

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
EchoStar 77 Corporation)	Call Sign E050196
)	
Application to Modify Blanket Earth Station)	File No. SES-MFS-2013_____
License to Add QuetzSat-1, a Mexican-Licensed)	
DBS Satellite at 77.0° W.L., as a Point of)	
Communication)	

APPLICATION TO MODIFY BLANKET EARTH STATION AUTHORITY¹

EchoStar 77 Corporation (“EchoStar 77”) hereby requests to modify its authority to operate 1,000,000 receive-only earth stations in the United States to receive Direct Broadcast Satellite (“DBS”) service from the nominal 77° W.L. orbital location allotted by the International Telecommunication Union (“ITU”) to Mexico. Specifically, EchoStar 77 seeks to modify its existing authority to communicate with QuetzSat-1 – a Mexican-licensed DBS satellite – at 77.05° W.L.² to reflect the satellite’s pending relocation to 77.0° W.L.³ EchoStar 77 also

¹ In addition to this application, EchoStar 77’s affiliate, EchoStar Broadcasting Corporation (“EchoStar Broadcasting”), is separately applying to modify a number of its DBS feeder link earth station licenses (Call Signs E080058, E980174, and E980180) to enable EchoStar Broadcasting to provide telemetry, tracking and control (“TT&C”) for the satellite and to uplink programming to the QuetzSat-1 satellite while at 77.0° W.L.

² See File No. SES-MFS-20110707-00793, Call Sign E050196 (granted Nov. 10, 2011); File No. SES-AMD-20110809-00937, Call Sign E050196 (granted Nov. 10, 2011).

³ To meet the requirements of 47 C.F.R. § 25.137, EchoStar 77 incorporates by reference the Technical Annex and Schedule S describing the physical and operational characteristics of the QuetzSat-1 satellite from its application to add QuetzSat-1 at 77.05° W.L. as a point of communication, as the 0.05 degree change in orbital location does not materially affect this information. See Narrative at Attachment 2 and Schedule S, File No. SES-MFS-20110707-00793, Call Sign E050196 (granted Nov. 10, 2011).

requests, to the extent necessary, a waiver of Sections 25.215 and 25.210(i)(1) of the Commission's rules⁴ to operate with QuetzSat-1 at 77.0° W.L. with less than 30 dB cross-polarization isolation over certain regions. For the reasons set forth herein, grant of this application will serve the public interest, will not cause any harmful interference, and is fully consistent with the Commission's *DISCO II* policies.⁵

I. BACKGROUND

The nominal 77° W.L. orbital location is allotted to Mexico under the Region 2 Broadcasting-Satellite Service ("BSS") plan set forth in Appendices 30 and 30A to the international Radio Regulations.⁶ Currently, three satellites operate under Mexican authority at the nominal 77° W.L. orbital location – QuetzSat-1,⁷ EchoStar 1,⁸ and EchoStar 8.⁹

These satellites operate pursuant to a concession granted by Mexican authorities to QuetzSat, S. de R.L. de C.V. ("QuetzSat"), a Mexican company.¹⁰ QuetzSat has an arrangement

⁴ 47 C.F.R. §§ 25.215, 25.210(i)(1).

⁵ See *Amendment of the Commission's Policies to Allow Non-U.S. Licensed Space Stations Providing Domestic and International Service in the United States*, 12 FCC Rcd. 24094 (1997) ("*DISCO II*").

⁶ International Telecommunication Union, Radio Regulations App. 30 (2012).

⁷ See File No. SES-MFS-20110707-00793, Call Sign E050196 (granted Nov. 10, 2011); File No. SES-AMD-20110809-00937, Call Sign E050196 (granted Nov. 10, 2011) (adding QuetzSat-1 at 77.05° W.L. as a point of communication).

⁸ See File No. SES-LFS-20090130-00106, Call Sign E090020 (granted Sept. 16, 2010) (blanket earth station license to receive DBS service from EchoStar 1 at 77.15° W.L.).

⁹ See File No. SES-MFS-20121203-01052, Call Sign E080120 (granted Mar. 28, 2013) (adding EchoStar 8 at 76.90° W.L. as a point of communication).

¹⁰ See Secretariat of Communications and Transportation Vice-Ministry of Communications, Concesion Para Ocupar La Posicion Orbital Geoestacionaria 77° Oeste Asignada al Pais y Explotar Sus Respectivas Bandas de Frecuencias 12.2 – 12.7 GHz y 17.3-17.8 GHz, Asi como

with SES Latin America, S.A. (“SES-LA”) and SES, S.A. (collectively, “SES”) to jointly develop the 77° W.L. slot. In 2011, EchoStar 77 sought and obtained blanket earth station authority to communicate with QuetzSat-1 at 77.05° W.L., anticipating that the satellite would operate there while other satellites in the cluster were relocated to accommodate interim operations in the cluster.¹¹ QuetzSat-1 arrived at 77.05° W.L. on January 11, 2012, and shortly thereafter began broadcasting to customers in Mexico and the United States. QuetzSat-1 will be moved to the 77.0° W.L. to position the satellite consistent with the underlying plan assignment.¹² This will have no customer impact.

QuetzSat-1 operates under the control of QuetzSat and will continue to provide service over 32 DBS transponders covering the continental United States (“CONUS”), Mexico, and Central America. EchoStar 77 has contracted with QuetzSat and SES for the entire DBS service capacity of QuetzSat-1, which EchoStar 77 will continue to make available to its customers, DISH Network L.L.C. (“DISH”) and DISH Mexico, for direct-to-home (“DTH”) television services in the United States and Mexico. EchoStar 1 and EchoStar 8 currently operate as active spares for the 77° W.L. orbital cluster. No customers will be affected by the QuetzSat-1 move, and no service interruptions are anticipated during the move itself.

los Derechos de Emision y Recepcion de Señales (granted February 2, 2005) (“77° W.L. BSS Concession”), *filed in* File No. SAT-STA-20080311-00068 (English translation).

¹¹ *See* Narrative at Attachment 2, File No. SES-MFS-20110707-00793, Call Sign E050196 (granted Nov. 10, 2011).

¹² *See* Letter from Pantelis Michalopoulos and Christopher Bjornson, Counsel for EchoStar 77 Corporation, to Marlene Dortch, Secretary, FCC, *filed in* File No. SES-MFS-20110707-00793, Call Sign E050196 (filed Nov. 8, 2011) (“[S]ince the stay of QuetzSat-1 at 77.05° W.L. is currently estimated to take six months or more after the arrival of the satellite at the 77° W.L. cluster, EchoStar is prepared to accept an authorization for 77.05° W.L. now, and will request any necessary further authority prior to a move to 77.0° W.L.”).

II. THIS APPLICATION IS LEGALLY AND TECHNICALLY COMPLETE

Operations with QuetzSat-1 located at 77.0° W.L. will continue to meet all the legal and technical requirements of Part 25 of the Commission's rules except to the extent of any waiver requested herein and granted by the Commission. The technical information submitted with EchoStar 77's original request to operate its blanket earth station authority with QuetzSat-1 remains valid, including the interference analysis, and EchoStar 77 hereby incorporates by reference the Technical Annex and the Schedule S submitted with that application into this filing.¹³ With respect to the geographic service requirements in Section 25.148(c) of the Commission's rules,¹⁴ DBS service to Alaska and Hawaii is not technically feasible from the 77° W.L. orbital location, as the Commission recognized in granting EchoStar's request for authority to transfer the EchoStar 8 satellite to QuetzSat for re-flagging under Mexican authority.¹⁵

Waiver Requested. The operation of the QuetzSat-1 satellite is consistent with the technical requirements of Part 25 of the rules in all but one respect — the cross-polarization isolation over certain regions is less than the minimum 30 dB required by Sections 25.215 (for DBS) and 25.210(i)(1) (for Fixed-Satellite Service) of the Commission's rules.¹⁶ Accordingly, EchoStar 77 requests a waiver of Sections 25.215 and 25.210(i)(1) of the Commission's rules to permit operation of QuetzSat-1 with the same limits of cross polarization isolation performance

¹³ See Schedule S and Narrative at Attachment 2, File No. SES-MFS-20110707-00793, Call Sign E050196 (granted Nov. 10, 2011).

¹⁴ 47 C.F.R. § 25.148(c).

¹⁵ See Radio Station Authorization, File No. SAT-T/C-20090217-00026 (granted Sept. 17, 2010).

¹⁶ 47 C.F.R. § 25.215; 47 C.F.R. § 25.210(i).

as in the original modification application to add QuetzSat-1 at 77.05° W.L. as a point of communication:¹⁷

- West Antenna: 26.5 dB in CONUS; 26.2 dB outside CONUS.
- East Antenna: 25.2 dB in CONUS to the extent required.

The above parameters represent the worst-case scenarios of cross-polarization isolation performance. For most of the transponders providing service over most of the coverage area, performance will meet Commission requirements. It is only certain transponders over certain regions, usually nearer the edges of the coverage region, where cross-polarization isolation will fall below 30 dB as described below. The shortfall will not create any harmful interference into adjacent, co-frequency DBS orbital slots, the nearest of which is in excess of four degrees away at 72.7° W.L. and is operated pursuant to the direction of EchoStar Satellite Operating Corporation.¹⁸

The Commission may waive its rules for good cause.¹⁹ Here, the same good cause exists as in the original grant and waiver.²⁰ The International Bureau has granted similar waivers when the impact on neighboring satellite networks is negligible, and the only party suffering increased interference is the satellite operator itself.²¹ The Bureau explained in one case, “[l]icensees may

¹⁷ See Narrative at 2, File No. SES-AMD-20110809-00937, Call Sign E050196 (granted Nov. 10, 2011).

¹⁸ This creates only insubstantial amounts of self-interference that have already been factored into the submitted link budgets shown in the Technical Annex and Schedule S.

¹⁹ See 47 C.F.R. § 1.3; *WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969).

²⁰ See File No. SES-MFS-20110707-00793, Call Sign E050196 (granted Nov. 10, 2011); File No. SES-AMD-20110809-00937, Call Sign E050196 (granted Nov. 10, 2011).

²¹ DIRECTV Enterprises LLC, *Order and Authorization*, 20 FCC Rcd. 15778, 15779 ¶ 7 (2005) (waiving Section 25.215 when the cross-polarization isolation of DIRECTV 5’s DBS antennas

use cross-polarization isolation different from that specified for the Region 2 BSS Plan if they demonstrate that such a difference does not result in interference to other operational or planned systems, including U.S. licensed systems.”²² Accordingly, consistent with Commission precedent, a waiver of Sections 25.215 and 25.210(i)(1) of the Commission’s rules is warranted here.

III. GRANT OF THIS APPLICATION IS IN THE PUBLIC INTEREST

The grant of this application is in the public interest for the reasons set forth in the original application to add QuetzSat-1 as a point of communication, which is incorporated herein by reference.²³ Grant of this application will ensure the continuation of programming services currently available to thousands of U.S. consumers, including high definition television services.

IV. GRANT OF THIS APPLICATION WILL NOT CAUSE HARMFUL INTERFERENCE

The grant of this application will not present any significant risk of harmful interference to other U.S. and non-U.S. satellites as set forth in the original application to add QuetzSat-1 as a point of communication.²⁴ There is no DBS orbital location in the vicinity of 77° W.L. that is assigned to the United States (the closest is 61.5° W.L.), and as demonstrated in the Technical Annex and Schedule S of the original modification application, there will be no harmful

was typically 27 dB over the satellite’s primary coverage area); *see also* EchoStar Satellite Operating Corporation, *Order and Authorization*, 21 FCC Rcd. 14780 ¶ 8 (2006) (“*EchoStar 9 Lower Ka-band Order*”); Star One S.A., *Order*, 19 FCC Rcd. 16334 ¶ 12 (2004); New Skies Satellites N.V., *Order*, 17 FCC Rcd. 10369 ¶ 19 (2002).

²² DIRECTV Enterprises LLC, 20 FCC Rcd. at 15779 ¶ 7.

²³ *See* Narrative, File No. SES-MFS-20110707-00793, Call Sign E050196 (granted Nov. 10, 2011).

²⁴ *Id.*

interference from the operation of QuetzSat-1 at the nominal 77° W.L. orbital location with any satellites operating at the 72.5° W.L.²⁵ or 82° W.L. orbital slots assigned to Canada. There is an existing coordination agreement between Mexico and Canada addressing interference issues regarding the Mexican 77° W.L. orbital location, and EchoStar 77 will work with QuetzSat to ensure that the operation of QuetzSat-1 complies with that agreement and future coordination agreements.

V. GRANT OF THIS APPLICATION IS CONSISTENT WITH THE COMMISSION'S *DISCO II* POLICIES

Grant of this application is consistent with the Commission's *DISCO II* policies for the reasons set forth in the original application to add QuetzSat-1 as a point of communication.²⁶ Under its *DISCO II* framework, the Commission evaluates whether the provision of service into the United States from a foreign-licensed satellite will serve the public interest. The *DISCO II* analysis includes consideration of a number of factors, including the effect on competition in the United States; eligibility and operating requirements; spectrum availability; and national security, law enforcement, foreign policy, and trade concerns.²⁷

The United States and Mexico have a bilateral agreement in place related to the provision of Direct-to-Home ("DTH") service.²⁸ Under *DISCO II*, such a bilateral agreement "acts as a

²⁵ The only satellite operating in the 72.5° W.L. cluster is the Nimiq 5 satellite at 72.7° W.L. EchoStar has leased the entire capacity of Nimiq 5 for U.S. DBS services.

²⁶ See Narrative, File No. SES-MFS-20110707-00793, Call Sign E050196 (granted Nov. 10, 2011).

²⁷ See *DISCO II*, 12 FCC Rcd at 24107-72.

²⁸ See Agreement between the Government of the United States of America and the Government of the United Mexican States Concerning the Transmission and Reception from Satellites for the Provision of Satellite Services to Users in the United States of America and the United Mexican States (Apr. 28, 1996); Article I and Protocol Concerning the Transmission and Reception of

gateway to, and a guarantee of, increased competition in the two countries at both ends of the agreement.”²⁹ Therefore, in cases such as this one, in which U.S. earth stations seek to communicate with a Mexican-flagged space station, the Commission assumes that the application would enhance competition and “no further market access analysis is required.”³⁰ Finally, EchoStar 77 has demonstrated compliance with the Commission’s eligibility and operating requirements.³¹ There are no spectrum availability, national security, law enforcement, foreign policy, or trade concerns that have arisen since the original application to add QuetzSat-1 was initially granted that would warrant different treatment.

VI. CONCLUSION

For the foregoing reasons, EchoStar 77 respectfully requests that the Commission grant this application to add QuetzSat-1, operating at 77.0° W.L. as a Mexican-licensed satellite, as a point of communication for EchoStar 77’s blanket earth station, and waive the cross-polarization requirements set forth in Sections 25.215 and 25.210(i)(1) of the Commission’s rules to the extent requested herein.

Signals from Satellites for the Provision of Direct-to-Home Satellite Services in the United States of America and the United Mexican States (Nov. 8, 1996).

²⁹ *DISCO II*, 12 FCC Rcd. at 24157 ¶ 143.

³⁰ See EchoStar Satellite L.L.C., *Order and Authorization*, 21 FCC Rcd. 44077, 4080 ¶ 8 n.20 (2006).

³¹ See Technical Annex and Schedule S, File No. SES-MFS-20110707-00793, Call Sign E050196 (granted Nov. 10, 2011).

Respectfully submitted,

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