



3219 Coliseum Street
New Orleans, LA 70115
(504) 715-4521
MoiseAdvisory.com

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VIA ELECTRONIC FILING

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
Office of the Secretary
445 12th Street, SW
Washington, DC 20554

Re: Ex Parte Letter, *Expanding Flexible Use of the 3.7 GHz to 4.2 GHz Band*,
GN Docket No. 18-122

Dear Ms. Dortch:

Moise Advisory hereby responds to the *Ex Parte* Letter filed by the C-Band Alliance, in which the C-Band Alliance submitted a White Paper by Auctionomics entitled ***FUEL for 5G: Flexible Use and Efficient Licensing***.¹ In the White Paper, Auctionomics states that in order to license the reallocated C-Band spectrum fairly, all bidders must be treated equally. However, it is clear that the FUEL design segregates bidders into distinct classes, large and small, and awards special protection and strategies to those in the larger class. The dual-class bidding system suggests unfairness in its definition and uses multiple methods to place small bidders at a decided disadvantage to their larger counterparts. For the reasons stated herein, Moise Advisory opposes the proposed FUEL auction design.

FUEL Creates Classes of Bidders. The bifurcation begins in the description of the Coordination round with “[a] Coordination round bid that is smaller (in total MHz-Pop) than some pre-defined size limit will be treated as a set of EA-based package bids, each of which could win independently of the other EA-based packages in the same bid, while a bid at or above this size limit may, at the bidder’s option, be treated as an all-or-nothing package bid.”² Auctionomics suggests a reasonable approach is to set this limit as the MHz-pop equivalent of two national licenses.³ In practice, this places AT&T, T-Mobile, Sprint and Verizon as one class of bidders and all other industry and auction participants as another.

¹ Letter from Bill Tolpegin, Chief Executive Officer, C-Band Alliance, to Marlene Dortch, Secretary, Federal Communications Commission, GN Docket No. 18-122 (filed June 12, 2019) (“CBA June 12, 2019 *Ex Parte*”).

² *Id.* at 6.

³ *Id.* at fn. 3.

FUEL Supplies Large Bidders with Additional Tools. Members of the larger bid class are granted extra benefits as soon as they are defined. Even in the optional Coordination round, the FUEL design provides larger bidders the option of packaging its bid as all-or-nothing. Smaller bidders do not have this option—their bids are treated as independent EA-based package bids.

EA Bid Groups Do Not Protect Small Bidders. The Economic Area (EA) service areas are built to describe large areas of economic activity, not to define operational areas of smaller wireless carriers. Consequently, those footprints often fall into multiple EAs. In Auction 1002, for example, Cellular South Licenses, LLC purchased licenses in six PEAs that fell into five different EAs. The case is not an isolated one. Moise Advisory estimates that 24 of the 50 successful bidders in Auction 1002 were established small wireless operators prior to the auction and required more than one Partial Economic Area (PEA) to meet their network's needs. FUEL protects larger bidders with an all-or-nothing option. Smaller bidders are not afforded this protection.

FUEL Solves Exposure Problem for Large Bidders, But Not for Small. The impact of differences in bidding rights is highlighted by Auctionomics when it describes an objective of the proposed auction. "... the FUEL design eliminates the exposure problem—that is, it precludes the possibility that a bidder might win too little spectrum in an area for a viable network, or too few areas for a viable business plan."⁴ This statement may be true for larger bidders who can tie all their bids together, but is not accurate for many smaller bidders who are forced to cobble together a footprint from multiple PEAs and across EA groups.

FUEL May Increase Exposure Problem for Small Bidders. The FUEL design may actually increase the exposure problem for small bidders over other auction formats previously used by the FCC. The Simultaneous Multiple Round (SMR) auction and related clock designs offer bidders many rounds to assess their competitive position and adjust their strategy. They allow bidders to view their footprint as a whole, rather than a grouping of EAs. Small FUEL bidders must accept that they may win only a subset of EA groupings with no option for exit during the auction—the very definition of the exposure problem Auctionomics identified.

FUEL May Reveal Small Bidders' Identity. In its auctions, the FCC has gone to great lengths to foster and protect competition through anonymous bidding. FUEL's Coordination round has the opposite effect. Many, if not all, of the established wireless operators who qualify as small bidders have well defined footprints that can be easily ascertained by prior auction purchases or ULS searches. Though optional, Auctionomics believes that participation is beneficial, if not necessary, stating "[s]ome bidders, especially smaller ones, may wish to use the Coordination round to advertise their preferred packages (but not their final bid prices) to enable and encourage other bidders to bid for

⁴ *Id.* at 4.

packages that fits well with those. Well-fitting sets of packages have a better chance of becoming winning in the auction.”⁵ Auctionomics illustrated the importance of participating in the Coordination round in the paper’s Appendix. In it, the only reason Regional Bidder Y was successful was because its desire for a license in Area C is known.⁶

However, by participating in the Coordination round, identities of small bidders may be ascertained by matching bidding groups with established footprints. This differs from large bidders that cast a wide-scale bid that offers no geographic signatures.

If the identities of smaller bidders are revealed or even thinly masked, large bidders have a decided advantage. They can assess their competitor’s financial strength to decide pricing and their prior auction bidding history to decide quantity. More darkly, knowing the identity of some participants could allow larger bidders to inflict punitive measures resulting from operational disputes or fierce competition. Bids could be used to put specific competitors at a strategic disadvantage with the overriding goal of forcing them to exit the industry or materially alter their footprint through a sale.

Combinatorial Bidding Offers Large Bidders More Options. The Appendix of the White Paper provides a simple example designed to illustrate how the FUEL design enables and encourages effective competition between small and large bidders.⁷ In order for the example to reach its desired outcome, Regional Bidder Y’s requested markets and quantity must be revealed to National Bidder X. In addition, neither company’s budget nor valuation of the three markets can change during the example. National Bidder X has a budget of \$1680 and Regional Bidder Y has a budget of \$50.

Once the bid packages are revealed, National Bidder X knows that it has no competition in 11 of the 12 licenses and will receive those licenses at the reserve price of \$830, or \$830 under budget. National Bidder X has the option of offering a price decrement for the contested license in addition to that offered in the base price. Regional Bidder Y only has only one pricing option. Even in this limited example, the FUEL design provides the large bidder more price discovery, better understanding of how and where its budget will be spent and more information about how it can re-allocate capital to better achieve its strategic goals than is afforded the small bidder. The FUEL design systemically provides large bidders a more robust set of strategic options.

Discovery in Coordination Round Disproportionately Benefits Large Bidders. In the example, Regional Bidder Y is successful only because National Bidder X offers a price decrement. Absent that reduction, Regional Bidder Y must offer more for its single license than National Bidder X’s bid for all its licenses to win. In short, the small bidder is at the mercy of the larger. This is inherent in the FUEL design and is described by

⁵ *Id.* at 7.

⁶ *Id.* at 19-20.

⁷ *Id.*

Auctionomics in statement already introduced: “Some bidders, especially smaller ones, may wish to use the Coordination round to advertise their preferred packages (but not their final bid prices) ***to enable and encourage other bidders to bid for packages that fits well with those.***”⁸ They point out that the smaller bidder must rely on other bidders to accommodate them—there is no unilateral action a small bidder can take to win against a larger bidder.

In practice, bidders likely to be driven by more than static price rules. The potential incremental savings realized by a large carrier through a price decrement in a rural market is insignificant when compared to its overall spend. The decrement offers a potential strategic loss and the time alone required to calculate the incremental savings may simply not be worth the effort. Additionally, it also increases the likelihood of a data entry error for a large bidder—the very same error Auctionomics cautions against regarding CCA auctions. In short, large bidders may have many other motivations beside static pricing constraints to avoid decrement bids.

Auctionomics’ example bears this out as well. In it, National Bidder X is not influenced by the knowledge that it is \$830 under budget even before it decides how to bid for the contested license.⁹ Its valuation of Area C does not change with the knowledge that it has landed both Areas A and B. It is not influenced by knowing that for \$50 more (3% of its budget), National Bidder X can keep out a competitor, land its desired spectrum position and still spend 52% of what it planned. While these assumptions might be appropriate for illustrative purposes, they certainly do not reflect the reality of decision-making during a live auction or reward systems put in place to drive bidding teams.

Combinatorial Bidding Is Inherently Biased. The example also illustrates how large bidders can use bids in markets potentially far away from a small bidder’s against them. Again, the example shows that the only way Regional Carrier Y wins its bid is by National Bidder X offering a price decrement. The difference in the winning amount bid and paid or “profit,” as Auctionomics terms it, is fungible among markets in a group bid.¹⁰ It flows in the example from Areas A, B and the uncontested licenses in C and aligns exclusively against Regional Bidder Y. In all other FCC spectrum auctions, small bidders still had to compete against the large bidders, but did so on a market-by-market basis. As an example, adding Miami against West Central Texas in its fight for the San Angelo PEA is inherently unfair.

Small Bidders Compete Effectively in Non- combinatorial Auctions. Given the opportunity, small bidders actively defend their territory against larger resources, sometimes paying much more than expected. In Auction 66, FMTC Wireless pushed CMA424: Iowa 13 into the top 5 most expensive CMAs on per-unit basis. In Auction 73, King

⁸ *Id.* (emphasis added).

⁹ *Id.* at 20.

¹⁰ *Id.*

Street Wireless offered \$6.51 per MHz-POP for CMA712: Wisconsin 5, \$1.94 more than CMA001: New York. In Auction 97, NE Colorado Cellular's price for CMA538: Nebraska 6 top that for Los Angeles on a per-unit basis. There are multiple examples in each national FCC auction of smaller bidders taking larger bidders to the highest price levels because small bidders know if they bid high enough, they got their prize. Under the FUEL design, that might not be the case because areas outside the small bidder's scope influence the outcome of their bid.

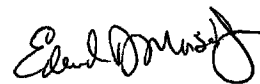
FUEL Flaws. Additional bidding options, less-than-opaque anonymity, unbalanced exposure risks, shared profit among grouped bids, and a structure that does not assure that the highest market price wins are serious flaws in the FUEL design—a design that should be passed over in favor of a more balanced, FCC-administered auction. Auctionomics suggests this should not be the case because its auction can be executed quickly. In fact, derivations of the words “quick” and “fast” appear 19 times in the 20 pages of the White Paper. If the FCC chooses speed over process, then it should act to provide small bidders a level playing field.

FUEL Remedies. Auctionomics points to Canada, Mexico and Ireland, as examples of countries that have all used combinatorial designs in recent spectrum. Like the United States, Canada has a goal of fostering competition through auction design and overcomes the shortcomings of combinatorial designs through spectrum set-asides. Most recently, Canada held its 600 MHz auction where 30 MHz, or 43% of the auction's total, was set aside for non-national bidders. Many of the problems highlighted here could be overcome by setting aside 80 MHz, or 44% of the proposed total, for non-national bidders.

The FCC has already utilized the concept of a market-based spectrum reserve in Auction 1002. Now, C-Band spectrum provides an opportunity to support service providers, large and small, in their quest to introduce 5G service and applications. It also represents a key opportunity to support the competitiveness of newer and smaller service providers by ensuring that they will have an opportunity to access mid-band spectrum that is necessary to roll out such systems.

Please feel free to contact me if you have any questions regarding this letter.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Edward D. Moise, Jr.", with a stylized flourish at the end.

Edward D. Moise, Jr.
Principal