

**COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF TELECOMMUNICATIONS AND CABLE**

Application of Starlink Services, LLC for  
Designation as an Eligible Telecommunications  
Carrier for Purposes of Receiving Rural Digital  
Opportunities Fund Support

DTC 21-1

**Starlink Services, LLC's Responses  
to the Department's First Set of Information Requests**

Starlink Services, LLC responds as follows to the First Set of Information Requests of the Department of Telecommunications and Cable to Starlink Services, LLC, dated March 4, 2021.

March 18, 2021

/s/ *Gregory M. Kennan*

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**D.T.C. 1-1**

Please provide copies of all of the materials Starlink filed with the FCC as part of FCC Forms 183 (Short-Form Application) and 683 (Long-Form Application).

**Response to D.T.C. 1-1**

Copies of Starlink Services' Forms 183 and 683 will be submitted **on a confidential basis as Attachments 1-1-A and 1-1-B** subject to the accompanying Motion for Confidential Treatment.

Response Dated: March 18, 2021

Person Responsible: R. Edward Price, Senior Counsel, SpaceX

**D.T.C. 1-2**

Identify any states where Starlink has been designated as an ETC. For each, state whether the designation is limited, and if so how, and include any specific requirements imposed on or volunteered by the ETC. Provide complete and detailed documentation describing any such limitations or requirements.

**Response to D.T.C. 1-2**

Starlink Services has not yet received an ETC designation.

Response Dated: March 18, 2021

Person Responsible: R. Edward Price, Senior Counsel, SpaceX

**D.T.C. 1-3**

Identify any states that have denied a Starlink petition for ETC designation, and any states in which Starlink has withdrawn a petition for ETC designation.

**Response to D.T.C. 1-3**

No state has denied a Starlink Services petition for ETC designation. Starlink Services has not withdrawn a petition for ETC designation in any state.

Response Dated: March 18, 2021

Person Responsible: R. Edward Price, Senior Counsel, SpaceX

**D.T.C. 1-4**

Please provide the FCC-determined location counts for each of the RDOF Census Blocks, by both block and block group.

**Response to D.T.C. 1-4**

<b>Massachusetts</b>	<b># of CBGs</b>	<b># of Locations</b>	<b>CBG Pop.</b>
Barnstable County	138	1,508	180,294
Berkshire County	6	48	20,388
Bristol County	115	898	151,857
Dukes County	19	1,181	30,268
Essex County	142	953	198,001
Franklin County	28	274	44,383
Hampden County	94	767	157,676
Hampshire County	40	275	78,015
Middlesex County	239	1,525	373,301
Nantucket County	8	73	16,349
Norfolk County	133	790	217,127
Plymouth County	130	975	199,559
Suffolk County	76	786	121,761
Worcester County	81	1,083	110,522
<b>TOTAL</b>	<b>1,249</b>	<b>11,136</b>	<b>1,899,501</b>

Response Dated: March 18, 2021

Person Responsible: R. Edward Price, Senior Counsel, SpaceX

**D.T.C. 1-5**

Describe Starlink's intended method for identifying serviceable locations in the RDOF Census Blocks and for reporting served locations into the High Cost Universal Broadband (HUBB) database.

**Response to D.T.C. 1-5**

Starlink intends to offer service to all locations in the RDOF Census Blocks it was assigned. If and when a customer at a location in an RDOF census block signs up for Starlink service, it will be reported to the HUBB database in accordance with FCC requirements.

Response Dated: March 18, 2021  
Person Responsible: R. Edward Price, Senior Counsel, SpaceX

**D.T.C. 1-6**

Provide an organizational chart showing the employees or groups responsible for the following services:

- a. Starlink's Internet Service Provider Services.
- b. Starlink's Network Operator Services.
- c. Starlink's Customer Support Services.

**Response to D.T.C. 1-6**

The specified services are handled by departments under the supervision of the following executives and managers:

- a. Samuel "Chad" Gibbs, Vice President of Starlink Business Operations and Mark Juncosa, Vice President of Vehicle Engineering
- b. Emanuele Jones, Senior Director of Network Operations Engineering
- c. Matt Johnson, Senior Manager, Customer Success

Response Dated: March 18, 2021

Person Responsible: R. Edward Price, Senior Counsel, SpaceX

**D.T.C. 1-7**

Certify whether Starlink has any outstanding tax liabilities or other late payments or liabilities due and owing to the Commonwealth of Massachusetts or any government and/or any quasi-public entity in any other jurisdictions. If so, provide complete and detailed documentation identifying the amount(s) owed and explaining the reasons for such arrears.

**Response to D.T.C. 1-7**

Starlink Services, LLC is responding to this information request on behalf of itself and its parent entity, Space Exploration Technologies Corp. ("SpaceX"), the successful bidder under the FCC RDOF auction, as explained in Starlink Services' petition in this matter. Starlink Services is limiting its response to those entities even though it has a number of "affiliates" under the definitions set forth at paragraphs 7 and 9 of the Information Requests' Instructions. Those entities may technically satisfy the definition based on the common indirect ownership of 10% or more of SpaceX and those entities by Mr. Elon Musk. However, those other entities (the best known of which is Tesla Motors) are in different lines of business and are not involved in the provision of telecommunications and broadband, the deployment of orbital or ground equipment in connection with such services, or the RDOF auction. They have separate corporate structures and management personnel. Information concerning those other entities would not be germane to the issues in this proceeding.

Subject to the foregoing, Starlink Services has no known outstanding material tax or governmental payment liabilities owing to the Commonwealth of Massachusetts or other government or quasi-public entity in any other jurisdiction.

Response Dated: March 18, 2021  
Person Responsible: R. Edward Price, Senior Counsel, SpaceX

**D.T.C. 1-8**

Identify any and all ongoing litigation involving Starlink in any jurisdiction. Provide a docket number and summary of the litigation for each matter identified.

**Response to D.T.C. 1-8**

Starlink Services, LLC is responding to this information request on behalf of itself and its parent entity, Space Exploration Technologies Corp. ("SpaceX"), the successful bidder under the FCC RDOF auction, as explained in Starlink Services' petition in this matter. Starlink Services is limiting its response to those entities even though it has a number of "affiliates" under the definitions set forth at paragraphs 7 and 9 of the Information Requests' Instructions. Those entities may technically satisfy the definition based on the common indirect ownership of 10% or more of SpaceX and those entities by Mr. Elon Musk. However, those other entities (the best known of which is Tesla Motors) are in different lines of business and are not involved in the provision of telecommunications and broadband, the deployment of orbital or ground equipment in connection with such services, or the RDOF auction. They have separate corporate structures and management personnel. Information concerning those other entities would not be germane to the issues in this proceeding.

Subject to the foregoing, Starlink Services has had no litigation and is not subject to any judgments related to our Starlink business (i.e., related to telecoms or broadband). SpaceX, an organization with many thousands of employees working in various locations in California, Texas, Florida, Washington state, Washington DC and Virginia, and with a supply chain and customer base spanning much of the world, is periodically involved in litigation. Neither the company nor its directors and officers in their roles as such have been the subject of any civil or criminal judgments.

Response Dated: March 18, 2021  
Person Responsible: R. Edward Price, Senior Counsel, SpaceX

**D.T.C. 1-9**

Certify whether the FCC, any state utilities commission, or any other government agency has rendered or entered a finding, criminal conviction (including plea agreements), or civil judgment against Starlink or any of its executive officers or senior managers during the last ten years. Provide a copy of any such finding, conviction, plea agreement, or civil judgment entered against or any of its executive officers or senior managers.

**Response to D.T.C. 1-9**

Starlink Services, LLC is responding to this information request on behalf of itself and its parent entity, Space Exploration Technologies Corp. ("SpaceX"), the successful bidder under the FCC RDOF auction, as explained in Starlink Services' petition in this matter. Starlink Services is limiting its response to those entities even though it has a number of "affiliates" under the definitions set forth at paragraphs 7 and 9 of the Information Requests' Instructions. Those entities may technically satisfy the definition based on the common indirect ownership of 10% or more of SpaceX and those entities by Mr. Elon Musk. However, those other entities (the best known of which is Tesla Motors) are in different lines of business and are not involved in the provision of telecommunications and broadband, the deployment of orbital or ground equipment in connection with such services, or the RDOF auction. They have separate corporate structures and management personnel. Information concerning those other entities would not be germane to the issues in this proceeding.

Subject to the foregoing, neither Starlink Services nor SpaceX, nor their directors and officers in their roles as such, have been the subject of any civil or criminal judgments.

Response Dated: March 18, 2021  
Person Responsible: R. Edward Price, Senior Counsel, SpaceX

**D.T.C. 1-10**

Referring to pages 5-6 of the Petition, please describe specifically how Starlink will provide service to 40 percent of the areas in Massachusetts for which it received RDOF funding within three years, and 20 percent of such areas each year 4 thereafter until 100 percent of such areas receive the required voice and broadband service by the end of Year 6.

**Response to D.T.C. 1-10**

In the past two years, Starlink Services' parent company, Space Exploration Technologies Corp. ("SpaceX"), has invested billions of dollars into Starlink. This has resulted in the development of a U.S.-based, world-leading manufacturing system that produces 120 satellites per month; launch of 18 Starlink missions to date (deploying ~60 satellites per mission); and deployment of over 1000 satellites total, making Starlink Services' satellite constellation the largest in the world thus far. SpaceX has also installed gateway ground stations throughout the United States and has begun beta service for thousands of users across multiple U.S. states.

Starlink Services will meet or exceed the deployment milestones adopted by the Federal Communications Commission for RDOF, targeting our first RDOF-related services to be delivered in Massachusetts by the end of 2021. Specifically, Starlink Services will, at a minimum, offer service to 40% of the awarded locations statewide by the end of the third full calendar year following funding authorization, and 20% each year thereafter, resulting in 100% deployment to funded locations by the end of the sixth calendar year. At each milestone, services provided will meet or exceed speeds of 100/20 Mbps the speeds and FCC "low latency" requirements (95% or more of all peak period measurements of network round trip latency are at or below 100 milliseconds). Assuming RDOF support is finally authorized in 2021, the first milestone would occur at the end of 2024, and the final deployment milestone would occur at the end of 2027.

Please see the FCC Form 683 provided in response to D.T.C. 1-1 for a detailed description of Starlink Services' technology and systems design, and deployment schedule in Massachusetts.

Response Dated: March 18, 2021  
Person Responsible: R. Edward Price, Senior Counsel, SpaceX

**D.T.C. 1-11**

Please describe Starlink's plans for providing quality customer service in Massachusetts, including but not limited to: a. The number of employees in Starlink's intended customer service operation. b. The physical location of Starlink's customer service staff. c. Starlink's internal standards for responding to and resolving customer inquiries and complaints (e.g., expected response times, manner of communication).

**Response to D.T.C. 1-11**

Starlink Services will offer—

- 24x7x365 Network Operations Center (NOC) and monitoring of the platform and service provider VoIP services.
- Ability to seamlessly extend troubleshooting tools, device registration and device configuration statistics for SpaceX's use in end-to-end troubleshooting to enable it to provide first class customer support.
- Documented and effective escalation processes for tier 3 and tier 4 support to help resolve any issues with our customers.
- Customer support options through our mobile application.

At present time, customer support hours of operation are from 7:00 AM - 11:30 PM PT, seven days a week with plans to extend support coverage to 24 hours a day during the workweek next month. At present time, if a consumer has a complaint about Starlink Services they can—

- log into their Starlink account in the Starlink Customer Support Portal and submit a Customer Support Request describing their issue and desired resolution; or
- send an email compliant describing their issue and desired resolution to [starlinkresolutions@spacex.com](mailto:starlinkresolutions@spacex.com).

Prior to activating consumers under the RDOF program, SpaceX will provide a phone-based mechanism that allows consumers to reach out with inquires and complaints.

At this time, Starlink Services does not have offices or staff in Massachusetts. Starlink Services' parent company, SpaceX, has offices and staff in California, the District of Columbia, Washington, Texas and Florida and plans to support services in Massachusetts from these states.

Response Dated: March 18, 2021

Person Responsible: R. Edward Price, Senior Counsel, SpaceX

**D.T.C. 1-12**

On page 4 of the Petition, Starlink mentions a current offering of “beta consumer grade broadband service in Washington, Montana, Minnesota, Oregon, Michigan, Idaho, Wisconsin, Maine, and North Dakota.” Please specify:

a. How many customers is Starlink currently serving in each state where it offers broadband service?

b. Available service plans, including information concerning bandwidth, pricing, costs (including recurring costs, one-time costs, and installation costs), contract terms, and service limitations (including whether Starlink imposes data caps).

c. What are the advertised and actual (median) download and upload speeds in each state? Please explain how Starlink calculates these metrics.

d. Does Starlink anticipate the existing beta program, including the information requested above, to be reflective of its proposed Massachusetts RDOF offering? If not, explain why.

**Response to D.T.C. 1-12**

a. The beta broadband service is currently offered by SpaceX. A list of the number of customers currently served in each state where the beta broadband service is offered will be submitted as Attachment 1-12 **on a confidential basis** subject to the accompanying Motion for Confidential Treatment.

b. The current charge for the beta broadband service is \$99 a month, which is below the benchmark for its broadband speed tier. And while the FCC sets the usage benchmark at 350 GB per month, the beta offering does not presently impose any data cap.

In addition, at this time, customers must have the Starlink Kit to access services. The Starlink Kit includes the Starlink antenna, wifi router, power supply, cables and mounting tripod. We plan to charge the single, upfront cost of \$499 for the equipment for all customers. Starlink has been able to avoid forcing customers into long-term contracts with hidden fees, and high early termination fees by charging this upfront equipment fee. Starlink allows its customers to purchase its equipment outright, rather than imposing never-ending “rental fees” that can leave the customer paying more over time than the actual cost of the equipment. Starlink Services will continue to evaluate equipment pricing options over time as we roll out to more states and evaluate customer feedback.

c. Download and upload speeds are defined as 100 Mbps down and 20 Mbps up. In accordance with the FCC’s RDOF program requirements, Starlink will implement a performance measurement system that will report upload and download speeds as well as latency.

d. The same services will be offered in Massachusetts. Under the RDOF program, Starlink Services will, in addition to broadband services, also offer voice over internet protocol (“VoIP”) services on a bundled or standalone basis in its RDOF territories in Massachusetts.

Response Dated: March 18, 2021

Person Responsible: R. Edward Price, Senior Counsel, SpaceX

**D.T.C. 1-13**

Identify all states and any countries other than the United States in which Starlink offers telecommunications services.

**Response to D.T.C. 1-13**

Starlink Services does not currently offer telecommunications services in any state or any country other than the United States. The beta broadband offering referred to in IR D.T.C. 1-12 is currently offered by SpaceX in California, Colorado, Connecticut, Delaware, Florida, Iowa, Idaho, Illinois, Indiana, Kansas, Kentucky, Massachusetts, Maryland, Maine, Michigan, Minnesota, Missouri, Mississippi, Montana, North Dakota, Nebraska, Nevada, New Hampshire, New Jersey, New York, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Dakota, Texas, Utah, Virginia, Vermont, Washington, West Virginia, Wisconsin, and Wyoming.

Response Dated: March 18, 2021

Person Responsible: R. Edward Price, Senior Counsel, SpaceX

**D.T.C. 1-14**

Identify any communities in Massachusetts in which Starlink currently offers voice or broadband services. In addition, please identify the number of Massachusetts residents that have signed up for Starlink's beta broadband program identified on page 4 of the Petition, and when it expects begin providing service under the program in Massachusetts.

**Response to D.T.C. 1-14**

SpaceX's system does not always provide service to an entire community depending on where its beams are allocated. SpaceX currently offers services in the approximate areas of Townsend, Pepperell, Dunstable, Groton, Westford, Littleton, Carlisle, Bedford, Concord, Maynard, Lincoln, Lancaster, Bolton, Boylston, Hudson, Sterling, Shirley, Auburn, Sutton, West Sutton, East Douglas, Douglas, Webster, Dudley, Oxford, Sherborn, Holliston, Medfield, Westwood, Norwood, Walpole, Norfolk, Pondville, Medway, Craigville, Centerville, Barnstable, Yarmouth, Dennis, Marstons Mills, Harwich, Brewster, South Yarmouth, Tyringham, Monteray, New Marlborough, Otis, East Otis, Chester, Pittsfield, Dalton, Chester, Huntington, Blandford, Russell, Chesterfield, Goshen, and Cummington. A count of current SpaceX beta customers in Massachusetts is provided in confidential Attachment 1-12.

Response Dated: March 18, 2021

Person Responsible: R. Edward Price, Senior Counsel, SpaceX

**D.T.C. 1-15**

As referenced on page 4 of the Petition, please clarify (a) what, if any, ground equipment Starlink will need to place in Massachusetts to enable its broadband service, (b) whether any such equipment has already been placed, and (c) the location or planned location of such equipment.

**Response to D.T.C. 1-15**

Starlink currently does not have any ground equipment in Massachusetts. We can support services via gateway antennas in neighboring states. The gateway antennas relay user traffic from our satellites to traditional fiber connections.

Response Dated: March 18, 2021

Person Responsible: R. Edward Price, Senior Counsel, SpaceX

**D.T.C. 1-16**

Please describe Starlink's capacity to respond to problems with its satellite, ground (i.e., gateway sites), and customer equipment, and how quickly Starlink anticipates being able to repair these problems.

**Response to D.T.C. 1-16**

At the user level, as an additional option and service outside the standard offering, Starlink Services will offer a 24-hour battery backup option for user equipment that will provide the ability to make phone calls in the event of a power outage. At the system level, Starlink Services is building redundancy into the network. For example, every user will have multiple satellites with which it can communicate. Every satellite will have multiple gateway sites in view with which it can communicate.

In the event that a gateway site loses power from the electric grid, traffic will be automatically rerouted to an operating gateway site to ensure that service to each customer is not interrupted. In addition, Starlink's Network Operations Center in Redmond, Washington will monitor the network and "mission control centers" located at various SpaceX facilities across the country will monitor the satellites, but can be run from anywhere remotely if necessary.

Starlink will monitor its network 24x7x365 through its Network Operations Center located in Redmond, Washington. At scale, each satellite should have three or more potential gateway sites in view at all times to ensure that all of the satellite's antennas are in use, and the system is fully redundant against a single gateway site going offline for any reason. Starlink typically equips gateway sites with nine steerable antennas for diverse network redundancy. The system is designed to detect failure of any individual gateway antenna and remove it from service. Because end-users will be able to obtain service through multiple satellites and gateways, automatic traffic rerouting is essentially built into the system.

The Starlink traffic routing system ensures that every user is served with bandwidth before users demanding more bandwidth get additional throughput assigned, which gives the Starlink network robustness in the event of emergencies requiring high throughput.

Response Dated: March 18, 2021  
Person Responsible: R. Edward Price, Senior Counsel, SpaceX

**D.T.C. 1-17**

Identify and describe the non-Lifeline broadband and voice plans Starlink plans to offer in the RDOF Census Blocks, including information on bandwidth, pricing, costs (including recurring costs, one-time costs, and installation costs), contract terms, and service limitations (including whether Starlink intends to impose data caps for Massachusetts customers).

**Response to D.T.C. 1-17**

Starlink Services has not decided on the non-Lifeline broadband and voice plans it will offer in Massachusetts. SpaceX currently charges \$99 a month for its beta program, which is below the benchmark for its broadband speed tier. Starlink Services does not presently impose any data cap.

In addition, at this time, customers must have the Starlink Kit to access services. The Starlink Kit includes the Starlink antenna, wifi router, power supply, cables and mounting tripod. We plan to charge the single, upfront cost of \$499 for the equipment for all customers. Starlink has been able to avoid forcing customers into long-term contracts with hidden fees, and high early termination fees by charging this upfront equipment fee. Starlink allows its customers to purchase its equipment outright, rather than imposing never-ending "rental fees" that can leave the customer paying more over time than the actual cost of the equipment.

Starlink Services will continue to evaluate equipment pricing options over time as we roll out to more states and evaluate customer feedback.

Response Dated: March 18, 2021  
Person Responsible: R. Edward Price, Senior Counsel, SpaceX

**D.T.C. 1-18**

On page 9 of the Petition, Starlink notes that it will offer the supported (RDOF) services using its own facilities or a combination of its own facilities and resale of another carrier's service. Please explain this statement, including how Starlink will balance the use of its own facilities and the resale of another carrier's service.

**Response to D.T.C. 1-18**

Starlink Services will use the satellites and earth stations ("gateway antennas") owned by SpaceX to provide broadband services. SpaceX contracts with carriers to provide the fiber connectivity between its gateway antennas and data centers from which it obtains internet connectivity. For VoIP services, those same facilities will be used to provide the underlying broadband connection necessary for customers to obtain the VoIP service. Starlink Services may provide VoIP services to customers who subscribe to them through the platform of a third-party managed service provider ("MSP"). Starlink Services is investigating MSPs and the possibility of developing its own VoIP solution. VoIP services will be available in Starlink Services' RDOF territories in accordance with the FCC's RDOF milestones.

Response Dated: March 18, 2021  
Person Responsible: R. Edward Price, Senior Counsel, SpaceX

**D.T.C. 1-19**

Provide Starlink's service outage reporting and restoration plans for its RDOF Census Blocks, identifying any staff or contractors responsible for service restoration in the RDOF Census Blocks.

**Response to D.T.C. 1-19**

Starlink Services will ensure that it complies with all FCC and DTC outage reporting and service restoration requirements. Starlink Services will offer—

- 24x7x365 Network Operations Center (NOC) and monitoring of the platform and service provider VoIP services.
- Ability to seamlessly extend troubleshooting tools, device registration and device configuration statistics for SpaceX's use in end-to-end troubleshooting to enable it to provide first class customer support.
- Documented and effective escalation processes for tier 3 and tier 4 support to help resolve any issues with our customers.
- Customer support options through our mobile application.

These Starlink teams are led by—

- Samuel "Chad" Gibbs, Vice President of Starlink Business Operations
- Mark Juncosa, Vice President of Vehicle Engineering
- Emanuele Jones, Senior Director of Network Operations Engineering
- Matt Johnson, Senior Manager, Customer Success

Response Dated: March 18, 2021

Person Responsible: R. Edward Price, Senior Counsel, SpaceX

**D.T.C. 1-20**

Please submit any network management statements (or other documents with information regarding the network management practices, performance characteristics, and commercial terms of Starlink's broadband internet access service) Starlink has created pursuant to 47 C.F.R. § 8.1(a) or otherwise, and identify how such documents can be accessed by the public.

**Response to D.T.C. 1-20**

Please see [www.starlink.com](http://www.starlink.com), including <https://www.starlink.com/faq> and <https://www.starlink.com/legal?regionCode=US>

Response Dated: March 18, 2021  
Person Responsible: R. Edward Price, Senior Counsel, SpaceX

**D.T.C. 1-21**

On page 10 of the Petition, Starlink notes that it is considering providing voice services through a Managed Service Provider (MSP). Please provide an update on whether Starlink will use an MSP or deliver voice service by alternative means. If Starlink will use an MSP, please explain whether Starlink has identified and contracted with an MSP(s) for Massachusetts customers.

**Response to D.T.C. 1-21**

Starlink Services is still investigating MSPs and has not yet made a decision on which MSP to use or whether to develop its own VoIP solution.

Response Dated: March 18, 2021

Person Responsible: R. Edward Price, Senior Counsel, SpaceX

**D.T.C. 1-22**

Regardless of the answer to D.T.C. 1-21, please confirm that Starlink will deliver voice service using its own facilities and explain whether customers who subscribe to the voice service will be required to purchase or rent additional equipment. Please also explain whether Starlink intends to deliver voice service in the same manner to other states.

**Response to D.T.C. 1-22**

Starlink Services will use the satellites and earth stations owned by SpaceX to provide broadband services. SpaceX contracts with carriers to provide the fiber connectivity between its earth stations and data centers from which it obtains internet connectivity. For VoIP services, those same facilities will be used to provide the underlying broadband connection necessary for customers to obtain the VoIP service.

At this time, customers must have the Starlink Kit to access services. The Starlink Kit includes the Starlink antenna, wifi router, power supply, cables and mounting tripod. We plan to charge the single, upfront cost of \$499 for the equipment for all customers. Starlink has been able to avoid forcing customers into long-term contracts with hidden fees, and high early termination fees by charging this upfront equipment fee. Starlink allows its customers to purchase its equipment outright, rather than imposing never-ending "rental fees" that can leave the customer paying more over time than the actual cost of the equipment. Starlink Services will continue to evaluate equipment pricing options over time as we roll out to more states and evaluate customer feedback.

VoIP Consumers will have the option of using a third-party, conventional phone connected to a Session Initiation Protocol standards-compliant analog terminal adaptor or a native-IP Phone selected from a list of certified models.

Starlink Services intends to deliver voice service in the same manner to customers in other states.

Response Dated: March 18, 2021  
Person Responsible: R. Edward Price, Senior Counsel, SpaceX

**D.T.C. 1-23**

Please explain how Starlink intends to assess and remit E911 surcharges in accordance with Massachusetts E911 regulations for each customer whose communication services are capable of accessing and utilizing the enhanced 911 system.

**Response to D.T.C. 1-23**

Starlink Services is still developing its compliance plans relating to E911, 911, access to PSAPs, and collection and remittance of E911 charges but will comply with all Massachusetts and federal requirements with respect to its offerings. Starlink Services will supplement this response with relevant information as it becomes available.

Response Dated: March 18, 2021

Person Responsible: R. Edward Price, Senior Counsel, SpaceX

**D.T.C. 1-24**

On page 14 of the Petition, Starlink states that its services will remain functional in emergency situations. At the system level, the Petition states that it “will be able to reroute traffic around damaged facilities, and will be able to manage traffic spikes resulting from emergency situations.”

- a. Please explain whether this is already the case with existing Starlink customers.
- b. Please disclose the number of outages Starlink broadband customers have experienced during 2020 and 2021, and the average duration of the outages.

**Response to D.T.C. 1-24**

SpaceX currently does reroute its network away from emergency situations and times when facilities are inoperable. SpaceX did not offer services in the Commonwealth of Massachusetts until March 2021. Although our beta customers are aware that they may experience individual outages, we have not had a system wide outage resulting in complete loss of service in the time that we have been offering services in the state.

Response Dated: March 18, 2021  
Person Responsible: R. Edward Price, Senior Counsel, SpaceX

**D.T.C. 1-25**

On page 14 of the Petition, Starlink notes that, with regard to building redundancies into its network, “every user will have multiple satellites in view with which it can communicate” and “every satellite will have multiple gateway sites in view with which it can communicate.” Within the RDOF census blocks covering the Commonwealth of Massachusetts, please describe:

a. How many satellites will Massachusetts users have in view, with which the users can communicate?

b. How many gateway sites will each Massachusetts satellite have in view, with which the satellite can communicate?

**Response to D.T.C. 1-25**

a. Satellite capacity is not allocated by political jurisdiction. All RDOF recipients, including Starlink Services, must offer service to 40% of their awarded locations statewide by the end of the third full calendar year following funding authorization, and 20% each year thereafter, resulting in 100% deployment to funded locations by the end of the sixth calendar year. At the time of this filing, SpaceX has deployed approximately 1200 satellites and will continue to deploy satellites until it can meet or exceed these RDOF build-out milestones in Massachusetts.

b. At present there are three gateway sites that serve customers in Massachusetts, with a fourth site being installed and due to be complete within 90 days. Gateway sites are roughly the size of a typical long haul terrestrial fiber amplification site and do not require extensive electrical or civil construction beyond the FCC license required to operate radio frequency equipment. SpaceX anticipates that it will add more gateway sites as needed in order to serve its customers in Massachusetts.

Response Dated: March 18, 2021

Person Responsible: R. Edward Price, Senior Counsel, SpaceX

**D.T.C. 1-26**

On page 13 of the Petition, Starlink states it will provide Lifeline to qualifying low-income consumers and publicize the availability of Lifeline service in a manner reasonably designed to reach those likely to qualify for the service. Please provide more details on Starlink's planned Lifeline offering(s) in Massachusetts, including:

- a. The manner in which Starlink will identify consumers likely to qualify for Lifeline service.
- b. The advertising channels that Starlink will use to reach consumers identified as likely to qualify for Lifeline service.
- c. What marketing materials Starlink is developing in order to advertise Lifeline service.
- d. Starlink's voice and broadband Lifeline service offering(s) in Massachusetts, including bandwidth, pricing, contract terms, service limitations, and any promotional rates Starlink plans to offer.

**Response to D.T.C. 1-26**

a. Starlink Services is still in the early stages of developing its Lifeline program and compliance plan and has not yet finalized its approach. With that in mind, pursuant to 47 C.F.R. § 54.410(b)(2), Starlink Services will not enroll a subscriber in Lifeline unless it receives notice from the National Verifier that the subscriber has met the income-eligibility criteria set forth in 47 C.F.R. § 54.409(a)(1). Starlink Services will likely direct prospective Lifeline subscribers to the National Verifier at <https://www.checklifeline.org/lifeline> for initial certification. Subscribers may complete their eligibility application through the National Verifier via either the online portal or by using the paper form provided by the Universal Services Administration Company.

b. Starlink Services expects to market its services primarily through general distribution advertising and direct mail. As it develops marketing plans for Massachusetts, Starlink Services will explore outside advertising campaigns, local media, and other tools that can efficiently improve its customer acquisition process.

c. See response 1-26(b).

d. Starlink Services is still in the early stages of developing its Lifeline program, and, as such, does not yet have a price list and set of proposed terms and conditions for the Lifeline services Starlink plans to provide broadband and voice services to Lifeline customers. Starlink will comply with all federal and Massachusetts provisions governing Lifeline service.

Response Dated: March 18, 2021

Person Responsible: R. Edward Price, Senior Counsel, SpaceX

**CERTIFICATION OF RESPONSES 1-7 AND 1-9**

I am Senior Counsel for Space Exploration Technologies Corp., the parent company of the petitioner, Starlink Services, LLC. I have made reasonable efforts to review relevant documents, records, and information possessed by or known to Starlink Services, LLC. Based on such review, the facts stated in the foregoing Responses 1-7 and 1-9 herein are true and correct.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

3/18/2021  
Date

  
R. Edward Price