



December 22, 2022

Filed via ECFS

Marlene H. Dortch
Secretary
Federal Communications Commission
45 L Street NE
Washington, DC 20554

Subject: SES Americom, Inc. – Quarterly Report; GN Docket Nos. 18-122, 20-173

Dear Ms. Dortch:

Please find enclosed SES Americom, Inc.'s quarterly report, filed pursuant to Section 27.1412(f) of the Commission's rules.¹ The report describes the status of SES's clearing activities conducted between October 1, 2022 and December 15, 2022.

As described in more detail in the attached report, we remain on track and in some cases are ahead of the schedule set out in our September 30, 2021 updated Transition Plan.² We look forward to continued engagement with the FCC, the Relocation Coordinator, and other stakeholders to continue the smooth transition of the 3700-4000 MHz band.

Yours Sincerely,

/s/ Christophe De Hauwer
Christophe De Hauwer
Chief Development Officer

¹ 47 C.F.R. § 27.1412(f).

² Letter from Brian D. Weimer, Counsel to SES Americom, Inc., to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 18-122 & 20-173, Appendix E (filed Sept. 30, 2021).

SES Americom, Inc. C-band Transition Quarterly Report

December 22, 2022

This report describes the transition activities undertaken by SES Americom, Inc. (“SES”) between October 1, 2022 and December 15, 2022, to achieve the accelerated clearing deadlines set out in the FCC’s C-band Report and Order.¹ The activities described in this report reflect the day-to-day work required to implement SES’s Transition Plan. SES filed its Final Transition Plan on August 14, 2020,² which reflected the comments SES received from the FCC and relevant stakeholders until that time. As subsequently directed by the FCC, SES submitted updates to its Transition Plan to account for the transition updates reported in its quarterly reports. Unless otherwise specified, all references to “Transition Plan” in this report are to the most recently updated Transition Plan filed on September 30, 2021.³

This report provides a comprehensive summary of the actions taken with respect to the customer services, SES-associated incumbent earth station (“IES”) operators, and vendors. The format of this report includes topics that we expect to report on and update over the course of the transition. Therefore, this report contains items for which there is no updated information at this time. We will provide any available updates in future reports.

I. Overview

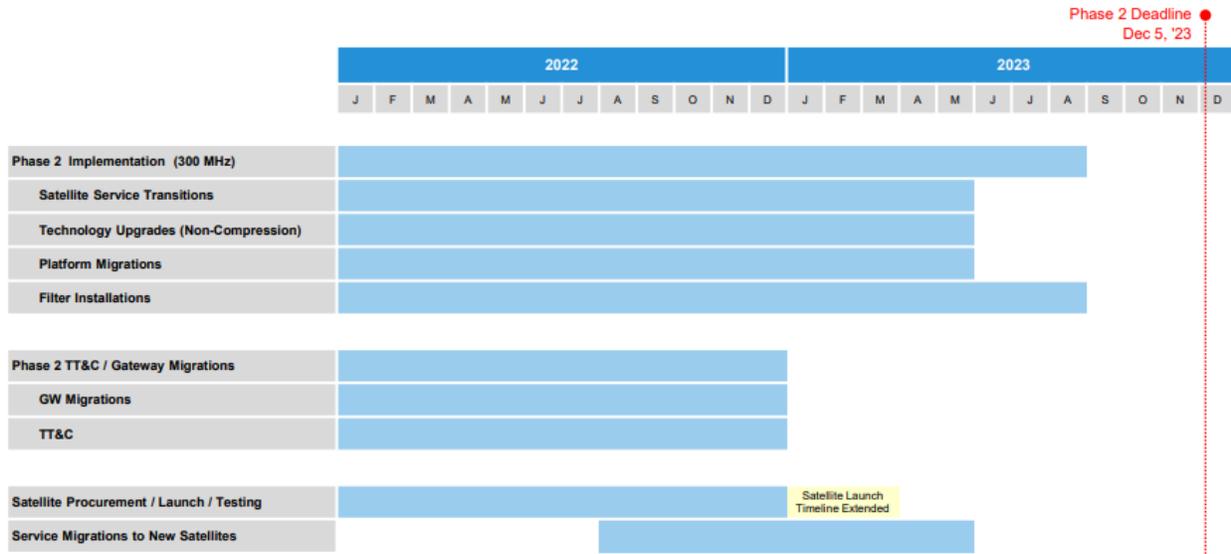
A. Successes

We remain on track and in some cases ahead of schedule for completing our Phase II transition activities in advance of the December 5, 2023 clearing deadline. The below graphic sets out the high-level Phase II transition timeline.

¹ *Expanding Flexible Use of the 3.7 to 4.2 GHz Band*, Report and Order and Order of Proposed Modification, 35 FCC Rcd 2343, ¶ 316 (2020) (“C-band Report and Order”); 47 C.F.R. § 27.1412(f).

² Letter from Brian D. Weimer, Counsel, SES Americom, Inc., to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 18-122 & 20-173 (filed Aug. 14, 2020).

³ Letter from Brian D. Weimer, Counsel, SES Americom, Inc., to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 18-122 & 20-173 (filed Sept. 30, 2021).



Phase II Transition Timeline

We have completed approximately 68% of the Phase II satellite transitions, which include broadcast TV, cable network services, and other services being received in the 3820-4000 MHz range.

Our installers have completed the installation of blue bandpass filters at approximately 65% of the IES locations associated with SES satellites. We have installed nearly 100% of the antennas associated with our Phase II transition schedule.

As previously reported, all SES-associated IESs designated to receive compression equipment have received their equipment, including IESs receiving services between 3820-4000 MHz. At this point, SES does not envision further compression technology upgrades. All compressed services were transitioned by October 31, 2021. SES continues other non-compression technology upgrade activities related to downlinks and terrestrial backhaul services from the Hawley, PA gateway to IES locations for satellite services SES is unable to migrate above 4000 MHz. SES also continues to support customer satellite service transitions out of its teleports with satellite turnaround services when customers do not have the ability to uplink simultaneously two signals for dual illumination.

Filter installation can only occur after all of the services received by the IES in the range of 3700-4000 MHz have been fully transitioned on the satellite. As noted in our Transition Plan, in some cases we installed filters for IESs subject to Phase II during our Phase I activities because they were already operating above 4000 MHz. As SES is continuing to transition satellite services, we will continue to install filters on any IES that has completed the satellite transition process.

TT&C / Gateway antenna construction and other upgrades are complete. The last task is to install the permanent shelter in the Brewster, WA facility, which is expected to arrive by the

end of December 2022.

Gateway services (i.e., platforms and SES-provided customer uplinks/downlinks) associated with Phase II are complete.

On October 4, 2022, SES successfully launched SES-20 and SES-21 from the Cape Canaveral Space Force Station. SES-21 began service at 131° W.L. on December 1, 2022, at which time SES began transitioning services to the new satellite. SES-20 is on track to arrive at 103° W.L. by the end of December where it will operate as an in-orbit spare. Upon the arrival of SES-20 at its orbital slot, SES will have met its transition milestone of three C-band transition satellites deployed in space by the end of 2022.

As described in the Transition Plan, SES has always intended to launch the first satellites that became available to meet its satellite replacement schedule.⁴ While SES expected to launch SES-18 and SES-19 in 2022, this launch has now been scheduled for between March 6, and March 12, 2023 due to delays from the original Northrop Grumman delivery, and priority of US government launches. As a direct result of these delays affecting SES-18 and SES-19, SES needed to launch SES-22, which became available for launch in June 2022. Assuming the launch schedule for SES-18 and SES-19 is maintained, SES expects SES-18 and SES-19 to commence operations by the end of April 2023.

We have continued our partnerships with various stakeholders, including customers—individually and through trade associations—and earth station operator associations to communicate our transition plans, address questions and concerns, and reiterate near-term transition activities. Specifically, we continue to work with numerous radio, cable, and broadcasting associations to communicate the latest moves regarding the C-band transition. A number of associations have agreed to post information on their websites and newsletters, including NCTC, ACA Connects (America’s Communications Association), NAB (National Association of Broadcasters), and NRB (National Religious Broadcasters). We have also presented our transition progress on a monthly basis to members of the Technical Working Group #2, which includes dozens of customers and IES operators. ACA Connects conducts monthly webinars at which SES representatives present status and upcoming activities to ACA Connects members and address any questions and concerns they may have. Additionally, ACA Connects and SES have an ongoing dialog to address specific member questions and concerns outside of the regularly scheduled webinars. In all cases where we have presented material to groups of stakeholders, IES operators that elected to accept the lump sum relocation payment were invited and received all of the same information about SES’s transition process and timing as all other SES-associated IES operators. We have a helpdesk and email address to answer questions and concerns. SES has also resumed participation in industry events as a result of relaxed COVID-19 restrictions, including the NAB Show in New York in October 2022. Additionally, SES plans to participate in two industry events in the upcoming quarter: the ACA Connects Summit in late February / early March, and Satellite 2023 in March, both of which are

⁴ Transition Plan at 10.

in Washington, DC.

SES continues to engage on a weekly basis with RSM US LLP in its role as the Relocation Coordinator in coordination with other satellite operators.

B. Risks/Challenges

Satellite Manufacturing Risk: As is typical in satellite procurements, industry-wide issues concerning the reliability of certain components and their testing can arise. This is no different for the satellites under procurement as mentioned in this report. As previously noted, some manufacturing and launch delays outside of SES's control have affected the delivery schedule for SES-18 and SES-19. SES was able to mitigate these delays by launching SES-22 on June 29, 2022. As a result of this mitigation, the clearing schedule in the Transition Plan is slightly altered but remains on track to satisfy the Phase II transition deadline.

COVID-19 Related Risks: Thanks in part to launching SES-22 on June 29, 2022, at this time, SES remains on schedule to meet its Phase II clearing obligations. However, as noted in our prior quarterly reports, in addition to the satellite manufacturing risks mentioned above, COVID-19 is impacting our satellite manufacturing programs. All satellite manufacturers have received notifications from some of their subcontractors indicating that the COVID-19 pandemic has impacted their production capabilities, and consequently, the component forecast delivery dates are delayed. SES continues to work with satellite manufacturers and launch service providers to reduce the impacts of such delays.

Other Risks: In addition to the risks described in our Transition Plan, such as the risk of launch failure or other operational issues with our C-band transition satellites, we continue to experience delayed responses from some IES operators when we or our installers contact them to verify antenna details at their sites or schedule antenna and/or filter installations. The delayed response from these IES operators has not, at this point, caused a delay in the clearing schedule. In the event a delayed response could impact our ability to complete our Phase II clearing activities on time, we may need to raise any residual lack of responses with the Relocation Coordinator and the FCC. We continue to experience delays in the earth station licensing process. Due to delays in the approvals, we are operating on sequential Special Temporary Authority.

C. Requests for FCC Assistance/Intervention

At this time, we are not requesting any assistance or intervention from the Commission related to SES's clearing activities. In the event the non-responsive IES operators described above do not provide a response to our further outreach, we will engage the Relocation Coordinator and may ultimately ask the Commission for assistance in either confirming the operating status of any of the IES operators or removing them from the Commission's list of

Incumbent Earth Stations.⁵

D. Other Observations

At this time, we have no further observations on the clearing process.

II. Satellite Manufacture and Launch Procurement

As described in SES's Transition Plan, SES needed to procure in total six satellites to complete the transition in a timely manner—four C-band transition satellites and two “ground spares” to be launched in the event delivery of one or more of the C-band transition satellites is substantially delayed, or any of the satellites experience a launch or in-orbit failure. Of the four C-band transition satellites needed to complete SES's clearing obligations, at least three of these satellites must be on station and operating nominally by the end of 2022 so that SES has sufficient time to repack existing services to the upper portion of the C-band and install all necessary filters in advance of the December 5, 2023 accelerated clearing deadline. SES also plans to start operations on the fourth C-band transition satellite in 2023 to ensure a smooth transition of services from SES-3.

SES contracted with Boeing, Northrop Grumman, and Thales to manufacture the six necessary spacecraft. The satellites will be launched in the order they are completed with the first operating at 135° W.L. (SES-22), the second operating at 131° W.L. (SES-21), the third located as an in-orbit spare at 103° W.L. (SES-20), and the last to be operated at 103° W.L. (either SES-18 or SES-19).⁶ The order of operation is slightly revised from that described in the Transition Plan. This change is necessary, however, to account for manufacturing and launch delays affecting SES-18 and SES-19.

The availability of SES-22 on time has proven critical for SES to meet its transition milestone of three C-band transition satellites operational in space by the end of 2022, thus allowing SES to maintain its Phase II clearing schedule. As previously reported, SES-18 and SES-19 have experienced a series of manufacturing and launch delays. The earliest available launch opportunity for SES-18 and SES-19 is now Q1 2023. Assuming this launch schedule is maintained, SES-18 and SES-19 will not be commercially available until the beginning of Q2 2023. Given these delays, SES needed to launch SES-22 to meet its basic requirement of three C-band transition satellites operating in space by the end of 2022.⁷ With the launch of SES-22, SES was able to begin transitioning services from the center of the arc to the upper C-band

⁵ See *International Bureau Releases Updated List of Incumbent Earth Stations in the 3.7-4.2 GHz Band in the Contiguous United States*, IB Docket No. 20-205 & GN Docket No. 20-305 (rel. Dec. 9, 2022).

⁶ The in-orbit spare satellite at 103° W.L. is necessary to provide contractual service protections in the event SES experiences an in-orbit failure of one of the SES satellites delivering C-band service to the United States during the transition. If such a loss occurs, the in-orbit spare will be available to continue service and reduce the likelihood of a prolonged service outage. In this regard, SES reiterates that it has contractual commitments to customers that can only be satisfied through the provision of the in-orbit spare satellite at 103° W.L.

⁷ As previously reported, SES launched SES-22 to 135° W.L. on June 29, 2022 where it started operations on August 2, 2022.

frequencies, thereby protecting the overall transition timing.⁸ SES expects to complete service transitions from the center of the arc to 135° W.L. by January 2023.

On October 4, 2022, SES successfully launched SES-20 and SES-21 from the Cape Canaveral Space Force Station. SES-21 began service at 131° W.L. on December 1, 2022, at which time SES began transitioning services to the new satellite. SES-20 is on track to arrive at 103° W.L. by the end of December where it will operate as an in-orbit spare.

Additionally, the two ground spare satellites continue to be an integral part of the SES Transition Plan to ensure we can meet our clearing obligations in the event one or more of the C-band transition satellites experience a launch or technical issue that makes them inoperable, or SES-18 and SES-19 experience further delays impacting our overall transition timeline. The first ground spare satellite (designated SES-22 in our Transition Plan) has already proved necessary to ensure our timely deployment of three C-band transition satellites by the end of 2022. The second ground spare satellite (designated SES-23 in our Transition Plan) continues to be needed to mitigate the risk of a dual launch or deployment failure affecting SES-18 and SES-19.⁹

Construction by Thales of SES-23 began on June 1, 2021. SES expects SES-23 to be delivered in March 2023. Subject to the successful launch and deployment of four C-band transition satellites, two satellites procured under SES's Transition Plan may become unused.¹⁰ SES is in discussions with the Relocation Payment Clearinghouse as to the appropriate mechanism for realizing the value of any satellites that may no longer be necessary for the relocation process.

The FCC has granted SES authority to launch and operate SES-18, SES-19, SES-20, SES-21, and SES-22.¹¹ We have filed fleet management notices for SES-20 and SES-21 to reflect their new orbital locations,¹² and we will modify the remaining authorizations to the extent necessary to reflect our revised launch plan.

⁸ The number of IESs requiring clearing in Phase II is approximately 2.5x that of Phase I. Accordingly, it is critical SES maintains its Phase II transition timeline, as additional time will be needed for the clearing. The placement of SES-22 at 135° W.L. in early August 2022 greatly reduced the associated schedule risks and allows for timely clearing of the spectrum in advance of the December 5, 2023 accelerated clearing deadline.

⁹ As explained in our Transition Plan, two ground spare satellites are necessary to address the risk that two C-band transition satellites are lost due to a dual launch failure or technical malfunction. Now that SES has successfully deployed three out of the four C-band transition satellites needed to complete its Transition Plan, SES continues to rely on two spare satellites to address any in-orbit failure of the three C-band transition satellites and/or the possibility of launch or deployment failure affecting SES-18 and SES-19. SES reiterates that its chosen approach of procuring six satellites and three launchers—two dual launches and one single launch—is the least cost/least risky approach to accomplishing the C-band transition.

¹⁰ SES's transition costs are being incurred in reliance on its Transition Plan. *See Wireless Telecommunications Bureau Opens Window for Eligible C-band Satellite Operators to Account for Final Phase I Updates to Their Transition Plans*, Public Notice, GN Docket No. 18-122 and GN Docket No. 20-173, DA 21-1100, 3 n.13 (noting that satellite operators may “rely” on their transition plans in carrying out transition activities).

¹¹ *See* IBFS File Nos. SAT-RPL-20210812-00099, SAT-RPL-20210812-00100, SAT-RPL-20210812-00101, SAT-RPL-20210812-00102 (granted Mar. 14, 2022), and SAT-LOA-20220315-00030 (granted June 16, 2022).

¹² *See* IBFS File Nos. SAT-MOD-20220819-00089 & SAT-MOD-20220819-00090 (filed Aug. 19, 2022).

As previously reported, we have also signed contracts with ULA and SpaceX to launch the SES-18, SES-19, SES-20, SES-21 and SES-22 C-band satellites. The launcher for SES-23 has not been contracted.

III. Satellite Service Migrations

We have completed approximately 68% of our Phase II service transitions on our satellites. Based on our performance in the completion of our Phase I service transitions, we anticipate completing all Phase II service transitions on time and in accordance with our overall timelines as reflected in our Transition Plan.

IV. Compression Technology

As previously reported, all compression activities were completed as of October 31, 2021. At this time, we do not envision any additional compression technology requirements.

V. Incumbent Earth Station Migration

SES continues to conduct virtual site surveys of IESs subject to our Phase II activities. The virtual site survey process identifies the individual needs of each IES site, the quantity and configuration of antennas accessing SES satellites, and any other relevant information needed in order for SES to prepare the sites for satellite service transitions and the eventual installation of passband filters. Additionally, in cases where the performance of an antenna (primarily antennas with multiple feeds and undersized antennas) must be assessed to determine if that antenna can support a higher adjacent satellite interference environment associated with the repacked satellite spectrum, we will be conducting individualized on-site testing at the IES sites. Installation technicians measure and record antenna performance metrics whenever possible before and after filter installation to ensure that each antenna is able to receive substantially the same or better service during and after the transition.

A number of filters were installed for IESs subject to Phase II during our Phase I activities for those IESs that were already operating above 4000 MHz. As SES continues to transition satellite services, we will continue to install filters on any IES that has completed the satellite transition process. As of the end of the reporting period, we have installed filters at approximately 65% of the IES locations identified for Phase II clearing.

We have installed nearly 100% of the new antennas we anticipate will be needed to complete the Phase II transition. We will continue to identify IESs that require new antennas through our outreach efforts.

A detailed list of SES-associated IES records, which excluded the Commission's final list of IESs that are subject to a successful lump sum election, is included in Appendix C to our Transition Plan. We will continue outreach activities on the most current list of IES records

provided by the FCC.¹³

VI. TT&C/Gateway Construction/Service Transition

Construction of our TT&C/Gateway facilities in Brewster, WA, and Hawley, PA, remains on target. Activities required for Phase II are on track. The full motion TT&C antenna installations, along with the associated ground equipment, are complete at Hawley and are near completion at Brewster. Currently, both full motion TT&C antennas are in operation and supporting TT&C operations for SES's C-band satellites. The antenna installed in the Brewster facility is also being utilized to support in-orbit testing of the new C-band transition satellites.

All four gateway antenna systems planned for the Hawley facility have been fully installed, tested, and put into operation. As of the end of the reporting period, all Phase II gateway services have been transitioned.

All services from international satellites received at SES teleports that could not be relocated to frequencies above 3820 MHz have now been transitioned to the Hawley facility.

Phase II TT&C antenna construction and the modification of existing antennas to be utilized for TT&C purposes for the new C-band spacecraft have been completed at SES's Hawley, Manassas, Woodbine, South Mountain, and Hawaii locations. The overall project schedules remain on track.

As noted in our prior quarterly reports, we have successfully established contractual arrangements with USEI at Brewster, WA, to host a full motion TT&C antenna to support SES's TT&C needs. The antenna foundation, shelter foundation, and propane tank foundations have been poured at the Brewster facility. The antenna has been delivered, erected, and put into operation. All associated electrical work at the Brewster facility is progressing in accordance with the schedule. Final connections await the delivery of the permanent shelter. The permanent equipment shelter is scheduled to be delivered to the Brewster site in late December depending on the weather. Installation and operation of the permanent equipment shelter is expected to occur generally in conjunction with the launch of SES-18 and SES-19 in 2023. In the interim, we have utilized a temporary shelter at the site to install a single thread configuration of equipment that has allowed us to put the antenna into operation. All of the communications equipment is at the site ready to be integrated into the permanent shelter.

VII. Costs

A. Costs Submitted for Reimbursement/Paid to Date

During the period covered by this report, we submitted approximately \$10 million in reimbursement claims. We did not receive any reimbursed costs during this same period. This

¹³ *International Bureau Releases Updated List of Incumbent Earth Stations in the 3.7-4.2 GHz Band in the Contiguous United States*, IB Docket No. 20-205 & GN Docket No. 20-305 (rel. Dec. 9, 2022).

results in a total outstanding requested amount of approximately \$653 million.

B. Updates to Estimates

SES continues to incur interest and financing charges related to its outstanding reimbursement claims. Through the end of the reporting period, SES has incurred approximately \$49 million of interest and financing charges. These costs continue to accumulate at approximately \$110,000 per day.

VIII. Updates to Transition Timeline

We have advanced the start of the service migrations to the new satellites as reported in our Transition Plan to reflect the availability of SES-22. The service migrations to SES-22 began in August 2022 and are expected to be completed by January 2023.