February 10, 2016

***Ex Parte* Notice**

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

     RE: *Connect America Fund*, **WC Docket No. 10-90**

Dear Ms. Dortch:

NTCA–The Rural Broadband Association hereby files further details and explanations regarding Exhibit A, dealing with a density-based disaggregation methodology, as originally included with its filing dated February 5, 2016 in the above-referenced proceeding.

Thank you for your attention to this correspondence. Pursuant to Section 1.1206 of the Commission's rules, a copy of this letter is being filed via ECFS.

        Sincerely,

        /s/ *Michael R. Romano*
        Michael R. Romano
        Senior Vice President – Policy

Exhibit A

Density Based Disaggregation for Rate-of-Return High Cost Support

This approach uses the ratios of average study area density[1] (locations[2] per square mile) to competitive and non-competitive areas' densities[3,4] to estimate disaggregated study area revenue requirements.

- To recognize that there are cost differences due to different densities between competitive and non-competitive areas, competitive and non-competitive costs per loop are calculated by scaling average study area cost per loop with the ratios of average study area density to competitive and non-competitive areas' densities respectively.
  - Table 1 shows an example for a study area with an average CPL of $800, average density equal to 10 locations per square mile; density in the competitive area equal to 25 locations per square mile and density in the non-competitive area equal to 5 locations per square mile. The non-competitive area has half of the average study area locations per square mile, so the non-competitive CPL is calculated to be 2 times more than the average study area CPL. The competitive area has 2.5 times more locations per square mile than the average, thus the competitive CPL is calculated as the inverse of 2.5 or, 0.4 times the average study area CPL.

Table 1. Example of Calculating Disaggregated CPLs for Competitive and Non-competitive Areas Using Density Factors

	Total Area	Competitive Area	Non Competitive Area
Density = Locations per sq mile	10	25	5
Density Factor = SAC Average Density / Disaggregated Area Density	1	0.4	2
CPL = Density Factor * Average CPL	$800	CPLc = $320	CPLn = $1,600

- To calculate disaggregated revenue requirements using the disaggregated CPLs from above we need to assign total loops to the competitive and the non-competitive areas. Loops in the disaggregated areas can be determined by using relative ratios of locations in the competitive and non-competitive areas to total locations.. These ratios are applied to the study area's actual loop count to ensure total loops are equal to the sum of the competitive (Loops$_c$) and

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[1] Average study area density defined as the sum of company's residential and business locations divided by the area in square miles of all Census blocks falling within the study area's territory.

[2] Total locations are currently available at https://transition.fcc.gov/wcb/ACAM_21_ILL_Rpt_Version4_0_FINAL_121515.xlsx (Column E of tab 4.1). A break-down of competitive and non-competitive locations is currently not publicly available, but possible if the FCC were to publish the competitive and non-competitive total (residential and business) locations with the next release of A-CAM reports.

[3] Competitive study area density defined as the sum of residential and business locations in the competitive Census blocks divided by the area in square miles of the competitive Census blocks.

[4] Non-competitive study area density defined as the difference between total locations and competitive locations divided by the difference between total area in square miles and the competitive area in square miles.

non-competitive areas' loops ($Loops_n$). For a study area with 1,000 total locations, 800 locations in the competitive area and 200 locations in the non-competitive area, $Loops_c$ = 0.8*Total Loops and $Loops_n$ = 0.2*Total Loops. To the extent a company reports actual loops by competitive and non-competitive areas, such actual loop counts would take precedent over the loop assignment method described herein.

- Competitive and non-competitive revenue requirements (RRQ) are calculated by multiplying the respective costs per loop (CPL) and loops.
  - Competitive $RRQ_c = CPL_c * Loops_c$.
  - Non-competitive $RRQ_n = CPL_n * Loops_n$.

- The ratio of the calculated non-competitive area's revenue requirement to the sum of the calculated competitive and non-competitive revenue requirements is applied to the study area's actual revenue requirements to ensure the total actual revenue requirement is equal to the sum of the competitive and non-competitive areas' revenue requirements.
  - Final RRQ assigned to non-competitive area = Total actual study area RRQ * [Non-competitive RRQ_n / (Competitive RRQ_c + Non-competitive RRQ_n)].

These data for non-competitive areas' revenue requirements are then used with ICLS to calculate non-competitive area support.