous census tracts. As stated above, for this first reverse auction, the Commission should err on the side of simplicity, which counsels in favor of the Bureaus not permitting package bidding of census tracts. By allowing package bidding of census tracts, the Bureaus would be importing some of the same problems we identify above in connection with bidder-defined aggregations. For example, because of the possibility of partially overlapping bids, a census tract that, based on cost, should have received support may not receive it, due to the presence of a lower partially-overlapping bid. Similarly, the possibility of partially overlapping bids will create an incentive for providers to engage in strategic bidding, such as bidding on the smallest, least cost census tracts, even though it might be more economical to build out to a larger area using a package bid. It would be prudent for the Bureaus to keep the Mobility Fund Phase I auction design as simple as possible and, based on its experience with this first auction, make any adjustments that the Commission deems necessary prior to commencing the Mobility Fund Phase II auction.

AT&T recommends one minor modification to the predefined aggregation proposal contained in the Public Notice, however. AT&T believes that the proposal to budget support based on the total road miles in an eligible census block but to disburse support on the basis of the actual percentage of road miles covered may result in monies that are unspent or not spent as productively as the Commission might want. Because the cost of deploying broadband to the most remote parts of a census tract are generally far higher than the cost of deploying in the more densely populated parts of a census tract, it is unlikely that providers ever will find it economical to build out to 100 percent of road miles in their award area. Thus, some of the \$300 million budgeted for the Phase I Mobility Fund is likely to go unused. Moreover, because the amount of support will be based on the road miles actually covered, distribution of support is likely to be delayed.

Instead, AT&T recommends that providers offer a bid consisting of a fixed amount of support for each eligible census tract. The Bureaus' auction algorithm would then simply divide this fixed amount of support by the total road miles within the eligible census blocks in the census tract and compute a per-mile amount of support. The competing bids would then be ranked based on the per-mile amount of support. Winners would then be required to meet the 75 percent coverage requirement. If the provider wanted to extend its deployment beyond the minimum requirement, it could do so, but it would not receive additional support. This approach would be considerably simpler than that contained in the Public Notice, and it would mean that all \$300 million in support will be both allocated and distributed. Furthermore, while this methodology may result in supported census blocks receiving less than 100 percent coverage, funds will not be wasted. Because providers will calculate their bids with the expectation that they need only cover 75 percent of the road miles, these bids will be lower than if they

anticipated covering 100 percent of the road miles. Therefore, there will be more census blocks that receive support. AT&T submits that it may be more socially valuable for a larger number of census blocks to gain 75 percent coverage than for a smaller number to gain coverage that exceeds 75 percent.

3. Milgrom-Eilet Proposal

The Public Notice also seeks comment on a proposal by Paul Milgrom and Assaf Eilet that was submitted on behalf of ViaSat in the broader *Connect America Fund* proceeding and not in the Mobility Fund context.²² Under the Milgrom-Eilet proposal, “[e]ach bid would specify a set of census blocks, a fixed amount of support to be paid if any of the census blocks identified in the bid are selected for an award, and a separate individual amount of support specific to each census block in the package.”²³ While this proposal may reflect the cost characteristics of a fixed satellite broadband provider,²⁴ it does not reflect the way that terrestrial mobile wireless providers incur costs as they build out 3G or 4G networks, and it fails to address the cost complementarities among adjacent census blocks that are characteristic of terrestrial wireless providers. That this proposal does not reflect the cost characteristics of terrestrial wireless providers or the geographic complementarities associated with terrestrial wireless deployment is not surprising, since the proposal was not designed for the Mobility Fund.

Mobile wireless providers seeking to build out their 3G or 4G networks will have to incur fixed costs associated with building (or upgrading) towers and backhaul, but they face no cost

²² *Id.*, at 13.

²³ *Id.*, at 13 (footnote omitted).

²⁴ A fixed satellite broadband provider incurs a fixed cost for launching a satellite and then a separate fixed cost for installing equipment, such as a satellite receiver and modem, at a customer’s location. Given these cost characteristics, a satellite provider would submit a bid that reflects the cost of the satellite and a separate bid for each census block that reflects its estimate of the number of households in the census block that would subscribe to the satellite service.

that is comparable to the cost of launching a satellite that can cover most or all of the United States. As a result, if the Milgrom-Eilet proposal were adopted, AT&T expects that most wireless providers would specify a close-to-zero price for the overall fixed cost and then a separate significant positive bid that reflects nearly the full stand-alone cost of building out to a particular census block. As a result, providers will view this auction as similar or identical to auctioning off individual census blocks. As the Bureaus recognize, auctioning off individual census blocks is unacceptable, both because it would involve so many items that must be auctioned, and because it would create a significant exposure problem due to complementarities among adjacent census blocks.

Thus, while this auction design might make sense if the Bureaus were conducting a reverse auction for satellite broadband service, it makes little sense for an auction for terrestrial mobile wireless broadband service.

B. Procedural and Other Issues

1. Default Payments

In the Public Notice, the Bureaus propose separate default payments for an “auction default” and a “performance default.”²⁵ AT&T supports the Bureaus’ proposal for an auction default penalty, but believes that the Bureaus’ proposal for a “performance default” is too severe and needs to be modified.

Where a bidder selected by the auction mechanism subsequently fails to become authorized to receive support, the Bureaus propose to assess a default auction penalty equal to 5 percent of the total defaulted bid. AT&T supports this proposal, as necessary to ensure the integrity of the auction process. We remain concerned, however, that, if the penalty percentage

²⁵ Public Notice at 16-17.

is too low, it will not serve as a sufficient deterrent. For that reason, the Bureaus may want to consider adopting a higher figure, such as 10 percent. The Commission should evaluate whether, and how many, auction defaults occur in this first phase of the Mobility Fund and make appropriate adjustments to the auction default penalty percentage in Phase II.

AT&T also supports the Bureaus' proposal to require wireless providers, prior to bidding, to furnish a bond or place funds on deposit with the Commission. AT&T prefers that that Bureaus require wireless providers, prior to bidding, to post a bond rather than make a deposit with the Commission, however. Bonds, unlike cash deposits, are used in the normal course of business and can be issued quickly and easily, and with relatively little administrative expense. AT&T further agrees that, provided the amount of the bond or deposit is not revealed to other bidders, the bond or deposit should be a function of the provider's bid. Additionally, AT&T suggests that the Bureaus disqualify a bidder from receiving *any* Mobility Fund Phase I support if that bidder defaults with respect to any of its accepted bids. For example, if the Commission selects three bids by one provider and that provider defaults on one of the three bids by not filing a long-form application for that particular bid, the Commission should reject the winning bidder's other two bids and assess auction default penalties on all three disqualified bids.

Where a winning bidder becomes authorized to receive support and actually receives it, but subsequently fails to satisfy its coverage requirements, other service requirements, or any other condition of the Mobility Fund, the Bureaus propose to assess a default penalty equal to 10 percent of the total level of support for which the bidder is eligible.²⁶ The Bureaus further propose that the recipient be "required to repay the Mobility Fund all of the support it has received and, depending on the circumstances involved, could be disqualified from receiving any

²⁶ *Id.*, at 17.

additional Mobility Fund or other USF support.”²⁷ AT&T believes that this proposal is too severe and insufficiently nuanced and that it would unnecessarily discourage providers from bidding in the auction.

There may be many reasons why a winning bidder fails to meet one or more of the performance requirements. For example, there may be unexpected zoning problems associated with building required towers or constructing backhaul that cause the provider to miss the two-year or three-year build out deadline. Or, there may be unexpected problems associated with the terrain that makes it difficult for the provider to meet the coverage requirements. While these examples would constitute technical defaults, they do not justify a penalty that requires the provider to pay 10 percent of the total level of support *and* to repay all support that it has received from the Mobility Fund. By adopting these harsh penalties, the Bureaus are likely to discourage participation in the auction.

AT&T believes that it would be far more reasonable to assess a performance default penalty equal to some percentage of the award associated with the portion of the total build-out and coverage obligation that the provider failed to fulfill. For example, suppose that the Commission awards \$10 per road mile to a bidder that has committed to deploy 3G wireless service covering 75 miles of the 100 miles in an eligible census block, but by the two-year deadline, it has deployed 3G wireless service to only 50 of those 75 miles due to reasons entirely within its own control. Because the provider has fulfilled its obligation for 50 of its miles, it should receive the \$500 award associated with those miles. But, in addition, the Commission should impose a performance default penalty of say 50 percent of the amount that the provider would have received for covering the remaining 25 miles. In this example, the Commission’s

²⁷ *Id.*

penalty would be \$125, so that the net amount of Mobility Fund Phase I support that the provider will receive for covering 50 of the 100 unserved road miles in that census block will be \$375 (\$500-\$125).

2. Reasonably Comparable Rates

Noting that Mobility Fund Phase I recipients must certify that they offer service in supported areas at “consumer rates that are within a reasonable range of rates for similar service plans offered . . . in urban areas,” the Public Notice seeks comment on how recipients could demonstrate compliance with this rate certification requirement.²⁸ The Bureaus propose that a recipient could demonstrate compliance by showing that each of its service plans for the supported area is “substantially similar” to a service plan offered by at least one mobile wireless service provider in an urban area and is offered at a rate no higher than the urban plan.²⁹ They seek comment on that proposal and on whether it should require such a showing for every rate plan that the recipient offers in the supported area.

AT&T believes a few simple rules could simplify the certification requirement. First, a recipient should be able to demonstrate compliance with this requirement if it certifies that it offers nationwide rate plans and that the rate plans it offers in the supported area are the same as the nationwide plans it offers in urban areas. Such a certification should also be acceptable if a recipient offers a state-wide rate plan (that includes an urban area) and the rate plans offered in the supported areas in that state are the same as the state-wide rate plans that it offers in urban areas. Finally a provider that does not serve an urban area should be able to satisfy the reasonable comparability requirement by certifying that the rates it offers for plans in supported

²⁸ *Id.*, at 18.

²⁹ *Id.*

areas are no higher than, or fall within a certain range of, the rates offered by another carrier that offers a nationwide or statewide plan to urban areas.

III. SUMMARY AND CONCLUSION

AT&T supports the Bureaus' proposal to use a single-round reverse auction to distribute Mobility Phase I support, and it believes that the experience the Bureaus gain in implementing this auction could provide useful lessons that could be used in the design of the CAF Phase II and Mobility Phase II auctions. AT&T has significant concerns with the Bureaus' proposal to allow applicants to aggregate eligible census blocks and then submit package bids, however. Because such an approach is likely to result in numerous partially overlapping bids, it seems likely that areas that should receive support will not receive it and that strategic behavior and gaming will result in winning bids for inefficiently small areas. A far simpler approach would be to have the Bureaus aggregate all the eligible census blocks within census tracts and have applicant bid for the right to deploy mobile broadband service in specific census tracts. This approach would eliminate the problem of partially overlapping bids and minimize the opportunities for gaming. Moreover, because of the size of census tracts, the issue of geographic complementarities and the associated exposure problem should be minimized.

With respect to various procedural issues identified in the Public Notice, AT&T agrees that auction default and performance default penalties are needed to protect the integrity of the auction process, but it believes that the proposal for performance default penalties requires modification. AT&T also believes that a relatively simple test can be developed that will permit

auction winners to certify that their rates in supported areas are reasonable comparable to those in urban areas.

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