

STATE OF VERMONT
PUBLIC UTILITY COMMISSION

Case No. 21-0018-PET

Petition of Starlink Services, LLC for)
Designation as an Eligible Telecommunications)
Carrier for purposes of receiving rural digital)
opportunities fund support)

PREFILED TESTIMONY OF
COREY R. CHASE

ON BEHALF OF THE
VERMONT DEPARTMENT OF PUBLIC SERVICE

February 9, 2021

Summary: Mr. Chase's testimony provides an analysis of the Federal Communications Commission's Rural Digital Opportunity Fund Phase I Auction (Auction 904) awards for Vermont and offers recommendations and conditions for Starlink Services, LLC's petition for designation as an Eligible Telecommunications Carrier.

Direct Testimony
of
Corey R. Chase

1 **Q1. Please state your name and occupation.**

2 A1. My name is Corey R. Chase. My business address is 112 State Street, Montpelier, VT
3 05620. I am the Telecommunications Infrastructure Specialist for the Vermont
4 Department of Public Service (“Department”).

5

6 **Q2. Please summarize your professional background and experience.**

7 A2. I earned a Bachelor of Arts degree from Middlebury College in 1992 with a double major
8 in Northern Studies and Soviet Area Studies. I have completed industry technical training
9 courses and earned certifications from several communications equipment manufacturers.
10 Prior to joining the Department, I held telecommunications industry positions with
11 responsibility for proposal writing, designing communications networks, negotiating and
12 managing international commercial contracts, and oversight of regulatory, legal, and tax
13 compliance.

14

15 I joined the Department in 2007 as a Telecommunications Policy Analyst. In this position
16 I gathered information for the preparation of the Vermont Telecommunications Plan,
17 including acquisition and analysis of data regarding facilities, services and market
18 conditions affecting the provision of telecommunications services in Vermont.

19

20

Q3. Have you testified previously before the Public Utility Commission (“Commission”)?

A3. Yes, I have previously offered testimony in Dockets 7316, 7250, 7633, 7280, 8438, 8301 and 8719.

Q4. What is the purpose of your testimony?

A4. The purpose of my testimony is to provide the Commission with information relevant to the Petition of Starlink Services, LLC (“Starlink”) for designation as an Eligible Telecommunications Carrier (“ETC”). As further detailed herein, I reviewed portions of the Petition that specify the census blocks where Starlink was awarded Rural Digital Opportunity Fund (“RDOF”) Phase I funding from the Federal Communications Commission (“FCC”) and compared that information against state data in order to confirm the number of locations expected to receive voice and broadband service with federal funding assistance. I also offer recommendations and conditions for the ETC designation.

Q5. How did you prepare for the analysis you present?

A5. I downloaded RDOF Phase I results data from the FCC website. Specifically, I used the file entitled Shapefile: Census Block Groups located at <https://www.fcc.gov/reports-research/maps/rdof-phase-i-dec-2020>.

Q6. What information does this file include?

A6. This file contains geographic information systems geography shapes in ESRI Shapefile format depicting the census block groups for which there was an award in RDOF Phase I

1 auction nationwide. The data includes 323 census block groups in Vermont, which I
2 extracted for further analysis. The data contains a table that depicts additional data for
3 each census block group. I include this information in columns A-M in **Exhibit A**. The
4 12-digit number in the column “census_ID” lists the census block group number for each
5 set of geography. Column “locations” lists the quantity of locations identified by the FCC
6 cost model for support in that census block group.

7
8 **Q7. Did you add other information to Exhibit A?**

9 A7. Yes. I added (1) locations from the VT E-911 database (columns N-U); (2) the Company
10 name from ETC petitions filed with the Commission (columns W-Z); and (3) the town
11 name in which each census block group is located (columns AA-AE).

12
13 **Q8. Please describe the E-911 locations used for the analysis.**

14 A8. The Vermont E-911 Board maintains a publicly accessible set of addresses with
15 coordinates for all buildings in the state. The Department maintains broadband
16 deployment information for these locations, developed through querying broadband
17 service providers. This data includes a subset of locations in the database (based on the
18 Sitetype field) thought to be buildings and excludes items such as trailheads and fire
19 hydrants. This dataset is posted on the Vermont geodata portal at
20 <https://geodata.vermont.gov/datasets/vtspd::vt-data-broadband-status-2019>.

21 **Q9. Please describe your analysis.**

1 A9. I first identified all locations from the Broadband Status dataset that are in all RDOF
2 award territories in Vermont. Then I associated these locations with the census block
3 group number in which they were located. I summarized the data to count the quantity of
4 locations in each census block and joined this summary to the FCC Shapefile based on
5 the census block group number. Columns N-U list the deployment status of the E-911
6 buildings within the RDOF census block group award territories.

7 I collected the census block information from the ETC petitions filed with the
8 Commission (four total), so the company name listed in **Exhibit A** reflected the name of
9 the ETC petitioner. I extracted the 12 digits relating to census block group number and
10 developed the information in the “company” field, column Y. I then joined this data to
11 the FCC Shapefile data based on the census block group number.

12 For town names (column AC) I started with the 2010 census GIS boundary data, which
13 lists for each census block the FIPS code for the town within which it is located. I
14 stripped the last three digits from each census block number for each block in the state
15 and then joined this data to the 323 census blocks in the FCC Shapefile data.

16
17 **Q10. How did you prepare Exhibit B RDOF by Town table?**

18 A10. As described above, the FCC Shapefile provides one row for each census block group.
19 The process described above added the town name and ETC petitioner name to each row.
20 I used a Microsoft Excel pivot table to summarize the Shapefile data on a town name and
21 ETC Petitioner basis. In the resulting summary, the first set (columns A-K) lists the

quantities of locations in the RDOF award data, and the second set (columns L-V) lists the quantify of E-911 locations. A summary of locations for each RDOF Phase I awardee in Vermont is below:

Row Labels	Sum of RDOF locations	Sum of E911 Locations
Charter Fiberlink	85	77
ECFiber	2320	2187
Kingdom Fiber	4555	4486
SpaceX/Starlink	2247	2031
CCI	10123	9708
Grand Total	19330	18489

Q11. Did you prepare a map depicting this data?

A11. Yes. **Exhibit C** depicts the census block group territories provided by the FCC and the company names drawn from the ETC filings made with the Commission.

Q12. Does the Department have additional plans for this data?

A12. Yes. The Department has prepared an interactive map on the Department's website that depicts the territories on the attached map and the E-911 locations in these territories. This allows consumers to zoom in and view the locations at various resolutions. The map is available at <https://publicservice.vermont.gov/content/rural-digital-opportunities-fund>. The subset of the E-911 locations in the Starlink RDOF Census Blocks (2,031), provided in the map and referred to in Q8 and Q9, is included in **Exhibit D**.

1 **Q13. Why do you believe that this analysis is important?**

2 A13. FCC location data has a history of being somewhat inaccurate due to the nature of its
3 collection methods. In the past, federal funding has gone unseen for entire census blocks
4 in Vermont because when just one location in a census block was served, the entire block
5 was deemed served. I understand that the FCC has tried to correct this discrepancy with
6 RDOF Phase I by requiring RDOF winners to provide service to all locations within their
7 awarded census blocks. However, because Vermont continues to have locations that are
8 completely unserved, it is important that the Department attempt to corroborate the
9 FCC's location information. By doing so, I was able to show that the FCC's estimated
10 number of locations in an RDOF Phase I census block in fact exceed the total quantity of
11 E-911 buildings identified at the state level.

12

13 **Q14. Do you have any concerns about the Starlink petition?**

14 A14. Federal funding through RDOF is expected to bring modern telecommunications
15 technology, including broadband and digital voice service, to thousands of Vermonters,
16 including eligible low-income consumers. Starlink is expected to provide voice and
17 broadband service to 2,247 unserved locations in unserved areas across the state, which is
18 in the public interest.

19

20 That said, Starlink is a new entrant to the telecommunications market in Vermont with
21 technologies and business practices with which the Department is not entirely familiar.
22 Because of this unfamiliarity, I have specific concerns regarding how Starlink will

1 provide standalone voice service to its customers. It is my hope and expectation that this
2 concern and any others that arise during Starlink's RDOF deployment will be swiftly
3 addressed by Starlink through direct communication with the Department.
4

5 To best serve the public interest and ensure proper oversight of Starlink's ETC
6 obligations as they relate to the RDOF Census Blocks, I recommend that certain reporting
7 obligations should be implemented. Specifically, any RDOF reporting submitted with the
8 FCC should also be submitted with the Commission and the Department. I provide
9 further detail below.
10

11 **Q15. Do you have any concerns about RDOF ETC designations generally?**

12 A15. Yes. I want to highlight that RDOF funding is essentially a reallocation of federal
13 universal service funds that traditionally the incumbent local exchange carrier ("ILEC")
14 in each state (Consolidated in Vermont) has received to deploy voice service in unserved
15 and underserved areas. This designation has more consequence than other designations.
16 For example, Lifeline-only ETCs provide Lifeline service to those customers that they
17 can already serve. Therefore, a wireless provider with an ETC designation must offer
18 Lifeline service to customers that request it but is not obligated to extend service beyond
19 the reach of its network. By contrast, FCC rules under RDOF require awardees to provide
20 the supported service to all locations within the census block areas they won. While it is
21 my hope that this will foster competition in areas currently unserved, this could

1 eventually lead to awardees being the carrier of last resort in the designated areas, which
2 is a concern for the Department.

3
4 **Q16. Do you have any recommendations?**

5 A16. Yes. I recommend that Starlink's petition for ETC designation in the RDOF Census
6 Blocks be granted. I also recommend that Starlink file with the Commission and the
7 Department any and all deployment milestone reports filed with the FCC during the
8 RDOF support term, which should include the number of locations served with stand-
9 alone voice in the applicable RDOF Census Block.

10
11 **Q17. Does this conclude your testimony?**

12 A17. Yes.