From: Michael Birnbaum
To: DeHart, Michael
Subject: Re: Cloud Alliance Update CI-CRF-015
Date: Sunday, March 28, 2021 10:07:15 PM

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Dear Michael,

Here are our Project Status Report and our Extension Request for the Department's consideration.

Project Status Report

- Our project upgrades seven Cloud Alliance towers from FCC Part 90 (utilizing WiMAX protocol) to FCC Part 96 CBRS (utilizing LTE protocol) in the 3GHz frequency band to deliver much improved service to our existing subscribers and expands access to many hundreds more.
- We purchased and received sufficient eNodeB systems (wireless LTE base stations with antennas and "embedded evolved packet cores") from BLiNQ Networks with necessary accessories (lightning surge arrestors, power supplies, cabling, networking equipment, etc.) to install these upgrades as 30) 60-degree sectors.
- We installed 24 of the 30 sectors on five of the seven towers.
- We purchased and received sufficient Category 6 and Category 12 UEs (user equipment) from BLiNQ to upgrade all Cloud Alliance subscribers currently served by the seven towers.
- We have, to date, installed 60 of these. Of those, six failed to certify at 25/3 Mbps, though each of those can enable greatly improved service levels. The rest have averaged 45.45/7.73 Mbps.
- We are currently seeking suitable "connectorized" 3 GHz LTE radios to pair with external antennas that we have on hand to qualify any locations with weaker signal.
- An overwhelming majority of our projected addresses are now serviceable but have not yet been documented via our certification system.
- We purchased and received sufficient high-throughput 5GHz backhaul bridge radios from Mimosa Networks to upgrade inter-tower bandwidth capacity complimenting our increased purchase of fiber-based bandwidth from FirstLight, which is delivered at two of our tower locations.
- Though we were able to sled equipment up mountain trails on multiple trips via snowshoes, we were unable to install equipment on two farm structure-attached towers due to inaccessibility during the winter (both of these are unclimbable so require 80-foot lifts, which we could not bring into snow-covered farm fields).
- Remaining to be completed are: outfitting the last two towers with ENodeBs, outfitting the towers with the backhaul bridge radios, installing UEs at about 150 more locations, and certifying non-subscriber locations.

Extension Request

- We concentrated on our NEW Alliance joint proposal application in Round 1. We applied for this project in Round 2, but learned that we had been blocked by an objection from a CUD. We appealed to the CUD to rescind its objection and were successful in the final round.

- We requested advanced funding, as we did not have the capital to begin the project. This was granted after a quite long period.
- By the time we received cash, our pre-arranged equipment order had been reassigned to another provider elsewhere in the country.
- The manufacturer then had to wait for sea delivery from Asia of new equipment.
- We received tower equipment but not user equipment in December.
- We installed most of the tower equipment by the initial 12/30 deadline.
- We did not receive any user equipment until mid-January.
- After testing of and familiarization with the new-to-us LTE systems, we began installing in February.
- CARES Act-funded projects proliferated across the country. Were it not for this pandemic funding, supply of equipment would not have been so constrained.
- Combined with the lateness of our funding and these supply-chain delays, we couldn't begin until nearly at the initial deadline so therefore were forced to do the work in deep winter.
- As there is still much to do, and we have a limited workforce available, we respectfully request that the deadline be extended to the end of the year consistent with the new authorizations from the federal and Vermont governments.
- We will strive to complete the work well before end of year.

Sincerely,
Michael

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