UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

FOR THE QUARTERLY PERIOD ENDED MARCH 31, 2023.

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

FOR THE TRANSITION PERIOD FROM TO .

Commission File Number: 001-39144

DISH Network Corporation
(Exact name of registrant as specified in its charter)

Nevada (State or other jurisdiction of incorporation or organization)	**88-0336997** (I.R.S. Employer Identification No.)
9601 South Meridian Boulevard **Englewood, Colorado** (Address of principal executive offices)	**80112** (Zip code)

(303) 723-1000
(Registrant's telephone number, including area code)

Not Applicable
(Former name, former address and former fiscal year, if changed since last report)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Class A common stock, $0.01 par value	DISH	The Nasdaq Stock Market L.L.C.

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☒	Accelerated filer ☐
Non-accelerated filer ☐	Smaller reporting company ☐
	Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of April 25, 2023, the registrant's outstanding common stock consisted of 294,172,528 shares of Class A common stock and 238,435,208 shares of Class B common stock.

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PART I — FINANCIAL INFORMATION

DISCLOSURE REGARDING FORWARD-LOOKING STATEMENTS

Unless otherwise required by the context, in this report, the words "DISH Network," the "Company," "we," "our" and "us" refer to DISH Network Corporation and its subsidiaries, "EchoStar" refers to EchoStar Corporation and its subsidiaries, and "DISH DBS" refers to DISH DBS Corporation, a wholly-owned, indirect subsidiary of DISH Network, and its subsidiaries.

This Quarterly Report on Form 10-Q contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, including, in particular, statements about our plans, objectives and strategies, growth opportunities in our industries and businesses, our expectations regarding future results, financial condition, liquidity and capital requirements, our estimates regarding the impact of regulatory developments and legal proceedings, and other trends and projections. Forward-looking statements are not historical facts and may be identified by words such as "future," "anticipate," "intend," "plan," "goal," "seek," "believe," "estimate," "expect," "predict," "will," "would," "could," "can," "may," and similar terms. These forward-looking statements are based on information available to us as of the date of this Quarterly Report on Form 10-Q and represent management's current views and assumptions. Forward-looking statements are not guarantees of future performance, events or results and involve known and unknown risks, uncertainties and other factors, which may be beyond our control. Accordingly, actual performance, events or results could differ materially from those expressed or implied in the forward-looking statements due to a number of factors, including, but not limited to, those summarized below:

SUMMARY OF RISK FACTORS

Competition and Economic Risks

- We face intense and increasing competition from providers of video, broadband and/or wireless services, which may require us to further increase subscriber acquisition and retention spending or accept lower subscriber activations and higher subscriber churn.
- Changing consumer behavior and new technologies in our Pay-TV business may reduce our subscriber activations and may cause our subscribers to purchase fewer services from us or to cancel our services altogether, resulting in less revenue to us.
- We face certain risks competing in the wireless services industry and operating a facilities-based wireless services business.
- Our pay-TV competitors may be able to leverage their relationships with programmers to reduce their programming costs and/or offer exclusive content that will place them at a competitive advantage to us.
- Through the MNSA and the NSA, we depend on T-Mobile and AT&T in providing network services to our Wireless subscribers. Our failure to effectively manage these relationships, including without limitation, our minimum commitments, any system failure in their wireless networks, interruption in the services provided to us, and/or the termination of the MNSA or the NSA could have a material adverse effect on our business, financial condition and results of operations.
- Changes in how network operators handle and charge for access to data that travels across their networks could adversely impact our Pay-TV business.
- Economic weakness and uncertainty may adversely affect our ability to grow or maintain our business.

COVID-19 Pandemic

- The COVID-19 pandemic and its impact on the economic environment generally, and on us specifically, have adversely impacted our business. Furthermore, any continuation or worsening of the pandemic and the economic environment could have a material adverse effect on our business, financial condition and results of operations.

Operational and Service Delivery Risks

- Any deterioration in our operational performance and subscriber satisfaction could adversely affect our business, financial condition and results of operations.
- If our subscriber activations decrease, or if our subscriber churn rate, subscriber acquisition costs or retention costs increase, our financial performance will be adversely affected.
- With respect to our Pay-TV business, programming expenses are increasing, which may adversely affect our future financial condition and results of operations.
- We depend on others to provide the programming that we offer to our Pay-TV subscribers and, if we fail to obtain or lose access to certain programming, our Pay-TV subscriber activations and our subscriber churn rate may be negatively impacted.
- We may not be able to obtain necessary retransmission consent agreements at acceptable rates, or at all, from local network stations.
- We have experienced and may continue to experience cyber-attacks or other malicious activities that disrupted or may continue to disrupt our business and any future failure or disruption of our information technology infrastructure and communications systems or those of third parties that we use in our operations, could harm our business.
- Extreme weather may result in risk of damage to our infrastructure and therefore our ability to provide services, and may lead to changes in federal, state and foreign government regulation, all of which could materially and adversely affect our business, results of operations and financial condition.
- Our failure to effectively invest in, introduce, and implement new competitive products and services could cause our products and services to become obsolete and could negatively impact our business.
- We rely on a single vendor or a limited number of vendors to provide certain key products or services to us, and the inability of these key vendors to meet our needs could have a material adverse effect on our business.
- We depend on independent third parties to solicit orders for our services that represent a meaningful percentage of our total gross new subscriber activations.
- We have limited satellite capacity and failures or reduced capacity could adversely affect our business, financial condition and results of operations.
- We may have potential conflicts of interest with EchoStar due to our common ownership and management.
- We rely on highly skilled personnel for our business, and any inability to hire and retain key personnel or hire qualified personnel may negatively affect our business, financial condition and results of operations.

Acquisition and Capital Structure Risks

- We have made substantial investments to acquire certain wireless spectrum licenses and other related assets, and we may be unable to realize a return on these assets.
- We have made substantial noncontrolling investments in the Northstar Entities and the SNR Entities related to AWS-3 wireless spectrum licenses, and we may be unable to obtain a profitable return on these investments.
- We may pursue acquisitions and other strategic transactions to complement or expand our business that may not be successful, and we may lose up to the entire value of our investment in these acquisitions and transactions.
- We have substantial debt outstanding and may incur additional debt.
- We will need additional capital, which may not be available on favorable terms, to continue investing in our business and to finance acquisitions and other strategic transactions.

- The conditional conversion features of our 3 3/8% Convertible Notes due 2026 (the “Convertible Notes due 2026”), our 2 3/8% Convertible Notes due 2024 (the “Convertible Notes due 2024”) and 0% Convertible Notes due 2025 (the “Convertible Notes due 2025,” and collectively with the Convertible Notes due 2026 and the Convertible Notes due 2024, the “Convertible Notes”), if triggered, may adversely affect our financial condition.
- The convertible note hedge and warrant transactions that we entered into in connection with the offering of the Convertible Notes due 2026 may affect the value of the Convertible Notes due 2026 and our Class A common stock.
- We are subject to counterparty risk with respect to the convertible note hedge transactions.
- From time to time a portion of our investment portfolio may be invested in securities that have limited liquidity and may not be immediately accessible to support our financing needs.
- We are controlled by one principal stockholder who is also our Chairman.

Legal and Regulatory Risks

- Our business depends on certain intellectual property rights and on not infringing the intellectual property rights of others.
- We are, and may become, party to various lawsuits which, if adversely decided, could have a significant adverse impact on our business, particularly lawsuits regarding intellectual property.
- Our services depend on Federal Communications Commission (“FCC”) licenses that can expire or be revoked or modified and applications for FCC licenses that may not be granted.
- If our internal controls are not effective, our business, our stock price and our investor confidence in our financial results may be adversely affected.
- We may face other risks described from time to time in periodic and current reports we file with the Securities and Exchange Commission (“SEC”).

Other factors that could cause or contribute to such differences include, but are not limited to, those discussed under the caption “Risk Factors” in Part II, Item 1A of this Quarterly Report on Form 10-Q and in Part I, Item 1A of our most recent Annual Report on Form 10-K (the “10-K”) filed with the SEC, those discussed in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” herein and in the 10-K and those discussed in other documents we file with the SEC. All cautionary statements made or referred to herein should be read as being applicable to all forward-looking statements wherever they appear. Investors should consider the risks and uncertainties described or referred to herein and should not place undue reliance on any forward-looking statements. The forward-looking statements speak only as of the date made, and we expressly disclaim any obligation to update these forward-looking statements.

Item 1. FINANCIAL STATEMENTS

DISH NETWORK CORPORATION
CONDENSED CONSOLIDATED BALANCE SHEETS
(Dollars in thousands, except share amounts)
(Unaudited)

	As of	
	March 31, 2023	**December 31, 2022**
Assets		
Current Assets:		
Cash and cash equivalents	$ 2,232,295	$ 1,785,056
Marketable investment securities	312,124	835,983
Trade accounts receivable, net of allowance for credit losses of $44,602 and $44,431, respectively	916,899	953,812
Inventory	523,020	502,373
Other current assets	536,768	532,886
Total current assets	4,521,106	4,610,110
Noncurrent Assets:		
Restricted cash, cash equivalents and marketable investment securities	105,815	104,614
Property and equipment, net	6,301,699	5,640,119
FCC authorizations	37,231,920	36,933,073
Other investment securities	167,276	168,200
Operating lease assets	2,854,337	2,687,522
Other noncurrent assets, net	1,860,454	1,897,815
Intangible assets, net	519,447	565,109
Total noncurrent assets	49,040,948	47,996,452
Total assets	$ 53,562,054	$ 52,606,562
Liabilities and Stockholders' Equity (Deficit)		
Current Liabilities:		
Trade accounts payable	$ 928,882	$ 924,438
Deferred revenue and other	664,137	711,474
Accrued programming	1,373,088	1,298,777
Accrued interest	395,655	258,799
Other accrued expenses	1,417,374	1,283,570
Current portion of long-term debt and finance lease obligations (Note 9)	1,109,624	1,547,190
Total current liabilities	5,888,760	6,024,248
Long-Term Obligations, Net of Current Portion:		
Long-term debt and finance lease obligations, net of current portion (Note 9)	20,352,913	19,801,948
Deferred tax liabilities	5,001,006	4,930,135
Operating lease liabilities	2,864,923	2,687,883
Long-term deferred revenue and other long-term liabilities	787,190	753,708
Total long-term obligations, net of current portion	29,006,032	28,173,674
Total liabilities	34,894,792	34,197,922
Commitments and Contingencies (Note 10)		
Redeemable noncontrolling interests (Note 2)	484,764	464,359
Stockholders' Equity (Deficit):		
Class A common stock, $0.01 par value, 1,600,000,000 shares authorized, 293,127,133 and 292,660,308 shares issued and outstanding, respectively	2,931	2,927
Class B common stock, $0.01 par value, 800,000,000 shares authorized, 238,435,208 shares issued and outstanding	2,384	2,384
Additional paid-in capital	4,866,292	4,851,392
Accumulated other comprehensive income (loss)	(2,548)	(3,029)
Accumulated earnings (deficit)	13,311,555	13,088,850
Total DISH Network stockholders' equity (deficit)	18,180,614	17,942,524
Noncontrolling interests	1,884	1,757
Total stockholders' equity (deficit)	18,182,498	17,944,281
Total liabilities and stockholders' equity (deficit)	$ 53,562,054	$ 52,606,562

The accompanying notes are an integral part of these condensed consolidated financial statements.

DISH NETWORK CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
AND COMPREHENSIVE INCOME (LOSS)
(Dollars in thousands, except per share amounts)
(Unaudited)

	For the Three Months Ended March 31, 2023	2022
Revenue:		
Service revenue	$ 3,809,421	$ 4,075,122
Equipment sales and other revenue	147,561	255,498
Total revenue	3,956,982	4,330,620
Costs and Expenses (exclusive of depreciation):		
Cost of services	2,332,706	2,482,642
Cost of sales - equipment and other	468,304	502,573
Selling, general and administrative expenses	586,852	618,704
Depreciation and amortization	245,697	176,341
Total costs and expenses	3,633,559	3,780,260
Operating income (loss)	323,423	550,360
Other Income (Expense):		
Interest income	40,533	4,849
Interest expense, net of amounts capitalized	(7,772)	(4,601)
Other, net	(30,521)	42,548
Total other income (expense)	2,240	42,796
Income (loss) before income taxes	325,663	593,156
Income tax (provision) benefit, net	(82,425)	(144,310)
Net income (loss)	243,238	448,846
Less: Net income (loss) attributable to noncontrolling interests, net of tax	20,533	16,195
Net income (loss) attributable to DISH Network	$ 222,705	$ 432,651
Weighted-average common shares outstanding - Class A and B common stock:		
Basic	531,293	529,067
Diluted	638,385	636,470
Earnings per share - Class A and B common stock:		
Basic net income (loss) per share attributable to DISH Network	$ 0.42	$ 0.82
Diluted net income (loss) per share attributable to DISH Network	$ 0.35	$ 0.68
Comprehensive Income (Loss):		
Net income (loss)	$ 243,238	$ 448,846
Other comprehensive income (loss):		
Foreign currency translation adjustments	632	(150)
Unrealized holding gains (losses) on available-for-sale debt securities	(24)	(98)
Recognition of previously unrealized (gains) losses on available-for-sale securities included in net income (loss)	(1)	2
Deferred income tax (expense) benefit, net	(126)	23
Total other comprehensive income (loss), net of tax	481	(223)
Comprehensive income (loss)	243,719	448,623
Less: Comprehensive income (loss) attributable to noncontrolling interests, net of tax	20,533	16,195
Comprehensive income (loss) attributable to DISH Network	$ 223,186	$ 432,428

The accompanying notes are an integral part of these condensed consolidated financial statements.

DISH NETWORK CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIT)
(In thousands)
(Unaudited)

	Class A and B Common Stock	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Earnings (Deficit)	Noncontrolling Interests	Total	Redeemable Noncontrolling Interests
Balance, December 31,2021	$ 5,289	$ 4,735,484	$ 281	$ 10,785,617	$ 1,220	$ 15,527,891	$ 395,222
Issuance of Class A common stock:							
Exercise of stock awards	1	253	—	—	—	254	—
Employee Stock Purchase Plan	2	4,360	—	—	—	4,362	—
Non-cash, stock-based compensation	—	15,285	—	—	—	15,285	—
Change in unrealized holding gains (losses) on available-for-sale debt securities, net	—	—	(96)	—	—	(96)	—
Deferred income tax (expense) benefit attributable to other comprehensive income (loss)	—	—	23	—	—	23	—
Foreign currency translation	—	—	(150)	—	—	(150)	—
Net income (loss) attributable to noncontrolling interests	—	—	—	—	159	159	16,036
Net income (loss) attributable to DISH Network	—	—	—	432,651	—	432,651	—
Balance, March 31, 2022	$ 5,292	$ 4,755,382	$ 58	$ 11,218,268	$ 1,379	$ 15,980,379	$ 411,258
Balance, December 31, 2022	$ 5,311	$ 4,851,392	$ (3,029)	$ 13,088,850	$ 1,757	$ 17,944,281	$ 464,359
Issuance of Class A common stock:							
Exercise of stock awards	—	(386)	—	—	—	(386)	—
Employee Stock Purchase Plan	4	3,249	—	—	—	3,253	—
Non-cash, stock-based compensation	—	12,037	—	—	—	12,037	—
Change in unrealized holding gains (losses) on available-for-sale debt securities, net	—	—	(25)	—	—	(25)	—
Deferred income tax (expense) benefit attributable to other comprehensive income (loss)	—	—	(126)	—	—	(126)	—
Foreign currency translation	—	—	632	—	—	632	—
Net income (loss) attributable to noncontrolling interests	—	—	—	—	127	127	20,405
Net income (loss) attributable to DISH Network	—	—	—	222,705	—	222,705	—
Balance, March 31, 2023	$ 5,315	$ 4,866,292	$ (2,548)	$ 13,311,555	$ 1,884	$ 18,182,498	$ 484,764

The accompanying notes are an integral part of these condensed consolidated financial statements.

DISH NETWORK CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)
(Unaudited)

	For the Three Months Ended March 31,	
	2023	2022
Cash Flows From Operating Activities:		
Net income (loss)	$ 243,238	$ 448,846
Adjustments to reconcile net income (loss) to net cash flows from operating activities:		
Depreciation and amortization	245,697	176,341
Realized and unrealized losses (gains) on investments, derivatives and other	29,220	(42,546)
Non-cash, stock-based compensation	12,037	15,285
Deferred tax expense (benefit)	70,745	122,386
Changes in allowance for credit losses	171	(4,599)
Change in long-term deferred revenue and other long-term liabilities	1,214	4,017
Other, net	38,579	58,885
Changes in current assets and current liabilities, net	96,473	(73,271)
Net cash flows from operating activities	737,374	705,344
Cash Flows From Investing Activities:		
Purchases of marketable investment securities	(368,091)	(55,200)
Sales and maturities of marketable investment securities	914,422	2,512,274
Purchases of property and equipment	(707,210)	(629,374)
Capitalized interest related to FCC authorizations (Note 2)	(199,395)	(266,917)
Purchases of FCC authorizations, including deposits	—	(7,206,757)
Other, net	(704)	3,348
Net cash flows from investing activities	(360,978)	(5,642,626)
Cash Flows From Financing Activities:		
Repayment of long-term debt and finance lease obligations	(25,626)	(5,818)
Redemption and repurchases of senior notes	(1,443,179)	(1,175)
Proceeds from issuance of senior notes	1,500,000	—
Net proceeds from Class A common stock options exercised and stock issued under the Employee Stock Purchase Plan	2,867	4,616
Debt issuance costs and debt (discount) premium	21,635	—
Proceeds from accrued interest	34,760	—
Other, net	(5,073)	4,428
Net cash flows from financing activities	85,384	2,051
Net increase (decrease) in cash, cash equivalents, restricted cash and cash equivalents	461,780	(4,935,231)
Cash, cash equivalents, restricted cash and cash equivalents, beginning of period (Note 5)	1,847,981	7,734,260
Cash, cash equivalents, restricted cash and cash equivalents, end of period (Note 5)	$ 2,309,761	$ 2,799,029

The accompanying notes are an integral part of these condensed consolidated financial statements.

DISH NETWORK CORPORATION
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

1. Organization and Business Activities

Principal Business

DISH Network Corporation is a holding company. Its subsidiaries (which together with DISH Network Corporation are referred to as “DISH Network,” the “Company,” “we,” “us” and/or “our,” unless otherwise required by the context) operate two primary business segments, Pay-TV and Wireless. Our Wireless business segment operates in two business units, Retail Wireless and 5G Network Deployment.

Pay-TV

We offer pay-TV services under the DISH® brand and the SLING® brand (collectively “Pay-TV” services). The DISH branded pay-TV service consists of, among other things, Federal Communications Commission (“FCC”) licenses authorizing us to use direct broadcast satellite (“DBS”) and Fixed Satellite Service (“FSS”) spectrum, our owned and leased satellites, receiver systems, broadcast operations, a leased fiber optic network, in-home service and call center operations, and certain other assets utilized in our operations (“DISH TV”). We also design, develop and distribute receiver systems and provide digital broadcast operations, including satellite uplinking/downlinking, transmission and other services to third-party pay-TV providers. The SLING branded pay-TV services consist of, among other things, multichannel, live-linear and on-demand streaming over-the-top (“OTT”) Internet-based domestic, international and Latino video programming services (“SLING TV”). As of March 31, 2023, we had 9.198 million Pay-TV subscribers in the United States, including 7.098 million DISH TV subscribers and 2.100 million SLING TV subscribers.

Wireless – Retail Wireless

We offer nationwide prepaid and postpaid retail wireless services to subscribers primarily under our Boost Mobile, Boost Infinite and Gen Mobile brands (“Retail Wireless” services), as well as a competitive portfolio of wireless devices. Prepaid wireless subscribers generally pay in advance for monthly access to wireless talk, text, and data services. Postpaid wireless subscribers are qualified to pay after receiving wireless talk, text, and data services.

We are currently operating our Retail Wireless business unit primarily as a mobile virtual network operator (“MVNO”) as we continue to complete our 5G Network Deployment. As an MVNO, today we depend on T-Mobile and AT&T to provide us with network services under the amended Master Network Services Agreement (“MNSA”) and Network Services Agreement (the “NSA”), respectively. Under the NSA, we expect AT&T will become our primary network services provider. As of March 31, 2023, we had 7.913 million Wireless subscribers.

Other Developments

We regularly evaluate ways to enhance our business. As part of this process, we are in regular dialogue with interested parties who may assist us in accomplishing our goals, including ongoing conversations with CONX Corp. (an entity partially owned by Charles W. Ergen, our Chairman) regarding a transaction involving our Retail Wireless business unit. There can be no assurance that these discussions will lead to a transaction nor as to the structure or terms of any such transaction.

DISH NETWORK CORPORATION
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS - Continued
(Unaudited)

Wireless – 5G Network Deployment

We have invested a total of over $30 billion in Wireless spectrum licenses, which includes over $10 billion in noncontrolling investments in certain entities. The $30 billion of investments related to Wireless spectrum licenses does not include $8 billion of capitalized interest related to the carrying value of such licenses. See Note 2 and Note 10 for further information.

DISH Network Spectrum

We have invested a total of over $30 billion to acquire certain Wireless spectrum licenses. These Wireless spectrum licenses are subject to certain interim and final build-out requirements, as well as certain renewal requirements. We plan to commercialize our Wireless spectrum licenses through the completion of the nation's first cloud-native, Open Radio Access Network ("O-RAN") based 5G network (our "5G Network Deployment"). We have committed to deploy a facilities-based 5G broadband network capable of serving increasingly larger portions of the U.S. population at different deadlines, including 20% of the U.S. population by June 2022 and 70% of the U.S. population by June 2023. If by June 2023, we are offering 5G broadband service to at least 50% of the U.S. population but less than 70% of the U.S. population, the 70% June 2023 deadline will be extended automatically to June 2025; however, as a result, we may, under certain circumstances, potentially be subject to certain penalties. On June 14, 2022, we announced we had successfully reached our 20% population coverage requirement. We are currently focused on our progression towards offering 5G broadband service to at least 70% of the U.S. population with a minimum of 15,000 5G sites. As of March 31, 2023, we had started construction on over 18,000 5G cell sites. We will need approximately 16,000 sites fully powered and fibered to provide 5G broadband service to over 70% of the U.S. population.

We may need to make significant additional investments or partner with others to, among other things, complete our 5G Network Deployment and further commercialize, build-out and integrate these licenses and related assets and any additional acquired licenses and related assets, as well as to comply with regulations applicable to such licenses. Depending on the nature and scope of such activities, any such investments or partnerships could vary significantly. In addition, as we complete our initial 5G Network Deployment, we have and may continue to incur significant additional expenses related to, among other things, research and development, wireless testing and ongoing upgrades to the wireless network infrastructure, software and third party integration. As a result of these investments, among other factors, we plan to raise additional capital, which may not be available on favorable terms. We may also determine that additional wireless spectrum licenses may be required to complete our 5G Network Deployment and to compete effectively with other wireless service providers. See Note 2 and Note 10 for further information.

DISH Network Noncontrolling Investments in the Northstar Entities and the SNR Entities Related to AWS-3 Wireless Spectrum Licenses

During 2015, through our wholly-owned subsidiaries American AWS-3 Wireless II L.L.C. ("American II") and American AWS-3 Wireless III L.L.C. ("American III"), we initially made over $10 billion in certain noncontrolling investments in Northstar Spectrum, LLC ("Northstar Spectrum"), the parent company of Northstar Wireless, L.L.C. ("Northstar Wireless," and collectively with Northstar Spectrum, the "Northstar Entities"), and in SNR Wireless HoldCo, LLC ("SNR HoldCo"), the parent company of SNR Wireless LicenseCo, LLC ("SNR Wireless," and collectively with SNR HoldCo, the "SNR Entities"), respectively. On October 27, 2015, the FCC granted certain AWS-3 wireless spectrum licenses (the "AWS-3 Licenses") to Northstar Wireless and to SNR Wireless, respectively, which are recorded in "FCC authorizations" on our Condensed Consolidated Balance Sheets.

Under the applicable accounting guidance in Accounting Standards Codification 810, *Consolidation* ("ASC 810"), Northstar Spectrum and SNR HoldCo are considered variable interest entities ("VIEs") and, based on the characteristics of the structure of these entities and in accordance with the applicable accounting guidance, we consolidate these entities into our financial statements. See Note 2 for further information.

DISH NETWORK CORPORATION
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS - Continued
(Unaudited)

The AWS-3 Licenses are subject to certain interim and final build-out requirements, as well as certain renewal requirements. The Northstar Entities and/or the SNR Entities may need to raise significant additional capital in the future, which may be obtained from third party sources or from us, so that the Northstar Entities and the SNR Entities may commercialize, build-out and integrate these AWS-3 Licenses, comply with regulations applicable to such AWS-3 Licenses, and make any potential Northstar Re-Auction Payment and SNR Re-Auction Payment for the AWS-3 licenses retained by the FCC. Depending upon the nature and scope of such commercialization, build-out and integration efforts, regulatory compliance, and potential Northstar Re-Auction Payment and SNR Re-Auction Payment, any loans, equity contributions or partnerships could vary significantly.

There can be no assurance that we will be able to obtain a profitable return on our noncontrolling investments in the Northstar Entities and the SNR Entities. See Note 10 for further information.

Recent Developments

Cyber-Security Incident

On February 23, 2023, we announced on our quarterly earnings call that we had experienced a network outage that affected internal servers and IT telephony. We immediately activated our incident response and business continuity plans designed to contain, assess and remediate the situation. We engaged the services of cyber-security experts and outside advisors to assist in the evaluation of the situation, and once we determined that the outage was due to a cyber-security incident, we promptly notified appropriate law enforcement authorities.

On February 28, 2023, we further disclosed that certain data had been extracted from our IT systems as part of this incident. Our investigation into the extent of the incident is now substantially completed. We have determined that our customer databases were not accessed in this incident. However, we have confirmed that certain employee-related records as well as a limited number of other records containing personal information were among the data extracted. We have taken steps to protect the affected records and personal information, and we received confirmation that the extracted data has been deleted. While we have no evidence that this data has been misused, we have started the process of notifying individuals whose data was extracted.

Our DISH TV, SLING TV and Retail Wireless services, along with our wireless and data networks remained operational at all times during the incident. As of March 31, 2023, all significant systems have been restored.

During the quarter ending March 31, 2023, we incurred certain cyber-security-related expenses, including, but not limited to, costs to remediate the incident and provide additional customer support. During the three months ended March 31, 2023, we have incurred approximately $30 million in cyber-security-related expenses, which are recorded in “Cost of services” on our Condensed Consolidated Statements of Operations and Comprehensive Income (Loss). We do not expect to incur material expenses in future periods resulting from the cyber-security incident.

2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying unaudited Condensed Consolidated Financial Statements have been prepared in accordance with accounting principles generally accepted in the United States ("GAAP") and with the instructions to Form 10-Q and Article 10 of Regulation S-X for interim financial information. Accordingly, these statements do not include all of the information and notes required for complete financial statements prepared under GAAP. In our opinion, all adjustments (consisting of normal recurring adjustments) considered necessary for a fair presentation have been included. Our results of operations for the interim periods presented are not necessarily indicative of the results that may be expected for the full year. For further information, refer to the Consolidated Financial Statements and notes thereto included in our Annual Report on Form 10-K for the year ended December 31, 2022. Certain prior period amounts have been reclassified to conform to the current period presentation.

Principles of Consolidation

We consolidate all majority owned subsidiaries, investments in entities in which we have controlling influence and VIEs where we have been determined to be the primary beneficiary. Minority interests are recorded as noncontrolling interests or redeemable noncontrolling interests. See below for further information. Non-consolidated investments are accounted for using the equity method when we have the ability to significantly influence the operating decisions of the investee. When we do not have the ability to significantly influence the operating decisions of an investee, these equity securities are classified as either marketable investment securities or other investments and recorded at fair value with changes recognized in "Other, net" within "Other Income (Expense)" on our Condensed Consolidated Statements of Operations and Comprehensive Income (Loss). All significant intercompany accounts and transactions have been eliminated in consolidation.

Redeemable Noncontrolling Interests

Northstar Wireless. Northstar Wireless is a wholly-owned subsidiary of Northstar Spectrum, which is an entity owned by Northstar Manager, LLC ("Northstar Manager") and us. Under the applicable accounting guidance in ASC 810, Northstar Spectrum is considered a VIE and, based on the characteristics of the structure of this entity and in accordance with the applicable accounting guidance, we consolidate Northstar Spectrum into our financial statements. The Northstar Operative Agreements, as amended, provide for, among other things, that Northstar Manager has the ability, but not the obligation, to require Northstar Spectrum to purchase Northstar Manager's ownership interests in Northstar Spectrum (the "Northstar Put Right") for a purchase price that equals its equity contribution to Northstar Spectrum plus a fixed annual rate of return.

The First Northstar Put Window closed in the first quarter of 2021. On October 21, 2022, we, through our wholly-owned subsidiary American II received notice that Northstar Manager exercised the Northstar Put Right effective as of October 21, 2022. The consummation of the sale is subject to approval by the FCC. The value of the Northstar Put Right has accrued to approximately $100 million as of March 31, 2023. If approved by the FCC, the sale will result in the elimination of all of our noncontrolling interest as it related to Northstar Wireless.

Northstar Purchase Agreement. On December 30, 2020, through our wholly owned subsidiary American II, we entered into a Purchase Agreement (the "Northstar Purchase Agreement") with Northstar Manager and Northstar Spectrum, pursuant to which American II purchased 80% of Northstar Manager's Class B Common Interests in Northstar Spectrum (the "Northstar Transaction") for a purchase price of approximately $312 million.

As a result of the Northstar Transaction, through American II, we hold 97% of the Class B Common Interests in Northstar Spectrum and Northstar Manager holds 3% of the Class B Common Interests in Northstar Spectrum. Other than the change in ownership percentage of Northstar Spectrum, the Northstar Transaction did not modify or amend in any way the existing arrangements between or among the Northstar parties.

Northstar Spectrum does not have a call right with respect to Northstar Manager's ownership interests in Northstar Spectrum. Although Northstar Manager is the sole manager of Northstar Spectrum, Northstar Manager's ownership interest is considered temporary equity under the applicable accounting guidance and is thus recorded as part of "Redeemable noncontrolling interests" in the mezzanine section of our Condensed Consolidated Balance Sheets. Northstar Manager's ownership interest in Northstar Spectrum was initially accounted for at fair value. Subsequently, Northstar Manager's ownership interest in Northstar Spectrum is increased by the fixed annual rate of return through "Redeemable noncontrolling interests" on our Condensed Consolidated Balance Sheets, with the offset recorded in "Net income (loss) attributable to noncontrolling interests, net of tax" on our Condensed Consolidated Statements of Operations and Comprehensive Income (Loss). The operating results of Northstar Spectrum attributable to Northstar Manager are recorded as "Redeemable noncontrolling interests" on our Condensed Consolidated Balance Sheets, with the offset recorded in "Net income (loss) attributable to noncontrolling interests, net of tax" on our Condensed Consolidated Statements of Operations and Comprehensive Income (Loss). See Note 10 for further information.

SNR Wireless. SNR Wireless is a wholly-owned subsidiary of SNR HoldCo, which is an entity owned by SNR Wireless Management, LLC ("SNR Management") and us. Under the applicable accounting guidance in ASC 810, SNR HoldCo is considered a VIE and, based on the characteristics of the structure of this entity and in accordance with the applicable accounting guidance, we consolidate SNR HoldCo into our financial statements. The SNR Operative Agreements, as amended, provide for, among other things, that SNR Management has the ability, but not the obligation, to require SNR HoldCo to purchase SNR Management's ownership interests in SNR HoldCo (the "SNR Put Right") for a purchase price that equals its equity contribution to SNR HoldCo plus a fixed annual rate of return.

The First SNR Put Window closed in the first quarter of 2021. On November 15, 2021, we, through our wholly-owned subsidiary American III received notice that SNR Management exercised the SNR Put Right effective as of November 15, 2021. The consummation of the sale is subject to approval by the FCC. The value of the SNR Put Right has accrued to approximately $385 million as of March 31, 2023. If approved by the FCC, the sale will result in the elimination of all of our noncontrolling interest as it related to SNR Wireless.

SNR HoldCo does not have a call right with respect to SNR Management's ownership interests in SNR HoldCo. Although SNR Management is the sole manager of SNR HoldCo, SNR Management's ownership interest is considered temporary equity under the applicable accounting guidance and is thus recorded as part of "Redeemable noncontrolling interests" in the mezzanine section of our Condensed Consolidated Balance Sheets. SNR Management's ownership interest in SNR HoldCo was initially accounted for at fair value. Subsequently, SNR Management's ownership interest in SNR HoldCo is increased by the fixed annual rate of return through "Redeemable noncontrolling interests" on our Condensed Consolidated Balance Sheets, with the offset recorded in "Net income (loss) attributable to noncontrolling interests, net of tax" on our Condensed Consolidated Statements of Operations and Comprehensive Income (Loss). The operating results of SNR HoldCo attributable to SNR Management are recorded as "Redeemable noncontrolling interests" on our Condensed Consolidated Balance Sheets, with the offset recorded in "Net income (loss) attributable to noncontrolling interests, net of tax" on our Condensed Consolidated Statements of Operations and Comprehensive Income (Loss). See Note 10 for further information.

As of March 31, 2023 and December 31, 2022, the aggregate value of Northstar Manager's ownership interest in Northstar Spectrum and SNR Management's ownership interest in SNR HoldCo was $485 million and $464 million, respectively, recorded as "Redeemable noncontrolling interests" on our Condensed Consolidated Balance Sheets.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expense for each reporting period. Estimates are based on historical experience and other reasonable assumptions in accounting for, among other things, allowances for credit losses (including those related to our installment billing programs), self-insurance obligations, deferred taxes and related valuation allowances, uncertain tax positions, loss contingencies, fair value of financial instruments, fair value of options granted under our stock-based compensation plans, fair value of assets and liabilities acquired in business combinations, the fair value of our option to purchase T-Mobile's 800 MHz spectrum, relative standalone selling prices of performance obligations, finance leases, asset impairments, estimates of future cash flows used to evaluate and recognize impairments, useful lives of property, equipment and intangible assets, incremental borrowing rate ("IBR") on lease right of use assets, nonrefundable upfront fees, independent third-party retailer incentives, programming expenses and subscriber lives. Economic conditions may increase the inherent uncertainty in the estimates and assumptions indicated above. Actual results may differ from previously estimated amounts, and such differences may be material to our condensed consolidated financial statements. Estimates and assumptions are reviewed periodically, and the effects of revisions are reflected prospectively in the period they occur.

Capitalized Interest

We capitalize interest associated with the acquisition or construction of certain assets, including, among other things, our Wireless spectrum licenses, build-out costs associated with our 5G Network Deployment and satellites. Capitalization of interest begins when, among other things, steps are taken to prepare the asset for its intended use and ceases when the asset is ready for its intended use or when these activities are substantially suspended.

We are currently preparing for the commercialization of our 5G Network Deployment. As a result, the interest expense related to the carrying amount of the 5G Network Deployment qualifying assets is being capitalized. The qualifying assets exceed the carrying value of our long-term debt and finance lease obligations, therefore substantially all of our interest expense is being capitalized. However, as the qualifying assets are placed into service, we will cease to capitalize interest on those assets placed into service.

Fair Value Measurements

We determine fair value based on the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants. Market or observable inputs are the preferred source of values, followed by unobservable inputs or assumptions based on hypothetical transactions in the absence of market inputs. We apply the following hierarchy in determining fair value:

- Level 1, defined as observable inputs being quoted prices in active markets for identical assets;
- Level 2, defined as observable inputs other than quoted prices included in Level 1, including quoted prices for similar assets and liabilities in active markets; and quoted prices for identical or similar instruments in markets that are not active; and
- Level 3, defined as unobservable inputs for which little or no market data exists, consistent with reasonably available assumptions made by other participants therefore requiring assumptions based on the best information available.

As of March 31, 2023 and December 31, 2022, the carrying amount for cash and cash equivalents, trade accounts receivable (net of allowance for credit losses) and current liabilities (excluding the "Current portion of long-term debt and finance lease obligations") was equal to or approximated fair value due to their short-term nature or proximity to current market rates. See Note 5 for the fair value of our marketable investment securities and derivative instruments.

Fair values for our publicly traded debt securities are based on quoted market prices, when available. The fair values of private debt are based on, among other things, available trade information, and/or an analysis in which we evaluate market conditions, related securities, various public and private offerings, and other publicly available information. In performing this analysis, we make various assumptions regarding, among other things, credit spreads, and the impact of these factors on the value of the debt securities. See Note 9 for the fair value of our long-term debt.

Assets Recognized Related to the Costs to Obtain a Contract with a Subscriber

We recognize an asset for the incremental costs of obtaining a contract with a subscriber if we expect the benefit of those costs to be longer than one year. We have determined that certain sales incentive programs in both our Pay-TV and Wireless segments, including those with our independent third-party retailers, meet the requirements to be capitalized, and payments made under these programs are capitalized and amortized to expense over the estimated subscriber life exceeding one year. During the three months ended March 31, 2023 and 2022, we capitalized $84 million and $88 million, respectively, under these programs. The amortization expense related to these programs was $97 million and $112 million for the three months ended March 31, 2023 and 2022, respectively. As of March 31, 2023 and December 31, 2022, we had a total of $368 million and $381 million, respectively, capitalized, net of amortization, on our Condensed Consolidated Balance Sheets. These amounts are capitalized in "Other current assets" and "Other noncurrent assets, net" on our Condensed Consolidated Balance Sheets, and then amortized in "Selling, general and administrative expenses" on our Condensed Consolidated Statements of Operations and Comprehensive Income (Loss).

Advertising Costs

We recognize advertising expense when incurred as a component of "Selling, general and administrative expenses" on our Condensed Consolidated Statements of Operations and Comprehensive Income (Loss). Advertising expenses totaled $129 million and $150 million for the three months ended March 31, 2023 and 2022, respectively.

Research and Development

Research and development costs are expensed as incurred and are included as a component of "Selling, general and administrative expenses" on our Condensed Consolidated Statements of Operations and Comprehensive Income (Loss). Research and development costs totaled $11 million and $10 million for the three months ended March 31, 2023 and 2022, respectively.

New Accounting Pronouncements

We do not expect that any recently issued accounting pronouncements will have a material effect on our condensed consolidated financial statements.

DISH NETWORK CORPORATION
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS - Continued
(Unaudited)

3. Basic and Diluted Net Income (Loss) Per Share

We present both basic earnings per share ("EPS") and diluted EPS. Basic EPS excludes potential dilution and is computed by dividing "Net income (loss) attributable to DISH Network" by the weighted-average number of common shares outstanding for the period. Diluted EPS reflects the potential dilution that could occur if stock awards were exercised and if our Convertible Notes were converted. The potential dilution from stock awards is accounted for using the treasury stock method based on the average market value of our Class A common stock for the reporting period. The potential dilution from conversion of the Convertible Notes is accounted for using the if-converted method, which requires that all of the shares of our Class A common stock issuable upon conversion of the Convertible Notes will be included in the calculation of diluted EPS assuming conversion of the Convertible Notes at the beginning of the reporting period (or at time of issuance, if later).

The following table presents EPS amounts for all periods and the basic and diluted weighted-average shares outstanding used in the calculation.

	For the Three Months Ended March 31,	
	2023	2022
	(In thousands, except per share amounts)	
Net income (loss)	$ 243,238	$ 448,846
Less: Net income (loss) attributable to noncontrolling interests, net of tax	20,533	16,195
Net income (loss) attributable to DISH Network - Basic	222,705	432,651
Interest on dilutive Convertible Notes, net of tax (1)	—	—
Net income (loss) attributable to DISH Network - Diluted	$ 222,705	$ 432,651
Weighted-average common shares outstanding - Class A and B common stock:		
Basic	531,293	529,067
Dilutive impact of Convertible Notes	107,016	107,016
Dilutive impact of stock awards outstanding	76	387
Diluted	638,385	636,470
Earnings per share - Class A and B common stock:		
Basic net income (loss) per share attributable to DISH Network	$ 0.42	$ 0.82
Diluted net income (loss) per share attributable to DISH Network	$ 0.35	$ 0.68

(1) For the three months ended March 31, 2023 and 2022, substantially all of our interest expense was capitalized. See Note 2 for further information.

Certain stock awards to acquire our Class A common stock are not included in the weighted-average common shares outstanding above, as their effect is anti-dilutive. In addition, vesting of performance/market based options and rights to acquire shares of our Class A common stock granted pursuant to our performance-based stock incentive plans ("Restricted Performance Units") are both contingent upon meeting certain goals, some of which are not yet probable of being achieved.

Furthermore, the warrants that we issued to certain option counterparties in connection with the Convertible Notes due 2026 are only exercisable at their expiration if the market price per share of our Class A common stock is greater than the strike price of the warrants, which is approximately $86.08 per share, subject to certain adjustments. As a consequence, the following are not included in the diluted EPS calculation.

	As of March 31,	
	2023	**2022**
	(In thousands)	
Anti-dilutive stock awards	15,170	11,259
Performance/market based options	14,308	15,981
Restricted Performance Units/Awards	693	1,273
Common stock warrants	46,029	46,029
Total	76,200	74,542

4. Supplemental Data - Statements of Cash Flows

The following table presents certain supplemental cash flow and other non-cash data. See Note 8 for supplemental cash flow and non-cash data related to leases.

	For the Three Months Ended March 31,	
	2023	**2022**
	(In thousands)	
Cash paid for interest (including capitalized interest)	$ 218,224	$ 277,056
Cash received for interest	4,556	4,388
Cash paid for income taxes	1,855	3,871
Capitalized interest (1)	325,323	267,305
Vendor financing	54,774	12,140
Accrued wireless equipment purchases	488,850	431,636
Asset retirement obligation	31,554	48,237

(1) See Note 2 for further information.

DISH NETWORK CORPORATION
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS - Continued
(Unaudited)

5. Marketable Investment Securities, Restricted Cash and Cash Equivalents, and Other Investment Securities

Our marketable investment securities, restricted cash and cash equivalents, and other investment securities consisted of the following:

	As of	
	March 31, 2023	December 31, 2022
	(In thousands)	
Marketable investment securities:		
Current marketable investment securities:		
Strategic - available-for-sale	$ 144	$ 144
Strategic - trading/equity	346	655
Other	311,634	835,184
Total current marketable investment securities	312,124	835,983
Restricted marketable investment securities (1)	28,349	41,689
Total marketable investment securities	340,473	877,672
Restricted cash and cash equivalents (1)	77,466	62,925
Other investment securities:		
Other investment securities	167,276	168,200
Total other investment securities	167,276	168,200
Total marketable investment securities, restricted cash and cash equivalents, and other investment securities	$ 585,215	$ 1,108,797

(1) Restricted marketable investment securities and restricted cash and cash equivalents are included in "Restricted cash, cash equivalents and marketable investment securities" on our Condensed Consolidated Balance Sheets.

Marketable Investment Securities

Our marketable investment securities portfolio consists of and may consist of debt and equity instruments. All equity securities are carried at fair value, with changes in fair value recognized in "Other, net" within "Other Income (Expense)" on our Condensed Consolidated Statements of Operations and Comprehensive Income (Loss). All debt securities are classified as available-for-sale and are recorded at fair value. We report the temporary unrealized gains and losses related to changes in market conditions of marketable debt securities as a separate component of "Accumulated other comprehensive income (loss)" within "Stockholders' Equity (Deficit)," net of related deferred income tax on our Condensed Consolidated Balance Sheets. The corresponding changes in the fair value of marketable debt securities, which are determined to be company specific credit losses are recorded in "Other, net" within "Other Income (Expense)" on our Condensed Consolidated Statements of Operations and Comprehensive Income (Loss).

Current Marketable Investment Securities – Strategic

Our current strategic marketable investment securities portfolio includes and may include strategic and financial debt and/or equity investments in private and public companies that are highly speculative and have experienced and continue to experience volatility. As of March 31, 2023, this portfolio consisted of securities of a small number of issuers, and as a result the value of that portfolio depends, among other things, on the performance of those issuers. The fair value of certain of the debt and equity securities in this portfolio can be adversely impacted by, among other things, the issuers' respective performance and ability to obtain any necessary additional financing on acceptable terms, or at all.

Current Marketable Investment Securities - Other

Our current other marketable investment securities portfolio includes investments in various debt instruments including, among others, commercial paper, corporate securities and United States treasury and/or agency securities.

Commercial paper consists mainly of unsecured short-term, promissory notes issued primarily by corporations with maturities ranging up to 365 days. Corporate securities consist of debt instruments issued by corporations with various maturities normally less than 18 months. U.S. Treasury and agency securities consist of debt instruments issued by the federal government and other government agencies.

Restricted Cash, Cash Equivalents and Marketable Investment Securities

As of March 31, 2023 and December 31, 2022, our restricted marketable investment securities, together with our restricted cash and cash equivalents, included amounts required as collateral for our letters of credit and trusts.

Other Investment Securities

We have strategic investments in certain debt and/or equity securities that are included in noncurrent "Other investment securities" on our Condensed Consolidated Balance Sheets. Our debt securities are classified as available-for-sale and our equity securities are accounted for using the equity method of accounting or recorded at fair value. Certain of our equity method investments are detailed below.

NagraStar L.L.C. We own a 50% interest in NagraStar L.L.C. ("NagraStar"), a joint venture that is our primary provider of encryption and related security systems intended to assure that only authorized customers have access to our programming.

Invidi Technologies Corporation. In November 2016, we, AT&T Inc., and Cavendish Square Holding B.V., an affiliate of WPP plc, entered into a series of agreements to acquire Invidi Technologies Corporation ("Invidi"), an entity that provides proprietary software for the addressable advertising market.

TerreStar Solutions, Inc. In March 2019, we closed a transaction with TerreStar Solutions, Inc. ("TSI") to acquire additional equity securities of TSI, an entity that holds certain 2 GHz wireless spectrum licenses in Canada, in exchange for certain Canadian assets, including, among other things, a portion of the satellite capacity on our T1 satellite, which we had acquired from TerreStar Networks, Inc. in 2012.

Our ability to realize value from our strategic investments in securities that are not publicly traded depends on, among other things, the success of the issuers' businesses and their ability to obtain sufficient capital, on acceptable terms or at all, and to execute their business plans. Because private markets are not as liquid as public markets, there is also increased risk that we will not be able to sell these investments, or that when we desire to sell them we will not be able to obtain fair value for them.

DISH NETWORK CORPORATION
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS - Continued
(Unaudited)

Fair Value Measurements

Our investments measured at fair value on a recurring basis were as follows:

	As of							
	March 31, 2023				December 31, 2022			
	Total	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3
	(In thousands)							
Cash equivalents (including restricted)	$ 2,091,414	$ 54,665	$ 2,036,749	$ —	$ 1,620,458	$ 174,050	$ 1,446,408	$ —
Debt securities (including restricted):								
U.S. Treasury and agency securities	$ —	$ —	$ —	$ —	$ 22,824	$ 22,824	$ —	$ —
Commercial paper	271,422	—	271,422	—	696,324	—	696,324	—
Corporate securities	66,557	—	66,557	—	156,380	—	156,380	—
Other	2,148	—	2,004	144	1,489	—	1,345	144
Equity securities	346	346	—	—	655	655	—	—
Total	$ 340,473	$ 346	$ 339,983	$ 144	$ 877,672	$ 23,479	$ 854,049	$ 144

As of March 31, 2023, restricted and non-restricted marketable investment securities included debt securities of $334 million with contractual maturities within one year and $6 million with contractual maturities extending longer than one year through and including five years. Actual maturities may differ from contractual maturities as a result of our ability to sell these securities prior to maturity.

Derivative Instruments

We have the option to purchase certain of T-Mobile's 800 MHz spectrum licenses from T-Mobile at a fixed price in the future. This instrument meets the definition of a derivative and was valued based upon, among other things, our estimate of the underlying asset price, the expected term, volatility, the risk free rate of return and the probability of us exercising the option. The instrument acquisition date fair value was $713 million. The derivative is remeasured quarterly. As of March 31, 2023 and December 31, 2022, the derivative's fair value was $1.664 billion and $1.693 billion, respectively, and is included in "Other noncurrent assets, net" on our Condensed Consolidated Balance Sheets. All changes in the derivative's fair value are recorded in "Other, net" on our Condensed Consolidated Statements of Operations and Comprehensive Income (Loss) until the option is either exercised or expires. See the table below. If we elect to exercise the option and purchase these licenses, we will record the licenses at fair value at that date in "FCC authorizations" on our Condensed Consolidated Balance Sheets. If we elect to not exercise the option or it expires, we will expense the derivative's fair value at that date on our Condensed Consolidated Statements of Operations and Comprehensive Income (Loss) and are potentially subject to pay T-Mobile a fee of approximately $72 million per the Spectrum Purchase Agreement under certain circumstances. See our Annual Report on Form 10-K for the year ended December 31, 2022 for further information on the Spectrum Purchase Agreement.

We account for our option to purchase certain T-Mobile's 800 MHz spectrum licenses under the Spectrum Purchase Agreement as a Level 3 instrument within the fair value hierarchy.

DISH NETWORK CORPORATION
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS - Continued
(Unaudited)

Gains and Losses on Sales and Changes in Carrying Amounts of Investments and Other

"Other, net" within "Other Income (Expense)" included on our Condensed Consolidated Statements of Operations and Comprehensive Income (Loss) is as follows:

	For the Three Months Ended March 31,	
Other, net:	**2023**	**2022**
	(In thousands)	
Marketable investment securities - realized and unrealized gains (losses)	$ (308)	$ (448)
Derivative instruments - net realized and/or unrealized gains (losses)	(28,961)	43,000
Costs related to early redemption of debt	49	(6)
Equity in earnings (losses) of affiliates	(1,451)	400
Other	150	(398)
Total	$ (30,521)	$ 42,548

6. Inventory

Inventory consisted of the following:

	As of	
	March 31, 2023	**December 31, 2022**
	(In thousands)	
Finished goods	$ 475,611	$ 447,322
Work-in-process and service repairs	22,708	19,351
Raw materials	24,701	35,700
Total inventory	$ 523,020	$ 502,373

DISH NETWORK CORPORATION
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS - Continued
(Unaudited)

7. Property and Equipment and Intangible Assets

Property and Equipment

Property and equipment consisted of the following:

	Depreciable Life (In Years)	As of March 31, 2023	As of December 31, 2022
		(In thousands)	
Equipment leased to customers	2 - 5	$ 1,271,946	$ 1,318,272
Satellites	4 - 15	1,718,865	1,718,865
Satellites acquired under finance lease agreements	15	344,447	344,447
Furniture, fixtures, equipment and other	2 - 20	1,217,232	1,215,496
5G Network Deployment equipment (1)	3 - 15	1,559,785	770,153
Software	3 - 6	1,389,092	1,354,656
Buildings and improvements	5 - 40	380,952	380,519
Land	-	17,513	17,513
Construction in progress	-	3,171,221	3,170,623
Total property and equipment		11,071,053	10,290,544
Accumulated depreciation		(4,769,354)	(4,650,425)
Property and equipment, net		$ 6,301,699	$ 5,640,119

(1) Includes 5G Network Deployment assets acquired under finance lease agreements.

Depreciation and amortization expense consisted of the following:

	For the Three Months Ended March 31, 2023	For the Three Months Ended March 31, 2022
	(In thousands)	
Equipment leased to customers	$ 46,716	$ 51,273
Satellites	36,082	39,806
Buildings, furniture, fixtures, equipment and other (1)	117,234	48,115
Intangible assets	45,665	37,147
Total depreciation and amortization	$ 245,697	$ 176,341

(1) This increase primarily resulted from depreciation expense related to software, tower equipment and certain other assets placed into service in connection with our 5G Network Deployment.

Cost of sales and operating expense categories included in our accompanying Condensed Consolidated Statements of Operations and Comprehensive Income (Loss) do not include depreciation expense related to satellites or equipment leased to customers.

Satellites

Pay-TV Satellites. We currently utilize ten satellites in geostationary orbit approximately 22,300 miles above the equator, seven of which we own and depreciate over their estimated useful life. We also lease three satellites from third parties: Ciel II and Anik F3, which are accounted for as operating leases, and Nimiq 5, which is accounted for as a financing lease and is depreciated over its economic life.

As of March 31, 2023, our pay-TV satellite fleet consisted of the following:

Satellites	Launch Date	Degree Orbital Location	Lease Termination Date
Owned:			
EchoStar X	February 2006	110	N/A
EchoStar XI	July 2008	110	N/A
EchoStar XIV	March 2010	119	N/A
EchoStar XV	July 2010	61.5	N/A
EchoStar XVI	November 2012	61.5	N/A
EchoStar XVIII	June 2016	61.5	N/A
EchoStar XXIII	March 2017	110	N/A
Under Construction:			
EchoStar XXV	2026	110	N/A
Leased from Other Third Party:			
Anik F3	April 2007	118.7	April 2025
Ciel II	December 2008	129	July 2023
Nimiq 5	September 2009	72.7	September 2024

Satellite Under Construction

EchoStar XXV. On March 20, 2023, we entered into a contract with Maxar Space LLC for the construction of EchoStar XXV, a DBS satellite that is capable of providing service to the continental United States ("CONUS") and is intended to be used at the 110 degree orbital location. This satellite is expected to be launched during 2026.

8. Leases

We enter into non-cancelable operating and finance leases for, among other things, communication towers, satellites, office space, dark fiber and transport equipment, warehouses and distribution centers, vehicles and other equipment. Substantially all of our leases have remaining lease terms from one to 15 years, some of which include renewal options, and some of which include options to terminate the leases within one year. For certain arrangements (generally communication towers), the lease term includes the non-cancelable period plus the renewal period that we are reasonably certain to exercise.

Through the first quarter of 2022, our Anik F3 and Nimiq 5 satellites were accounted for as finance leases. However, during April 2022, we extended the Anik F3 lease and as a result it is currently accounted for as an operating lease. Substantially all of our remaining leases are accounted for as operating leases.

DISH NETWORK CORPORATION
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The components of lease expense were as follows:

	For the Three Months Ended March 31,	
	2023	2022
	(In thousands)	
Operating lease cost (1)	$ 111,433	$ 61,102
Short-term lease cost (2)	2,718	3,554
Finance lease cost:		
Amortization of right-of-use assets	27,056	9,893
Interest on lease liabilities	3,570	2,732
Total finance lease cost	30,626	12,625
Total lease costs	$ 144,777	$ 77,281

(1) The increase in operating lease cost is primarily related to communication tower leases.
(2) Leases that have terms of 12 months or less.

Supplemental cash flow information related to leases was as follows:

	For the Three Months Ended March 31,	
	2023	2022
	(In thousands)	
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	$ 67,223	$ 24,360
Operating cash flows from finance leases	$ 2,397	$ 917
Financing cash flows from finance leases	$ 8,713	$ 4,420
Right-of-use assets obtained in exchange for lease obligations:		
Operating leases	$ 231,868	$ 543,868
Finance leases	$ 51,110	$ —

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NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS - Continued
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Supplemental balance sheet information related to leases was as follows:

	As of	
	March 31, 2022	December 31, 2022
	(In thousands)	
Operating Leases:		
Operating lease assets	$ 2,854,337	$ 2,687,522
Other current liabilities	$ 225,464	$ 194,030
Operating lease liabilities	2,864,923	2,687,883
Total operating lease liabilities	$ 3,090,387	$ 2,881,913
Finance Leases:		
Property and equipment, gross	$ 462,887	$ 411,778
Accumulated depreciation	(330,858)	(303,802)
Property and equipment, net	$ 132,029	$ 107,976
Other current liabilities	$ 57,309	$ 48,066
Other long-term liabilities	108,302	75,287
Total finance lease liabilities	$ 165,611	$ 123,353
Weighted Average Remaining Lease Term:		
Operating leases	11.6 years	11.8 years
Finance leases	2.7 years	2.7 years
Weighted Average Discount Rate:		
Operating leases	7.5%	7.3%
Finance leases	9.9%	9.8%

Maturities of lease liabilities as of March 31, 2023 were as follows:

	Maturities of Lease Liabilities		
For the Years Ending December 31,	**Operating Leases**	**Finance Leases**	**Total**
		(In thousands)	
2023 (remaining nine months)	$ 229,048	$ 57,701	$ 286,749
2024	334,298	61,934	396,232
2025	367,051	34,344	401,395
2026	396,883	36,588	433,471
2027	399,850	2,574	402,424
Thereafter	3,103,067	—	3,103,067
Total lease payments	4,830,197	193,141	5,023,338
Less: Imputed interest	(1,739,810)	(27,530)	(1,767,340)
Total	3,090,387	165,611	3,255,998
Less: Current portion	(225,464)	(57,309)	(282,773)
Long-term portion of lease obligations	$ 2,864,923	$ 108,302	$ 2,973,225

DISH NETWORK CORPORATION
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS - Continued
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9. Long-Term Debt and Finance Lease Obligations

Fair Value of our Long-Term Debt

The following table summarizes the carrying amount and fair value of our debt facilities as of March 31, 2023 and December 31, 2022:

	As of			
	March 31, 2023		December 31, 2022	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
	(In thousands)			
5% Senior Notes due 2023 (1)	$ —	$ —	$ 1,443,179	$ 1,441,635
2 3/8% Convertible Notes due 2024 (2)	1,000,000	886,250	1,000,000	906,970
5 7/8% Senior Notes due 2024	2,000,000	1,786,400	2,000,000	1,870,940
0% Convertible Notes due 2025	2,000,000	1,030,000	2,000,000	1,287,540
7 3/4% Senior Notes due 2026	2,000,000	1,327,960	2,000,000	1,620,280
3 3/8% Convertible Notes due 2026	3,000,000	1,552,500	3,000,000	1,894,230
5 1/4% Senior Secured Notes due 2026	2,750,000	2,195,105	2,750,000	2,336,813
11 3/4% Senior Secured Notes due 2027 (3)	3,500,000	3,378,620	2,000,000	2,071,240
7 3/8% Senior Notes due 2028	1,000,000	574,040	1,000,000	708,320
5 3/4% Senior Secured Notes due 2028	2,500,000	1,862,275	2,500,000	2,013,675
5 1/8% Senior Notes due 2029	1,500,000	805,680	1,500,000	976,755
Other notes payable	126,114	126,114	138,303	138,303
Subtotal	21,376,114	$ 15,524,944	21,331,482	$ 17,266,700
Unamortized deferred financing costs and other debt discounts, net	(79,188)		(105,697)	
Finance lease obligations (4)	165,611		123,353	
Total long-term debt and finance lease obligations (including current portion)	$ 21,462,537		$ 21,349,138	

(1) We had repurchased or redeemed the principal balance of our 5% Senior Notes due 2023 as of March 15, 2023, the instrument's maturity date.
(2) Our 2 3/8% Convertible Notes due 2024 mature on March 15, 2024 and have been reclassified to "Current portion of long-term debt and finance lease obligations" on our Condensed Consolidated Balance Sheets as of March 31, 2023.
(3) On January 26, 2023, we issued an additional $1.5 billion aggregate principal amount of our 11 3/4% Senior Secured Notes due November 15, 2027.
(4) Disclosure regarding fair value of finance leases is not required.

We estimated the fair value of our publicly traded long-term debt using market prices in less active markets (Level 2).

Future Capital Requirements

We have and expect to continue to incur significant expenditures in 2023 related to our 5G Network Deployment, including, but not limited to, capital expenditures associated with our 5G Network Deployment, and the potential purchase of additional wireless spectrum licenses. The amount of capital required will also depend on, among other things, debt maturities (as detailed in the table above) and the levels of investment necessary to support potential strategic initiatives that may arise from time to time. We do not currently have cash, marketable investment securities balances and/or projected future cash flows to fully fund our convertible notes due in 2024 with an aggregate principal balance of $1.0 billion, which mature on March 15, 2024. After we have achieved our 5G Network Deployment milestone of 70% of the U.S. population by June 2023, our capital expenditures will decline as we prepare for our next significant build-out requirement in 2025.

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NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS - Continued
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To address any remaining capital needs, we plan to implement one or more of the following options, among other things, raise additional capital, pursue strategic transactions and/or advance additional cost reduction initiatives. Our cost reduction initiatives may include, among other things, a decrease in the anticipated rate at which we acquire subscribers and a further reduction in our capital expenditures. Any additional capital may not be available at the historical interest rates of our long-term debt, as detailed in the table above, or at all, due to, among other things, the current market rate environment.

Convertible Notes

2 3/8% Convertible Notes due 2024

On March 17, 2017, we issued $1.0 billion aggregate principal amount of the Convertible Notes due March 15, 2024 in a private placement. Interest accrues at an annual rate of 2 3/8% and is payable semi-annually in cash, in arrears on March 15 and September 15 of each year.

The Convertible Notes due 2024 are:

- our general unsecured obligations;
- ranked senior in right of payment to any future indebtedness that is expressly subordinated in right of payment to the Convertible Notes due 2024;
- ranked equally in right of payment with all of our existing and future unsecured senior indebtedness;
- ranked effectively junior to any of our existing and future secured indebtedness to the extent of the value of the assets securing such indebtedness;
- ranked structurally junior to all indebtedness and other liabilities of our subsidiaries; and
- not guaranteed by our subsidiaries.

We may not redeem the Convertible Notes due 2024 prior to the maturity date. If a "fundamental change" (as defined in the related indenture) occurs prior to the maturity date of the Convertible Notes due 2024, holders may require us to repurchase for cash all or part of their Convertible Notes due 2024 at a repurchase price equal to 100% of the principal amount of such Convertible Notes due 2024, plus accrued and unpaid interest to, but not including, the fundamental change repurchase date.

The indenture related to the Convertible Notes due 2024 does not contain any financial covenants and does not restrict us from paying dividends, issuing or repurchasing our other securities, issuing new debt (including secured debt) or repaying or repurchasing our debt.

Subject to the terms of the related indenture, the Convertible Notes due 2024 may be converted at an initial conversion rate of 12.1630 shares of our Class A common stock per $1,000 principal amount of Convertible Notes due 2024 (equivalent to an initial conversion price of approximately $82.22 per share of our Class A common stock) (the "Initial Conversion Rate"), at any time on or after October 15, 2023 through the second scheduled trading day preceding the maturity date. Holders of the Convertible Notes due 2024 will also have the right to convert the Convertible Notes due 2024 at the Initial Conversion Rate prior to October 15, 2023, but only upon the occurrence of specified events described in the related indenture. The conversion rate is subject to anti-dilution adjustments if certain events occur. Upon any conversion, we will settle our conversion obligation in cash, shares of our Class A common stock or a combination of cash and shares of our Class A common stock, at our election.

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NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS - Continued
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0% Convertible Notes due 2025

On December 21, 2020, we issued $2.0 billion aggregate principal amount of the Convertible Notes due December 15, 2025 in a private placement. These notes will not bear interest, and the principal amount of the Notes will not accrete.

The Convertible Notes due 2025 are:

- our general unsecured obligations;
- ranked senior in right of payment to any future indebtedness that is expressly subordinated in right of payment to the Convertible Notes due 2025;
- ranked equally in right of payment with all of our existing and future unsecured senior indebtedness;
- ranked effectively junior to any of our existing and future secured indebtedness to the extent of the value of the assets securing such indebtedness;
- ranked structurally junior to all indebtedness and other liabilities of our subsidiaries; and
- not guaranteed by our subsidiaries.

We may not redeem the Convertible Notes due 2025 prior to the maturity date. If a "fundamental change" (as defined in the related indenture) occurs prior to the maturity date of the Convertible Notes due 2025, holders may require us to repurchase for cash all or part of their Convertible Notes due 2025 at a repurchase price equal to 100% of the principal amount of such Convertible Notes due 2025, plus accrued and unpaid interest to, but not including, the fundamental change repurchase date.

The indenture related to the Convertible Notes due 2025 does not contain any financial covenants and does not restrict us from paying dividends, issuing or repurchasing our other securities, issuing new debt (including secured debt) or repaying or repurchasing our debt.

Subject to the terms of the related indenture, the Convertible Notes due 2025 may be converted at an initial conversion rate of 24.4123 shares of our Class A common stock per $1,000 principal amount of the Convertible Notes due 2025 (equivalent to an initial conversion price of approximately $40.96 per share of our Class A common stock) (the "Initial Conversion Rate"), at any time on or after July 15, 2025 through the second scheduled trading day preceding the maturity date. Holders of the Convertible Notes due 2025 will also have the right to convert the Convertible Notes due 2025 at the Initial Conversion Rate prior to July 15, 2025, but only upon the occurrence of specified events described in the related indenture. The conversion rate is subject to anti-dilution adjustments if certain events occur. Upon any conversion, we will settle our conversion obligation in cash, shares of our Class A common stock or a combination of cash and shares of our Class A common stock, at our election.

3 3/8% Convertible Notes due 2026

On August 8, 2016, we issued $3.0 billion aggregate principal amount of the Convertible Notes due August 15, 2026 in a private unregistered offering. Interest accrues at an annual rate of 3 3/8% and is payable semi-annually in cash, in arrears on February 15 and August 15 of each year.

The Convertible Notes due 2026 are:

- our general unsecured obligations;
- ranked senior in right of payment to any future indebtedness that is expressly subordinated in right of payment to the Convertible Notes due 2026;
- ranked equally in right of payment with all of our existing and future unsecured senior indebtedness;
- ranked effectively junior to any of our existing and future secured indebtedness to the extent of the value of the assets securing such indebtedness;

- ranked structurally junior to all indebtedness and other liabilities of our subsidiaries; and
- not guaranteed by our subsidiaries.

We may not redeem the Convertible Notes due 2026 prior to the maturity date. If a “fundamental change” (as defined in the related indenture) occurs prior to the maturity date of the Convertible Notes due 2026, holders may require us to repurchase for cash all or part of their Convertible Notes due 2026 at a specified make-whole price equal to 100% of the principal amount of such Convertible Notes due 2026, plus accrued and unpaid interest to, but not including, the fundamental change repurchase date.

The indenture related to the Convertible Notes due 2026 does not contain any financial covenants and does not restrict us from paying dividends, issuing or repurchasing our other securities, issuing new debt (including secured debt) or repaying or repurchasing our debt.

Subject to the terms of the related indenture, the Convertible Notes due 2026 may be converted at an initial conversion rate of 15.3429 shares of our Class A common stock per $1,000 principal amount of Convertible Notes due 2026 (equivalent to an initial conversion price of approximately $65.18 per share of our Class A common stock) (the “Initial Conversion Rate”), at any time on or after March 15, 2026 through the second scheduled trading day preceding the maturity date. Holders of the Convertible Notes due 2026 will also have the right to convert the Convertible Notes due 2026 at the Initial Conversion Rate prior to March 15, 2026, but only upon the occurrence of specified events described in the related indenture.

The conversion rate is subject to anti-dilution adjustments if certain events occur. Upon any conversion, we will settle our conversion obligation in cash, shares of our Class A common stock or a combination of cash and shares of our Class A common stock, at our election.

Convertible Note Hedge and Warrant Transactions

In connection with the offering of the Convertible Notes due 2026, we entered into convertible note hedge transactions with certain option counterparties. The convertible note hedge transactions cover, subject to anti-dilution adjustments substantially similar to those applicable to the Convertible Notes due 2026, the number of shares of our Class A common stock underlying the Convertible Notes due 2026, which initially gives us the option to purchase approximately 46 million shares of our Class A common stock at a price of approximately $65.18 per share. The total cost of the convertible note hedge transactions was $635 million. Concurrently with entering into the convertible note hedge transactions, we also entered into warrant transactions with each option counterparty whereby we sold to such option counterparty warrants to purchase, subject to customary anti-dilution adjustments, up to the same number of shares of our Class A common stock, which initially gives the option counterparties the option to purchase approximately 46 million shares of our Class A common stock at a price of approximately $86.08 per share. We received $376 million in cash proceeds from the sale of these warrants. For us, the economic effect of these transactions is to effectively raise the initial conversion price from approximately $65.18 per share of our Class A common stock to approximately $86.08 per share of our Class A common stock (thus effectively raising the conversion premium on the Convertible Notes due 2026 from approximately 32.5% to approximately 75%). In accordance with accounting guidance on hedge and warrant transactions, the net cost incurred in connection with the convertible note hedge and warrant transactions are recorded as a reduction in “Additional paid-in capital” within “Stockholders’ Equity (Deficit)” on our Consolidated Balance Sheets as of December 31, 2016.

We will not be required to make any cash payments to each option counterparty or its affiliates upon the exercise of the options that are a part of the convertible note hedge transactions, but will be entitled to receive from them a number of shares of Class A common stock, an amount of cash or a combination thereof. This consideration is generally based on the amount by which the market price per share of Class A common stock, as measured under the terms of the convertible note hedge transactions, is greater than the strike price of the convertible note hedge transactions during the relevant valuation period under the convertible note hedge transactions. Additionally, if the market price per share of Class A common stock, as measured under the terms of the warrant transactions, exceeds the strike price of the warrants during the measurement period at the maturity of the warrants, we will owe each option counterparty a number of shares of Class A common stock in an amount based on the excess of such market price per share of Class A common stock over the strike price of the warrants. However, as specified under the terms of the warrant transactions, we may elect to settle the warrants in cash.

Intercompany Loan

The net proceeds from the offering of our 5 1/4% Senior Secured Notes due 2026 and our 5 3/4% Senior Secured Notes due 2028 (the “Senior Notes”) issued on November 26, 2021 were used by DISH DBS to make an intercompany loan to DISH Network pursuant to a Loan and Security Agreement dated November 26, 2021 (together with potential future advances to DISH Network, the “Intercompany Loan”) between DISH DBS and DISH Network in order to finance the purchase of wireless spectrum licenses and for general corporate purposes, including our 5G Network Deployment. The Intercompany Loan will mature in two tranches, with the first tranche maturing on December 1, 2026 (the “2026 Tranche”) and the second tranche maturing on December 1, 2028 (the “2028 Tranche”). DISH DBS may make additional advances to DISH Network under the Intercompany Loan, and on February 11, 2022, DISH DBS advanced an additional $1.5 billion to DISH Network under the Intercompany Loan 2026 Tranche. Interest accrues and is payable semiannually, and interest payments with respect to the Intercompany Loan are, at our option, payable in kind for the first two years. In the third year, a minimum of 50% of each interest payment due with respect to each tranche of the Intercompany Loan must be paid in cash. Thereafter, interest payments must be paid in cash. Interest will accrue: (a) when paid in cash, at a fixed rate of 0.25% per annum in excess of the interest rate applicable to, in the case of the 2026 Tranche, the 5 1/4% Senior Secured Notes due 2026, and in the case of the 2028 Tranche, the 5 3/4% Senior Secured Notes due 2028 (each, the “Cash Accrual Rate” with respect to the applicable tranche); and (b) when paid in kind, at a rate of 0.75% per annum in excess of the Cash Accrual Rate for the applicable tranche. As of March 31, 2023, the total Intercompany Loan amount outstanding plus interest paid in kind was $7.160 billion. The cash proceeds of the Intercompany Loan of $6.750 billion were paid to the FCC in connection with Weminuche’s winning bids in Auction 110. As a result, the Intercompany Loan is secured by Weminuche’s interest in the wireless spectrum licenses acquired in Auction 110 with such cash proceeds up to the total loan amount outstanding including interest paid in kind. The remaining balance of our winning bids of approximately $455 million was paid from cash and marketable investment securities balances at that time, for a total of approximately $7.205 billion. Under certain circumstances, DISH Network wireless spectrum licenses (valued based upon a third-party valuation) may be substituted for the collateral. The Intercompany Loan is not included as collateral for the Senior Secured Notes, and the Senior Secured Notes are subordinated to DISH DBS’s existing and certain future unsecured notes with respect to certain realizations under the Intercompany Loan and any collateral pledged as security for the Intercompany Loan.

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10. Commitments and Contingencies

Commitments

Future maturities of our long-term debt, finance lease and contractual obligations as disclosed in our Annual Report on Form 10-K for the year ended December 31, 2022 have not changed materially, other than those disclosed below.

"Other long-term obligations" totaled $14.683 billion as of March 31, 2023 and $15.115 billion as of December 31, 2022, a decrease of $432 million as of March 31, 2023. This decrease primarily resulted from the recognition of approximately $264 million of communication tower leases recorded as "Operating lease assets" and "Operating lease liabilities" on our Condensed Consolidated Balance Sheets partially offset by contractual commitments, including, but not limited to, our satellite under construction, EchoStar XXV. As of March 31, 2023, our future "Other long-term obligations" were as follows:

For the Years Ending December 31,	Other Long-Term Obligations (1)	
	(In thousands)	
2023 (remaining nine months)	$	3,635,929
2024		2,469,468
2025		1,935,955
2026		1,744,978
2027		1,371,171
Thereafter		3,525,563
Total	$	14,683,064

(1) Represents minimum contractual commitments related to communication tower obligations, certain 5G Network Deployment commitments, obligations under the NSA with AT&T and the MNSA with T-Mobile, radios, software and integration services and satellite related and other obligations.

In certain circumstances, the dates on which we are obligated to make these payments could be delayed.

We currently expect capital expenditures, excluding capitalized interest, for our 5G Network Deployment to be approximately $10 billion, including amounts incurred in 2021, 2022 and in the first three months of 2023, of which approximately $2.281 billion is included in the table above in "Other long-term obligations."

Agreements in Connection with the Asset Purchase Agreement

On July 1, 2020, we completed the Boost Mobile Acquisition. In connection with the closing of the Boost Mobile Acquisition, we and T-Mobile entered into the Spectrum Purchase Agreement (as defined in our Annual Report on Form 10-K for the year ended December 31, 2021) for approximately $3.59 billion. If we elect to not exercise the option to purchase the 800 MHz licenses pursuant to the Spectrum Purchase Agreement or it expires, we are potentially subject to pay T-Mobile a fee of approximately $72 million per the Spectrum Purchase Agreement under certain circumstances. The $3.59 billion and the $72 million are not included in "Other long-term obligations" above.

Wireless – 5G Network Deployment

We have invested a total of over $30 billion in Wireless spectrum licenses, which includes over $10 billion in noncontrolling investments in certain entities. The $30 billion of investments related to Wireless spectrum licenses does not include $8 billion of capitalized interest related to the carrying value of such licenses. See Note 2 for further information on capitalized interest.

Wireless Spectrum Licenses

These Wireless spectrum licenses are subject to certain interim and final build-out requirements, as well as certain renewal requirements that are summarized in the table below:

	Carrying Amount	Build-Out Deadlines		Expiration Date
		Interim	Final	
	(In thousands)			
Owned:				
DBS Licenses (1)	$ 677,409			
700 MHz Licenses (2)	711,871		June 14, 2023 (3)	June 2023
AWS-4 Licenses (2)	1,940,000		June 14, 2023 (3)	June 2023
H Block Licenses (2)	1,671,506		June 14, 2023 (4)	June 2023
600 MHz Licenses	6,213,335		June 14, 2025 (5)	June 2029
MVDDS Licenses (1)	24,000			August 2024
LMDS Licenses (1)	—			September 2028
28 GHz Licenses	2,883		October 2, 2029 (6)	October 2029
24 GHz Licenses	11,772		December 11, 2029 (6)	December 2029
37 GHz, 39 GHz and 47 GHz Licenses	202,533		June 4, 2030 (6)	June 2030
3550-3650 MHz Licenses	912,939		March 12, 2031 (6)	March 2031
3.7-3.98 GHz Licenses	2,731	July 23, 2029 (6)	July 23, 2033 (6)	July 2036
3.45–3.55 GHz Licenses	7,327,989	May 4, 2026 (6)	May 4, 2030 (6)	May 2037
1695-1710 MHz, 1755-1780 MHz, and 2155-2180 MHz	972		March 30, 2024 (7)	March 2026
Subtotal	19,699,940			
Noncontrolling Investments:				
Northstar	5,618,930		October 2025 (8)	October 2025 (8)
SNR	4,271,459		October 2025 (8)	October 2025 (8)
Total AWS-3 Licenses	9,890,389			
Capitalized Interest (9)	7,641,591			
Total as of March 31, 2023	$ 37,231,920			

(1) The build-out deadlines for these licenses have been met.
(2) The interim build-out deadlines for these licenses have been met.
(3) For these licenses, we must offer 5G broadband service to 70% of the United States population by this date; provided, however, if by June 14, 2023, we are offering 5G broadband service with respect to these licenses to at least 50% of the population of the United States but less than 70% of the population of the United States, the final deadline shall be further extended automatically to June 14, 2025, for us to construct and offer 5G broadband service to at least 70% of the population in each Economic Area (which is a service area established by the FCC) with respect to these licenses.
(4) For these licenses, we must offer 5G broadband service to at least 70% of the United States population by this date; provided, however, that if by June 14, 2023, we are offering 5G broadband service with respect to these licenses to at least 50% of the population of the United States but less than 70% of the population of the United States, the final deadline shall be further extended automatically to June 14, 2025, for us to construct and offer 5G broadband service to at least 75% of the population in each Economic Area (which is a service area established by the FCC) with respect to these licenses.
(5) For these licenses, we must offer 5G broadband service to at least 75% of the population in each Partial Economic Area (which is a service area established by the FCC) by this date. We have also acquired certain additional 600 MHz licenses through private transactions. These licenses are currently subject to their original FCC buildout deadlines.
(6) There are a variety of build-out options and associated build-out metrics associated with these licenses.
(7) For these licenses, we must provide reliable signal coverage and offer service to at least 75% of the population of each license area by this date.

(8) For these licenses, Northstar Wireless and SNR Wireless must provide reliable signal coverage and offer service to at least 75% of the population of each license area by this date. The AWS-3 interim build-out requirement was not met and as a result, the AWS-3 expiration date and the AWS-3 final build-out requirement have been accelerated by two years (from October 2027 to October 2025) for each AWS-3 License area in which Northstar Wireless and SNR Wireless did not meet the requirement.
(9) See Note 2 for further information.

Commercialization of Our Wireless Spectrum Licenses and Related Assets. We plan to commercialize our Wireless spectrum licenses through our 5G Network Deployment. We have committed to deploy a facilities-based 5G broadband network capable of serving increasingly larger portions of the U.S. population at different deadlines, including 20% of the U.S. population by June 2022 and 70% of the U.S. population by June 2023. If by June 2023, we are offering 5G broadband service to at least 50% of the U.S. population but less than 70% of the U.S. population, the 70% June 2023 deadline will be extended automatically to June 2025; however, as a result, we may, under certain circumstances, potentially be subject to certain penalties. On June 14, 2022, we announced we had successfully reached our 20% population coverage requirement. We are currently focused on our progression towards offering 5G broadband service to at least 70% of the U.S. population with a minimum of 15,000 5G sites. As of March 31, 2023, we had started construction on over 18,000 5G cell sites. We will need approximately 16,000 sites fully powered and fibered to provide 5G broadband service to over 70% of the U.S. population. We currently expect capital expenditures, excluding capitalized interest, for our 5G Network Deployment to be approximately $10 billion, including amounts incurred in 2021, 2022 and the first three months of 2023. See Note 2 for further information.

We may need to make significant additional investments or partner with others to, among other things, complete our 5G Network Deployment and further commercialize, build-out and integrate these licenses and related assets and any additional acquired licenses and related assets, as well as to comply with regulations applicable to such licenses. Depending on the nature and scope of such activities, any such investments or partnerships could vary significantly. In addition, as we complete our initial 5G Network Deployment, we have and may continue to incur significant additional expenses related to, among other things, research and development, wireless testing and ongoing upgrades to the wireless network infrastructure, software and third party integration. As a result of these investments, among other factors, we plan to raise additional capital, which may not be available on favorable terms. See Note 9 for further information. We may also determine that additional wireless spectrum licenses may be required to complete our 5G Network Deployment and to compete effectively with other wireless service providers.

We may need to raise significant additional capital in the future to fund the efforts described above, which may not be available on favorable terms. There can be no assurance that we will be able to develop and implement a business model that will realize a return on these Wireless spectrum licenses or that we will be able to profitably deploy the assets represented by these Wireless spectrum licenses, which may affect the carrying amount of these assets and our future financial condition or results of operations.

DISH Network Noncontrolling Investments in the Northstar Entities and the SNR Entities Related to AWS-3 Wireless Spectrum Licenses

Noncontrolling Investments

During 2015, through our wholly-owned subsidiaries American II and American III, we initially made over $10 billion in certain noncontrolling investments in Northstar Spectrum, the parent company of Northstar Wireless, and in SNR HoldCo, the parent company of SNR Wireless, respectively. Under the applicable accounting guidance in ASC 810, Northstar Spectrum and SNR HoldCo are considered VIEs and, based on the characteristics of the structure of these entities and in accordance with the applicable accounting guidance, we consolidate these entities into our financial statements. See Note 2 for further information.

Northstar Investment. As of 2015, through American II, we owned a noncontrolling interest in Northstar Spectrum, which was comprised of 85% of the Class B Common Interests and 100% of the Class A Preferred Interests of Northstar Spectrum. Northstar Manager is the sole manager of Northstar Spectrum and owns a controlling interest in Northstar Spectrum, which was comprised of 15% of the Class B Common Interests of Northstar Spectrum. As of March 31, 2018, the total equity contributions from American II and Northstar Manager to Northstar Spectrum were approximately $7.621 billion and $133 million, respectively. As of March 31, 2018, the total loans from American II to Northstar Wireless under the Northstar Credit Agreement (as defined below) for payments to the FCC related to the Northstar Licenses (as defined below) were approximately $500 million. See below for further information.

Northstar Purchase Agreement. On December 30, 2020, through our wholly-owned subsidiary American II, we entered into a Purchase Agreement (the "Northstar Purchase Agreement") with Northstar Manager and Northstar Spectrum, pursuant to which American II purchased 80% of Northstar Manager's Class B Common Interests in Northstar Spectrum (the "Northstar Transaction") for a purchase price of approximately $312 million. As a result of the Northstar Transaction, through American II, we hold 97% of the Class B Common Interests in Northstar Spectrum and Northstar Manager holds 3% of the Class B Common Interests in Northstar Spectrum. Other than the change in ownership percentage of Northstar Spectrum, the Northstar Transaction did not modify or amend in any way the existing arrangements between or among the Northstar parties.

SNR Investment. As of 2015, through American III, we own a noncontrolling interest in SNR HoldCo, which is comprised of 85% of the Class B Common Interests and 100% of the Class A Preferred Interests of SNR HoldCo. SNR Management is the sole manager of SNR HoldCo and owns a controlling interest in SNR HoldCo, which is comprised of 15% of the Class B Common Interests of SNR HoldCo. As of March 31, 2018, the total equity contributions from American III and SNR Management to SNR HoldCo were approximately $5.590 billion and $93 million, respectively. As of March 31, 2018, the total loans from American III to SNR Wireless under the SNR Credit Agreement (as defined below) for payments to the FCC related to the SNR Licenses (as defined below) were approximately $500 million. See below for further information.

AWS-3 Auction

Northstar Wireless and SNR Wireless each filed applications with the FCC to participate in Auction 97 (the "AWS-3 Auction") for the purpose of acquiring certain AWS-3 Licenses. Each of Northstar Wireless and SNR Wireless applied to receive bidding credits of 25% as designated entities under applicable FCC rules. Northstar Wireless was the winning bidder for AWS-3 Licenses with gross winning bid amounts totaling approximately $7.845 billion, which after taking into account a 25% bidding credit, was approximately $5.884 billion. SNR Wireless was the winning bidder for AWS-3 Licenses with gross winning bid amounts totaling approximately $5.482 billion, which after taking into account a 25% bidding credit, was approximately $4.112 billion. In addition to the net winning bids, SNR Wireless made a bid withdrawal payment of approximately $8 million.

FCC Order and October 2015 Arrangements. On August 18, 2015, the FCC released a *Memorandum Opinion and Order*, FCC 15-104 (the "Order") in which the FCC determined, among other things, that DISH Network has a controlling interest in, and is an affiliate of, Northstar Wireless and SNR Wireless, and therefore DISH Network's revenues should be attributed to them, which in turn makes Northstar Wireless and SNR Wireless ineligible to receive the 25% bidding credits (approximately $1.961 billion for Northstar Wireless and $1.370 billion for SNR Wireless). On November 23, 2020, the FCC released a Memorandum Opinion and Order on Remand, FCC 20-160, that found that Northstar Wireless and SNR Wireless are not eligible for bidding credits based on the FCC's determination that they remain under DISH Network's *de facto* control. Northstar Wireless and SNR Wireless have appealed the FCC's order to the D.C. Circuit Court of Appeals. On June 21, 2022, the United States Court of Appeals for the District of Columbia issued an Opinion rejecting this challenge. On January 17, 2023, Northstar Wireless filed a petition for a writ of certiorari asking the United States Supreme Court to hear a further appeal. On April 20, 2023, the Supreme Court asked for further briefing in connection with that petition.

Letters Exchanged between Northstar Wireless and the FCC Wireless Bureau. As outlined in letters exchanged between Northstar Wireless and the Wireless Telecommunications Bureau of the FCC (the "FCC Wireless Bureau"), Northstar Wireless paid the gross winning bid amounts for 261 AWS-3 Licenses (the "Northstar Licenses") totaling approximately $5.619 billion through the application of funds already on deposit with the FCC. Northstar Wireless also notified the FCC that it would not be paying the gross winning bid amounts for 84 AWS-3 Licenses totaling approximately $2.226 billion. As a result of the nonpayment of those gross winning bid amounts, the FCC retained those licenses and Northstar Wireless owed the FCC an additional interim payment of approximately $334 million (the "Northstar Interim Payment"), which is equal to 15% of $2.226 billion. The Northstar Interim Payment was recorded as an expense during the fourth quarter of 2015. Northstar Wireless immediately satisfied the Northstar Interim Payment through the application of funds already on deposit with the FCC and an additional loan from American II of approximately $69 million. As a result, the FCC will not deem Northstar Wireless to be a "current defaulter" under applicable FCC rules.

In addition, the FCC Wireless Bureau acknowledged that Northstar Wireless' nonpayment of those gross winning bid amounts does not constitute action involving gross misconduct, misrepresentation or bad faith. Therefore, the FCC concluded that such nonpayment will not affect the eligibility of Northstar Wireless, its investors (including DISH Network) or their respective affiliates to participate in future spectrum auctions (including Auction 1000 and any re-auction of the AWS-3 licenses retained by the FCC). At this time, DISH Network (through itself, a subsidiary or another entity in which it may hold a direct or indirect interest) expects to participate in any re-auction of those AWS-3 licenses.

If the winning bids from re-auction or other award of the AWS-3 licenses retained by the FCC are greater than or equal to the winning bids of Northstar Wireless, no additional amounts will be owed to the FCC. However, if those winning bids are less than the winning bids of Northstar Wireless, then Northstar Wireless will be responsible for the difference less any overpayment of the Northstar Interim Payment (which will be recalculated as 15% of the winning bids from re-auction or other award) (the "Northstar Re-Auction Payment"). For example, if the winning bids in a re-auction are $1, the Northstar Re-Auction Payment would be approximately $1.892 billion, which is calculated as the difference between $2.226 billion (the Northstar winning bid amounts) and $1 (the winning bids from re-auction) less the resulting $334 million overpayment of the Northstar Interim Payment. As discussed above, at this time, DISH Network (through itself, a subsidiary or another entity in which it may hold a direct or indirect interest) expects to participate in any re-auction. We cannot predict with any degree of certainty the timing or outcome of any re-auction or the amount of any Northstar Re-Auction Payment.

DISH Network Guaranty in Favor of the FCC for Certain Northstar Wireless Obligations. On October 1, 2015, DISH Network entered into a guaranty in favor of the FCC (the "FCC Northstar Guaranty") with respect to the Northstar Interim Payment (which was satisfied on October 1, 2015) and any Northstar Re-Auction Payment. The FCC Northstar Guaranty provides, among other things, that during the period between the due date for the payments guaranteed under the FCC Northstar Guaranty and the date such guaranteed payments are paid: (i) Northstar Wireless' payment obligations to American II under the Northstar Credit Agreement will be subordinated to such guaranteed payments; and (ii) DISH Network or American II will withhold exercising certain rights as a creditor of Northstar Wireless.

Letters Exchanged between SNR Wireless and the FCC Wireless Bureau. As outlined in letters exchanged between SNR Wireless and the FCC Wireless Bureau, SNR Wireless paid the gross winning bid amounts for 244 AWS-3 Licenses (the "SNR Licenses") totaling approximately $4.271 billion through the application of funds already on deposit with the FCC and a portion of an additional loan from American III in an aggregate amount of approximately $344 million (which included an additional bid withdrawal payment of approximately $3 million). SNR Wireless also notified the FCC that it would not be paying the gross winning bid amounts for 113 AWS-3 Licenses totaling approximately $1.211 billion. As a result of the nonpayment of those gross winning bid amounts, the FCC retained those licenses and SNR Wireless owed the FCC an additional interim payment of approximately $182 million (the "SNR Interim Payment"), which is equal to 15% of $1.211 billion. The SNR Interim Payment was recorded as an expense during the fourth quarter of 2015. SNR Wireless immediately satisfied the SNR Interim Payment through a portion of an additional loan from American III in an aggregate amount of approximately $344 million. As a result, the FCC will not deem SNR Wireless to be a "current defaulter" under applicable FCC rules.

In addition, the FCC Wireless Bureau acknowledged that SNR Wireless' nonpayment of those gross winning bid amounts does not constitute action involving gross misconduct, misrepresentation or bad faith. Therefore, the FCC concluded that such nonpayment will not affect the eligibility of SNR Wireless, its investors (including DISH Network) or their respective affiliates to participate in future spectrum auctions (including Auction 1000 and any re-auction of the AWS-3 licenses retained by the FCC). At this time, DISH Network (through itself, a subsidiary or another entity in which it may hold a direct or indirect interest) expects to participate in any re-auction of those AWS-3 licenses.

If the winning bids from re-auction or other award of the AWS-3 licenses retained by the FCC are greater than or equal to the winning bids of SNR Wireless, no additional amounts will be owed to the FCC. However, if those winning bids are less than the winning bids of SNR Wireless, then SNR Wireless will be responsible for the difference less any overpayment of the SNR Interim Payment (which will be recalculated as 15% of the winning bids from re-auction or other award) (the "SNR Re-Auction Payment"). For example, if the winning bids in a re-auction are $1, the SNR Re-Auction Payment would be approximately $1.029 billion, which is calculated as the difference between $1.211 billion (the SNR winning bid amounts) and $1 (the winning bids from re-auction) less the resulting $182 million overpayment of the SNR Interim Payment. As discussed above, at this time, DISH Network (through itself, a subsidiary or another entity in which it may hold a direct or indirect interest) expects to participate in any re-auction. We cannot predict with any degree of certainty the timing or outcome of any re-auction or the amount of any SNR Re-Auction Payment.

DISH Network Guaranty in Favor of the FCC for Certain SNR Wireless Obligations. On October 1, 2015, DISH Network entered into a guaranty in favor of the FCC (the "FCC SNR Guaranty") with respect to the SNR Interim Payment (which was satisfied on October 1, 2015) and any SNR Re-Auction Payment. The FCC SNR Guaranty provides, among other things, that during the period between the due date for the payments guaranteed under the FCC SNR Guaranty and the date such guaranteed payments are paid: (i) SNR Wireless' payment obligations to American III under the SNR Credit Agreement will be subordinated to such guaranteed payments; and (ii) DISH Network or American III will withhold exercising certain rights as a creditor of SNR Wireless.

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FCC Licenses. On October 27, 2015, the FCC granted the Northstar Licenses to Northstar Wireless and the SNR Licenses to SNR Wireless, respectively, which are recorded in "FCC authorizations" on our Condensed Consolidated Balance Sheets. The AWS-3 Licenses are subject to certain interim and final build-out requirements. By October 2021, Northstar Wireless and SNR Wireless must provide reliable signal coverage and offer service to at least 40% of the population in each area covered by an individual AWS-3 License (the "AWS-3 Interim Build-Out Requirement"). By October 2027, Northstar Wireless and SNR Wireless must provide reliable signal coverage and offer service to at least 75% of the population in each area covered by an individual AWS-3 License (the "AWS-3 Final Build-Out Requirement"). The AWS-3 Interim Build-Out Requirement was not met and as a result, the AWS-3 License term and the AWS-3 Final Build-Out Requirement have been accelerated by two years (from October 2027 to October 2025) for each AWS-3 License area in which Northstar Wireless and SNR Wireless did not meet the requirement. If the AWS-3 Final Build-Out Requirement is not met, the authorization for each AWS-3 License area in which Northstar Wireless and SNR Wireless do not meet the requirement may terminate. These wireless spectrum licenses expire in October 2027 unless they are renewed by the FCC. There can be no assurance that the FCC will renew these wireless spectrum licenses.

Qui Tam. On September 23, 2016, the United States District Court for the District of Columbia unsealed a qui tam complaint that was filed by Vermont National Telephone Company ("Vermont National") against us; our wholly-owned subsidiaries, American AWS-3 Wireless I L.L.C., American II, American III, and DISH Wireless Holding L.L.C.; Charles W. Ergen (our Chairman) and Cantey M. Ergen (a member of our board of directors); Northstar Wireless; Northstar Spectrum; Northstar Manager; SNR Wireless; SNR HoldCo; SNR Management; and certain other parties. See "*Contingencies – Litigation – Vermont National Telephone Company"* for further information.

D.C. Circuit Court Opinion. On August 29, 2017, the United States Court of Appeals for the District of Columbia Circuit (the "D.C. Circuit") in *SNR Wireless LicenseCo, LLC, et al. v. Federal Communications Commission*, 868 F.3d 1021 (D.C. Cir. 2017) (the "Appellate Decision") affirmed the Order in part, and remanded the matter to the FCC to give Northstar Wireless and SNR Wireless an opportunity to seek to negotiate a cure of the issues identified by the FCC in the Order (a "Cure"). On January 26, 2018, SNR Wireless and Northstar Wireless filed a petition for a writ of certiorari, asking the United States Supreme Court to hear an appeal from the Appellate Decision, which the United States Supreme Court denied on June 25, 2018.

Order on Remand. On January 24, 2018, the FCC released an Order on Remand, DA 18-70 (the "Order on Remand") purporting to establish a procedure to afford Northstar Wireless and SNR Wireless the opportunity to implement a Cure pursuant to the Appellate Decision. On June 8, 2018, Northstar Wireless and SNR Wireless each filed amended agreements to demonstrate that, in light of such changes, each of Northstar Wireless and SNR Wireless qualified for the very small business bidding credit that it sought in the AWS-3 Auction. Northstar Wireless and SNR Wireless filed a Joint Application for Review of the Order on Remand requesting, among other things, an iterative negotiation process with the FCC regarding a Cure, which was denied on July 12, 2018. The pleading cycle established in the Order on Remand concluded in October 2018. On November 23, 2020, the FCC issued a Memorandum Opinion and Order that concluded, among other things, that DISH Network retained de facto control over Northstar Wireless and SNR Wireless and denied the very small business bidding credit sought by Northstar Wireless and SNR Wireless, even though the parties had eliminated or significantly modified every provision previously deemed to have been disqualifying by the FCC. Northstar Wireless and SNR Wireless timely filed an appeal of the FCC's 2020 decision. On June 21, 2022, the United States Court of Appeals for the District of Columbia issued an Opinion rejecting this challenge. On January 17, 2023, Northstar Wireless filed a petition for a writ of certiorari asking the United States Supreme Court to hear a further appeal. On April 20, 2023, the Supreme Court asked for further briefing in connection with that petition.

Northstar Operative Agreements

Northstar LLC Agreement. Northstar Spectrum is governed by a limited liability company agreement by and between American II and Northstar Manager (the "Northstar Spectrum LLC Agreement"). Pursuant to the Northstar Spectrum LLC Agreement, American II and Northstar Manager made pro-rata equity contributions in Northstar Spectrum.

On March 31, 2018, American II, Northstar Spectrum, and Northstar Manager amended and restated the Northstar Spectrum LLC Agreement, to, among other things: (i) exchange $6.870 billion of the amounts outstanding and owed by Northstar Wireless to American II pursuant to the Northstar Credit Agreement (as defined below) for 6,870,493 Class A Preferred Interests in Northstar Spectrum (the "Northstar Preferred Interests"); (ii) replace the existing investor protection provisions with the investor protections described by the FCC in Baker Creek Communications, LLC, Memorandum Opinion and Order, 13 FCC Rcd 18709, 18715 (1998); (iii) delete the obligation of Northstar Manager to consult with American II regarding budgets and business plans; and (iv) remove the requirement that Northstar Spectrum's systems be interoperable with ours. The Northstar Preferred Interests: (a) are non-voting; (b) have a 12 percent mandatory quarterly distribution, which can be paid in cash or additional face amount of Northstar Preferred Interests at the sole discretion of Northstar Manager; and (c) have a liquidation preference equal to the then-current face amount of the Northstar Preferred Interests plus accrued and unpaid mandatory quarterly distributions in the event of certain liquidation events or deemed liquidation events (e.g., a merger or dissolution of Northstar Spectrum, or a sale of substantially all of Northstar Spectrum's assets). As a result of the exchange noted in (i) above, a principal amount of $500 million of debt remains under the Northstar Credit Agreement, as described below.

On June 7, 2018, American II, Northstar Spectrum, and Northstar Manager amended and restated the Second Amended and Restated Limited Liability Company Agreement, dated March 31, 2018, by and among American II, Northstar Spectrum, and Northstar Manager, to, among other things: (i) reduce the mandatory quarterly distribution for the Northstar Preferred Interests from 12 percent to eight percent from and after June 7, 2018; (ii) increase the window for Northstar Manager to "put" its interest in Northstar Spectrum to Northstar Spectrum after October 27, 2020 from 30 days to 90 days; (iii) provide an additional 90-day window for Northstar Manager to put its interest in Northstar Spectrum to Northstar Spectrum commencing on October 27, 2021; (iv) provide a right for Northstar Manager to require an appraisal of the fair market value of its interest in Northstar Spectrum at any time from October 27, 2022 through October 27, 2024, coupled with American II having the right to accept the offer to sell from Northstar Manager; (v) allow Northstar Manager to sell its interest in Northstar Spectrum without American II's consent any time after October 27, 2020 (previously October 27, 2025); (vi) allow Northstar Spectrum to conduct an initial public offering without American II's consent any time after October 27, 2022 (previously October 27, 2029); (vii) remove American II's rights of first refusal with respect to Northstar Manager's sale of its interest in Northstar Spectrum or Northstar Spectrum's sale of any AWS-3 Licenses; and (viii) remove American II's tag along rights with respect to Northstar Manager's sale of its interest in Northstar Spectrum. Northstar Manager had the right to put its interest in Northstar Spectrum to Northstar Spectrum for a 90-day period beginning October 27, 2020, which Northstar Manager waived in connection with the Northstar Purchase Agreement.

On January 24, 2022, American II, Northstar Spectrum, and Northstar Manager amended and restated the Third Amended and Restated Limited Liability Company Agreement, dated June 7, 2018, by and among American II, Northstar Spectrum, and Northstar Manager, to, among other things: (i) increase the second window for Northstar Manager to "put" its interest in Northstar Spectrum to Northstar Spectrum after October 27, 2021 from 90 days to 270 days.

On July 22, 2022, American II, Northstar Spectrum, and Northstar Manager amended and restated the Third Amended and Restated Limited Liability Company Agreement, dated June 7, 2018, by and among American II, Northstar Spectrum, and Northstar Manager, to, among other things, increase the second window for Northstar Manager to "put" its interest in Northstar Spectrum to Northstar Spectrum after July 24, 2022 from 270 days to 360 days.

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On October 21, 2022, we, through our wholly-owned subsidiary American II received notice that Northstar Manager exercised the Northstar Put Right effective as of October 21, 2022. The value of the Northstar Put Right has accrued to approximately $100 million as of March 31 2023. The consummation of the sale is subject to approval by the FCC. We expect to fund this obligation from cash and marketable investment securities balances at that time.

Northstar Wireless Credit Agreement. On October 1, 2015, American II, Northstar Wireless and Northstar Spectrum amended the First Amended and Restated Credit Agreement dated October 13, 2014, by and among American II, as Lender, Northstar Wireless, as Borrower, and Northstar Spectrum, as Guarantor (as amended, the "Northstar Credit Agreement"), to provide, among other things, that: (i) the Northstar Interim Payment and any Northstar Re-Auction Payment will be made by American II directly to the FCC and will be deemed as loans under the Northstar Credit Agreement; (ii) the FCC is a third-party beneficiary with respect to American II's obligation to pay the Northstar Interim Payment and any Northstar Re-Auction Payment; (iii) in the event that the winning bids from re-auction or other award of the AWS-3 licenses retained by the FCC are less than the winning bids of Northstar Wireless, the purchaser, assignee or transferee of any AWS-3 Licenses from Northstar Wireless is obligated to pay its pro-rata share of the difference (and Northstar Wireless remains jointly and severally liable for such pro-rata share); and (iv) during the period between the due date for the payments guaranteed under the FCC Northstar Guaranty (as discussed below) and the date such guaranteed payments are paid, Northstar Wireless' payment obligations to American II under the Northstar Credit Agreement will be subordinated to such guaranteed payments.

On March 31, 2018, American II, Northstar Wireless, and Northstar Spectrum amended and restated the Northstar Credit Agreement, to, among other things: (i) lower the interest rate on the remaining $500 million principal balance under the Northstar Credit Agreement from 12 percent per annum to six percent per annum; (ii) eliminate the higher interest rate that would apply in the case of an event of default; and (iii) modify and/or remove certain obligations of Northstar Wireless to prepay the outstanding loan amounts.

On June 7, 2018, American II, Northstar Wireless, and Northstar Spectrum amended and restated the Northstar Credit Agreement to, among other things: (i) extend the maturity date on the remaining loan balance from seven years to ten years; and (ii) remove the obligation of Northstar Wireless to obtain American II's consent for unsecured financing and equipment financing in excess of $25 million.

SNR Operative Agreements

SNR LLC Agreement. SNR HoldCo is governed by a limited liability company agreement by and between American III and SNR Management (the "SNR HoldCo LLC Agreement"). Pursuant to the SNR HoldCo LLC Agreement, American III and SNR Management made pro-rata equity contributions in SNR HoldCo.

On March 31, 2018, American III, SNR Holdco, SNR Wireless Management, and John Muleta amended and restated the SNR HoldCo LLC Agreement, to, among other things: (i) exchange $5.065 billion of the amounts outstanding and owed by SNR Wireless to American III pursuant to the SNR Credit Agreement (as defined below) for 5,065,415 Class A Preferred Interests in SNR Holdco (the "SNR Preferred Interests"); (ii) replace the existing investor protection provisions with the investor protections described by the FCC in Baker Creek Communications, LLC, Memorandum Opinion and Order, 13 FCC Rcd 18709, 18715 (1998); (iii) delete the obligation of SNR Management to consult with American III regarding budgets and business plans; and (iv) remove the requirement that SNR Management's systems be interoperable with ours. The SNR Preferred Interests: (a) are non-voting; (b) have a 12 percent mandatory quarterly distribution, which can be paid in cash or additional face amount of SNR Preferred Interests at the sole discretion of SNR Management; and (c) have a liquidation preference equal to the then-current face amount of the SNR Preferred Interests plus accrued and unpaid mandatory quarterly distributions in the event of certain liquidation events or deemed liquidation events (e.g., a merger or dissolution of SNR Holdco, or a sale of substantially all of SNR Holdco's assets). As a result of the exchange noted in (i) above, a principal amount of $500 million of debt remains under the SNR Credit Agreement, as described below.

On June 7, 2018, American III, SNR Holdco, SNR Management, and John Muleta amended and restated the Second Amended and Restated Limited Liability Company Agreement, dated March 31, 2018, by and among American III, SNR Holdco, SNR Management and John Muleta, to, among other things: (i) reduce the mandatory quarterly distribution for the SNR Preferred Interests from 12 percent to eight percent from and after June 7, 2018; (ii) increase the window for SNR Management to "put" its interest in SNR Holdco to SNR Holdco after October 27, 2020 from 30 days to 90 days; (iii) provide an additional 90-day window for SNR Management to put its interest in SNR Holdco to SNR Holdco commencing on October 27, 2021; (iv) provide a right for SNR Management to require an appraisal of the fair market value of its interest in SNR Holdco at any time from October 27, 2022 through October 27, 2024, coupled with American III having the right to accept the offer to sell from SNR Management; (v) allow SNR Management to sell its interest in SNR Holdco without American III's consent any time after October 27, 2020 (previously October 27, 2025); (vi) allow SNR Holdco to conduct an initial public offering without American III's consent any time after October 27, 2022 (previously October 27, 2029); (vii) remove American III's rights of first refusal with respect to SNR Management's sale of its interest in SNR Holdco or SNR Holdco's sale of any AWS-3 Licenses; and (viii) remove American III's tag along rights with respect to SNR Management's sale of its interest in SNR Holdco. SNR Management had the right to put its interest in SNR Holdco to SNR Holdco for a 90-day period from October 27, 2020. The First SNR Put Window closed in the first quarter of 2021, was not exercised and expired in January 2021.

On November 15, 2021, we, through our wholly-owned subsidiary American III received notice that SNR Management exercised the SNR Put Right effective as of November 15, 2021. The value of the SNR Put Right has accrued to approximately $385 million as of March 31, 2023. The consummation of the sale is subject to approval by the FCC. We expect to fund this obligation from cash and marketable investment securities balances at that time.

SNR Credit Agreement. On October 1, 2015, American III, SNR Wireless and SNR HoldCo amended the First Amended and Restated Credit Agreement dated October 13, 2014, by and among American III, as Lender, SNR Wireless, as Borrower, and SNR HoldCo, as Guarantor (as amended, the "SNR Credit Agreement"), to provide, among other things, that: (i) the SNR Interim Payment and any SNR Re-Auction Payment will be made by American III directly to the FCC and will be deemed as loans under the SNR Credit Agreement; (ii) the FCC is a third-party beneficiary with respect to American III's obligation to pay the SNR Interim Payment and any SNR Re-Auction Payment; (iii) in the event that the winning bids from re-auction or other award of the AWS-3 licenses retained by the FCC are less than the winning bids of SNR Wireless, the purchaser, assignee or transferee of any AWS-3 Licenses from SNR Wireless is obligated to pay its pro-rata share of the difference (and SNR Wireless remains jointly and severally liable for such pro-rata share); and (iv) during the period between the due date for the payments guaranteed under the FCC SNR Guaranty (as discussed below) and the date such guaranteed payments are paid, SNR Wireless' payment obligations to American III under the SNR Credit Agreement will be subordinated to such guaranteed payments.

On March 31, 2018, American III, SNR Wireless, and SNR Holdco amended and restated the SNR Credit Agreement, to, among other things: (i) lower the interest rate on the remaining $500 million principal balance under the SNR Credit Agreement from 12 percent per annum to six percent per annum; (ii) eliminate the higher interest rate that would apply in the case of an event of default; and (iii) modify and/or remove certain obligations of SNR Wireless to prepay the outstanding loan amounts.

On June 7, 2018, American III, SNR Wireless, and SNR Holdco amended and restated the SNR Credit Agreement to, among other things: (i) extend the maturity date on the remaining loan balance from seven years to ten years; and (ii) remove the obligation of SNR Wireless to obtain American III's consent for unsecured financing and equipment financing in excess of $25 million.

As of March 31, 2023 and December 31, 2022, the aggregate value of Northstar Manager's ownership interest in Northstar Spectrum and SNR Management's ownership interest in SNR HoldCo was $485 million and $464 million, respectively, recorded as "Redeemable noncontrolling interests" on our Condensed Consolidated Balance Sheets.

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The Northstar Entities and/or the SNR Entities may need to raise significant additional capital in the future, which may be obtained from third party sources or from us, so that the Northstar Entities and the SNR Entities may commercialize, build-out and integrate these AWS-3 Licenses, comply with regulations applicable to such AWS-3 Licenses, and make any potential Northstar Re-Auction Payment and SNR Re-Auction Payment for the AWS-3 licenses retained by the FCC. Depending upon the nature and scope of such commercialization, build-out and integration efforts, regulatory compliance, and potential Northstar Re-Auction Payment and SNR Re-Auction Payment, any loans, equity contributions or partnerships could vary significantly. There can be no assurance that we will be able to obtain a profitable return on our noncontrolling investments in the Northstar Entities and the SNR Entities.

Contingencies

Separation Agreement

On January 1, 2008, we completed the distribution of our technology and set-top box business and certain infrastructure assets (the “Spin-off”) into a separate publicly-traded company, EchoStar. In connection with the Spin-off, we entered into a separation agreement with EchoStar that provides, among other things, for the division of certain liabilities, including liabilities resulting from litigation. Under the terms of the separation agreement, EchoStar has assumed certain liabilities that relate to its business, including certain designated liabilities for acts or omissions that occurred prior to the Spin-off. Certain specific provisions govern intellectual property related claims under which, generally, EchoStar will only be liable for its acts or omissions following the Spin-off and we will indemnify EchoStar for any liabilities or damages resulting from intellectual property claims relating to the period prior to the Spin-off, as well as our acts or omissions following the Spin-off.

On February 28, 2017, we and EchoStar and certain of our respective subsidiaries completed the transactions contemplated by the Share Exchange Agreement (the “Share Exchange Agreement”) that was previously entered into on January 31, 2017 (the “Share Exchange”), pursuant to which certain assets that were transferred to EchoStar in the Spin-off were transferred back to us. On September 10, 2019, we and EchoStar and certain of our respective subsidiaries completed the transactions contemplated by the Master Transaction Agreement (the “Master Transaction Agreement”) that was previously entered into on May 19, 2019, pursuant to which certain assets that were transferred to EchoStar in the Spin-off were transferred back to us. The Share Exchange Agreement and the Master Transaction Agreement contain additional indemnification provisions between us and EchoStar for certain liabilities and legal proceedings.

Litigation

We are involved in a number of legal proceedings (including those described below) concerning matters arising in connection with the conduct of our business activities. Many of these proceedings are at preliminary stages, and many of these proceedings seek an indeterminate amount of damages. We regularly evaluate the status of the legal proceedings in which we are involved to assess whether a loss is probable or there is a reasonable possibility that a loss or an additional loss may have been incurred and to determine if accruals are appropriate. If accruals are not appropriate, we further evaluate each legal proceeding to assess whether an estimate of the possible loss or range of possible loss can be made.

For certain cases described on the following pages, management is unable to provide a meaningful estimate of the possible loss or range of possible loss because, among other reasons: (i) the proceedings are in various stages; (ii) damages have not been sought; (iii) damages are unsupported and/or exaggerated; (iv) there is uncertainty as to the outcome of pending appeals or motions; (v) there are significant factual issues to be resolved; and/or (vi) there are novel legal issues or unsettled legal theories to be presented or a large number of parties. For these cases, however, management does not believe, based on currently available information, that the outcomes of these proceedings will have a material adverse effect on our financial condition, though the outcomes could be material to our operating results for any particular period, depending, in part, upon the operating results for such period.

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ClearPlay, Inc.

On March 13, 2014, ClearPlay, Inc. (“ClearPlay”) filed a complaint against us, our wholly-owned subsidiary DISH Network L.L.C., EchoStar, and its then wholly-owned subsidiary EchoStar Technologies L.L.C., in the United States District Court for the District of Utah. The complaint alleges willful infringement of United States Patent Nos. 6,898,799 (the “799 patent”), entitled “Multimedia Content Navigation and Playback”; 7,526,784 (the “784 patent”), entitled “Delivery of Navigation Data for Playback of Audio and Video Content”; 7,543,318 (the “318 patent”), entitled “Delivery of Navigation Data for Playback of Audio and Video Content”; 7,577,970 (the “970 patent”), entitled “Multimedia Content Navigation and Playback”; and 8,117,282 (the “282 patent”), entitled “Media Player Configured to Receive Playback Filters From Alternative Storage Mediums.” ClearPlay alleges that the AutoHop™ feature of our Hopper® set-top box infringes the asserted patents. On February 11, 2015, the case was stayed pending various third-party challenges before the United States Patent and Trademark Office regarding the validity of certain of the patents asserted in the action.

In those third-party challenges, the United States Patent and Trademark Office found that all claims of the 282 patent are unpatentable, and that certain claims of the 784 patent and 318 patent are unpatentable. ClearPlay appealed as to the 784 patent and the 318 patent, and on August 23, 2016, the United States Court of Appeals for the Federal Circuit affirmed the findings of the United States Patent and Trademark Office. On October 31, 2016, the stay was lifted, and in May 2017, ClearPlay agreed to dismiss us and EchoStar as defendants, leaving DISH Network L.L.C. and DISH Technologies L.L.C. as the sole defendants.

On October 16, October 21, November 2, 2020 and November 9, 2020, DISH Network L.L.C. filed petitions with the United States Patent and Trademark Office requesting ex parte reexamination of the validity of the asserted claims of, respectively, the 784 patent, the 799 patent, the 318 patent and the 970 patent; and on November 2, November 20, December 14 and December 15, 2020, the United States Patent and Trademark Office granted each request for reexamination. On May 7, 2021, May 25, 2021, June 25, 2021 and July 7, 2021, the United States Patent and Trademark Office issued Ex Parte Reexamination Certificates confirming the patentability of the challenged claims of, respectively, the 799 patent, the 784 patent, the 318 patent and the 970 patent.

In October and November 2021, DISH Network L.L.C. filed petitions with the United States Patent and Trademark Office requesting ex parte reexamination of the validity of certain asserted claims of the 784 patent, the 799 patent and the 970 patent. In November and December, 2021, the United States Patent and Trademark Office granted review of the challenged claims of the 799 patent and the 970 patent, but denied review of the challenged claims of the 784 patent. In December 2021, DISH Network L.L.C. petitioned for review of the denial as to the 784 patent. On January 24, 2022, an examiner of the United States Patent and Trademark Office affirmed the challenged claims of the 799 patent, and on January 19, 2023, an examiner of the United States Patent and Trademark Office affirmed the challenged claims of the 970 patent.

In an order dated January 31, 2023, the Court granted in part and denied in part DISH Network L.L.C.’s and DISH Technologies L.L.C.’s motion for summary judgment. Thereafter, ClearPlay narrowed its case to three asserted claims: one under the 799 patent and two under the 970 patent. Following a two-week trial, on March 10, 2023, the jury returned a verdict that DISH Network L.L.C. and DISH Technologies L.L.C. infringed each of the asserted patent claims (though not willfully), and awarded damages of $469 million. That verdict became moot on March 21, 2023, when the trial court indicated that it would grant DISH Network L.L.C.’s and DISH Technologies L.L.C.’s motion for judgment as a matter of law, thus effectively vacating the jury award. DISH Network L.L.C. and DISH Technologies L.L.C. have submitted a proposed form of order granting the motion.

We intend to vigorously defend this case. In the event that a court ultimately determines that we infringe the asserted patents, we may be subject to substantial damages, which may include treble damages, and/or an injunction that could require us to materially modify certain features that we currently offer to consumers. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages.

Digital Broadcasting Solutions, LLC

On August 29, 2022, Digital Broadcasting Solutions, LLC filed a complaint against our wholly-owned subsidiaries DISH Network L.L.C. and DISH Technologies L.L.C. in the United States District Court for the Eastern District of Texas. The complaint alleges infringement of U.S. Patent No. 8,929,710 (the "710 patent") and U.S. Patent No. 9,538,122 (the "122 patent"), each entitled "System and method for time shifting at least a portion of a video program." Generally, the plaintiff contends that the AutoHop feature of our Hopper® set-top boxes infringes the asserted patents. The Court has set the case for trial on April 1, 2024.

We intend to vigorously defend this case. In the event that a court ultimately determines that we infringe the asserted patents, we may be subject to substantial damages, which may include treble damages, and/or an injunction that could require us to materially modify certain features that we currently offer to consumers. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages.

Entropic Communications, LLC (first action)

On March 9, 2022, Entropic Communications, LLC ("Entropic") filed a complaint against us and our wholly-owned subsidiaries DISH Network L.L.C. and Dish Network Service L.L.C. in the United States District Court for the Eastern District of Texas. The complaint alleges infringement of U.S. Patent No. 7,130,576 (the "576 patent"), entitled "Signal Selector and Combiner for Broadband Content Distribution"; U.S. Patent No. 7,542,715 (the "715 Patent"), entitled "Signal Selector and Combiner for Broadband Content Distribution"; and U.S. Patent No. 8,792,008 (the "008 Patent"), entitled "Method and Apparatus for Spectrum Monitoring." On March 30, 2022, Entropic filed an amended complaint alleging infringement of the same patents. Generally, the plaintiff accuses satellite antennas, low-noise block converters, signal selector and combiners, and set-top boxes and the manner in which they process signals for satellite television customers of infringing the asserted patents. On October 24, 2022, this case was ordered to be transferred to the United States District Court for the Central District of California. A companion case against DirecTV was also ordered transferred to the United States District Court for the Central District of California.

In January and February of 2023, DISH Network L.L.C. and Dish Network Service L.L.C. filed petitions with the United States Patent and Trademark Office challenging the validity of all claims of the 715 patent, all claims of the 008 patent, and 25 claims of the 576 patent, which includes all of its asserted claims.

We intend to vigorously defend this case. In the event that a court ultimately determines that we infringe the asserted patents, we may be subject to substantial damages, which may include treble damages, and/or an injunction that could require us to materially modify certain features that we currently offer to consumers. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages. The plaintiff is an entity that seeks to license a patent portfolio without itself practicing any of the claims recited therein.

DISH NETWORK CORPORATION
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS - Continued
(Unaudited)

Entropic Communications, LLC (second action)

On February 10, 2023, Entropic filed a second lawsuit against us and our wholly-owned subsidiaries DISH Network L.L.C., Dish Network Service L.L.C. and Dish Network California Service Corporation in the United States District Court for the Central District of California. The complaint alleges infringement of U.S. Patent No. 7,295,518 (the "518 patent"), entitled "Broadband network for coaxial cable using multi-carrier modulation"; U.S. Patent No. 7,594,249 (the "249 patent"), entitled "Network interface device and broadband local area network using coaxial cable"; U.S. Patent Nos. 7,889,759 (the "759 patent"), entitled "Broadband cable network utilizing common bit-loading"; U.S. Patent No. 8,085,802 (the "802 Patent"), entitled "Multimedia over coaxial cable access protocol"; U.S. Patent No. 9,838,213 (the "213 patent"), entitled "Parameterized quality of service architecture in a network"; U.S. Patent No. 10,432,422 (the "422 patent"), entitled "Parameterized quality of service architecture in a network"; U.S. Patent No. 8,631,450 (the "450 patent"), entitled "Broadband local area network"; U.S. Patent No. 8,621,539 (the "539 patent"), entitled "Physical layer transmitter for use in a broadband local area network"; U.S. Patent No. 8,320,566 (the "0,566 patent"), entitled "Method and apparatus for performing constellation scrambling in a multimedia home network"; U.S. Patent No. 10,257,566 (the "7,566 patent"), entitled "Broadband local area network"; U.S. Patent No. 8,228,910 (the "910 Patent"), entitled "Aggregating network packets for transmission to a destination mode"; and U.S. Patent No. 8,363,681 (the "681 patent"), entitled "Method and apparatus for using ranging measurements in a multimedia home network." Generally, the patents relate to Multimedia over Coax Alliance standards and the manner in which we provide a whole-home DVR network over an on-premises coaxial cable network. Entropic has asserted the same patents in the same court against Comcast and Cox.

We intend to vigorously defend this case. In the event that a court ultimately determines that we infringe the asserted patents, we may be subject to substantial damages, which may include treble damages, and/or an injunction that could require us to materially modify certain features that we currently offer to consumers. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages.

Freedom Patents

On April 7, 2023, Freedom Patents LLC filed a complaint against us and our wholly-owned subsidiaries DISH Network L.L.C. and Dish Network Service L.L.C. in the United States District Court for the Eastern District of Texas. The complaint alleges infringement of U.S. Patent No. 8,284,686 (the "686 Patent"), entitled "Antenna/Beam Selection Training in MIMO Wireless LANS with Different Sounding Frames"; U.S. Patent No. 8,374,096 (the "096 Patent"), entitled "Method for Selecting Antennas and Beams in MIMO Wireless LANs"; and U.S. Patent No. 8,514,815 (the "815 Patent"), entitled "Training Signals for Selecting Antennas and Beams in MIMO Wireless LANs." Similar complaints were also filed against Acer, Altice, Charter, Comcast and Verizon. In general, the asserted patents relate to the 802.11 wireless standard, and the products accused of infringement are the Wireless Joey, its access point, and certain Ring, Nest and Linksys products that we sell.

We intend to vigorously defend this case. In the event that a court ultimately determines that we infringe the asserted patents, we may be subject to substantial damages, which may include treble damages, and/or an injunction that could require us to materially modify certain features that we currently offer to consumers. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages. The plaintiff is an entity that seeks to license a patent portfolio without itself practicing any of the claims recited therein.

Jaramillo (Cyber-security Securities Class Action)

On March 23, 2023, a securities fraud class action complaint was filed against us and Messrs. Ergen, Carlson and Orban in the United States District Court for the District of Colorado. The complaint is brought on behalf of a putative class of purchasers of our securities during the February 22, 2021 to February 27, 2023 class period. In general, the complaint alleges that DISH Network's public statements during that period were false and misleading and contained material omissions, because they did not disclose that we allegedly maintained a deficient cyber-security and information technology infrastructure, were unable to properly secure customer data and our operations were susceptible to widespread service outages.

We intend to vigorously defend this case. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages.

Jones 401(k) Litigation

On December 20, 2021, four former employees filed a class action complaint in the United States District Court for the District of Colorado against us, our Board of Directors, and our Retirement Plan Committee alleging fiduciary breaches arising from the management of our 401(k) Plan. The putative class, comprised of all participants in the Plan on or after January 20, 2016, alleges that the Plan had excessive recordkeeping and administrative expenses and that it maintained underperforming funds. On February 1, 2023, a Magistrate Judge issued a Recommendation that the defendants' motion to dismiss the complaint be granted, and on March 27, 2023, the district court judge granted the motion. As permitted by the Court's order, the plaintiffs filed an amended complaint on April 10, 2023, which is limited to allegations regarding the alleged underperformance of the Fidelity Freedom Funds.

We intend to vigorously defend this case. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages.

Realtime Data LLC and Realtime Adaptive Streaming LLC

On June 6, 2017, Realtime Data LLC d/b/a IXO ("Realtime") filed an amended complaint in the United States District Court for the Eastern District of Texas (the "Original Texas Action") against us; our wholly-owned subsidiaries DISH Network L.L.C., DISH Technologies L.L.C. (then known as EchoStar Technologies L.L.C.), Sling TV L.L.C. and Sling Media L.L.C.; EchoStar, and EchoStar's wholly-owned subsidiary Hughes Network Systems, L.L.C. ("HNS"); and Arris Group, Inc. Realtime's initial complaint in the Original Texas Action, filed on February 14, 2017, had named only EchoStar and HNS as defendants.

The amended complaint in the Original Texas Action alleges infringement of United States Patent No. 8,717,204 (the "204 patent"), entitled "Methods for encoding and decoding data"; United States Patent No. 9,054,728 (the "728 patent"), entitled "Data compression systems and methods"; United States Patent No. 7,358,867 (the "867 patent"), entitled "Content independent data compression method and system"; United States Patent No. 8,502,707 (the "707 patent"), entitled "Data compression systems and methods"; United States Patent No. 8,275,897 (the "897 patent"), entitled "System and methods for accelerated data storage and retrieval"; United States Patent No. 8,867,610 (the "610 patent"), entitled "System and methods for video and audio data distribution"; United States Patent No. 8,934,535 (the "535 patent"), entitled "Systems and methods for video and audio data storage and distribution"; and United States Patent No. 8,553,759 (the "759 patent"), entitled "Bandwidth sensitive data compression and decompression." Realtime alleges that our, Sling TV L.L.C., Sling Media L.L.C. and Arris Group, Inc.'s streaming video products and services compliant with various versions of the H.264 video compression standard infringe the 897 patent, the 610 patent and the 535 patent, and that the data compression system in Hughes' products and services infringes the 204 patent, the 728 patent, the 867 patent, the 707 patent and the 759 patent.

On July 19, 2017, the Court severed Realtime's claims against us, DISH Network L.L.C., Sling TV L.L.C., Sling Media L.L.C. and Arris Group, Inc. (alleging infringement of the 897 patent, the 610 patent and the 535 patent) from the Original Texas Action into a separate action in the United States District Court for the Eastern District of Texas (the "Second Texas Action"). On August 31, 2017, Realtime dismissed the claims against us, Sling TV L.L.C., Sling Media Inc., and Sling Media L.L.C. from the Second Texas Action and refiled these claims (alleging infringement of the 897 patent, the 610 patent and the 535 patent) against Sling TV L.L.C., Sling Media Inc., and Sling Media L.L.C. in a new action in the United States District Court for the District of Colorado (the "Colorado Action"). Also on August 31, 2017, Realtime dismissed DISH Technologies L.L.C. from the Original Texas Action, and on September 12, 2017, added it as a defendant in an amended complaint in the Second Texas Action. On November 6, 2017, Realtime filed a joint motion to dismiss the Second Texas Action without prejudice, which the Court entered on November 8, 2017.

On October 10, 2017, Realtime Adaptive Streaming LLC ("Realtime Adaptive Streaming") filed suit against our wholly-owned subsidiaries DISH Network L.L.C. and DISH Technologies L.L.C., as well as Arris Group, Inc., in a new action in the United States District Court for the Eastern District of Texas (the "Third Texas Action"), alleging infringement of the 610 patent and the 535 patent. Also on October 10, 2017, an amended complaint was filed in the Colorado Action, substituting Realtime Adaptive Streaming as the plaintiff instead of Realtime, and alleging infringement of only the 610 patent and the 535 patent, but not the 897 patent. On November 6, 2017, Realtime Adaptive Streaming filed a joint motion to dismiss the Third Texas Action without prejudice, which the court entered on November 8, 2017. Also on November 6, 2017, Realtime Adaptive Streaming filed a second amended complaint in the Colorado Action, adding our wholly-owned subsidiaries DISH Network L.L.C. and DISH Technologies L.L.C., as well as Arris Group, Inc., as defendants.

As a result, neither we nor any of our subsidiaries is a defendant in the Original Texas Action; the Court has dismissed without prejudice the Second Texas Action and the Third Texas Action; and our wholly-owned subsidiaries DISH Network L.L.C., DISH Technologies L.L.C., Sling TV L.L.C. and Sling Media L.L.C. as well as Arris Group, Inc., are defendants in the Colorado Action, which now has Realtime Adaptive Streaming as the named plaintiff. Following a settlement with the plaintiff, Arris Group, Inc. was dismissed from the action on March 10, 2021.

On July 3, 2018, Sling TV L.L.C., Sling Media L.L.C., DISH Network L.L.C., and DISH Technologies L.L.C. filed petitions with the United States Patent and Trademark Office challenging the validity of each of the asserted patents. On January 31, 2019, the United States Patent and Trademark Office agreed to institute proceedings on our petitions, and it held trial on the petitions on December 5, 2019. On January 17, 2020, the United States Patent and Trademark Office terminated the petitions as time-barred, but issued a final written decision invalidating the 535 patent to third parties that had timely joined in our petition (and, on January 10, 2020, issued a final written decision invalidating the 535 patent in connection with a third party's independent petition). On March 16, 2020, Sling TV L.L.C., Sling Media L.L.C., DISH Network L.L.C., and DISH Technologies L.L.C. filed a notice of appeal from the terminated petitions to the United States Court of Appeals for the Federal Circuit. On June 29, 2020, the United States Patent and Trademark Office filed a notice of intervention in the appeal. On March 16, 2021, the Court of Appeals dismissed the appeal for lack of jurisdiction. On April 29, 2021, Sling TV L.L.C., Sling Media L.L.C., DISH Network L.L.C., and DISH Technologies L.L.C. filed a petition for rehearing, which was denied on June 28, 2021. On January 12, 2021, Realtime Adaptive Streaming filed a notice of dismissal of its claims on the 535 patent.

On July 30, 2021, the District Court granted summary judgment in favor of DISH Network L.L.C., DISH Technologies L.L.C., Sling TV L.L.C. and Sling Media L.L.C., holding that the remaining asserted patent, the 610 patent, is invalid because it claims patent-ineligible abstract subject matter. Realtime Adaptive Streaming filed a notice of appeal from that ruling to the United States Court of Appeals for the Federal Circuit, and the oral argument on that appeal was heard on May 5, 2023. On January 21, 2022, the District Court granted the motion by DISH Network L.L.C., DISH Technologies L.L.C., Sling TV L.L.C. and Sling Media L.L.C. to have the case declared "exceptional," and on September 20, 2022, awarded them $3.9 million in attorneys' fees. Realtime Adaptive Streaming filed a notice of appeal to the United States Court of Appeals for the Federal Circuit from the exceptionality and fee award orders, and briefing is underway. Independently, on September 21, 2021, in connection with an ex parte reexamination of the validity of the 610 patent, an examiner at the United States Patent and Trademark Office issued a final office action rejecting each asserted claim of the 610 patent. On April 19, 2023, the Patent Trial and Appeal Board rejected Realtime Adaptive Streaming's appeal and affirmed the examiner's rejection of the asserted claims of the 610 patent.

We intend to vigorously defend this case. In the event that a court ultimately determines that we infringe the asserted patents, we may be subject to substantial damages, which may include treble damages, and/or an injunction that could require us to materially modify certain features that we currently offer to consumers. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages. Realtime Adaptive Streaming is an entity that seeks to license an acquired patent portfolio without itself practicing any of the claims recited therein.

SafeCast Limited

On June 27, 2022, SafeCast Limited filed a complaint against DISH Network in the United States District Court for the Western District of Texas. The complaint alleges that we infringe U.S. Patent No. 9,392,302, entitled "System for providing improved facilities in time-shifted broadcasts." On the same day, it brought complaints in the same court asserting infringement of the same patent against AT&T, Google, HBO, NBCUniversal, Paramount and Verizon. On October 24, 2022, in response to the parties' joint motion, the Court ordered the case transferred to the United States District Court for the District of Colorado.

We intend to vigorously defend this case. In the event that a court ultimately determines that we infringe the asserted patent, we may be subject to substantial damages, which may include treble damages, and/or an injunction that could require us to materially modify certain features that we currently offer to consumers. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages. The plaintiff is an entity that seeks to license a patent portfolio without itself practicing any of the claims recited therein.

Sound View Innovations, LLC

On December 30, 2019, Sound View Innovations, LLC filed one complaint against our wholly-owned subsidiaries DISH Network L.L.C. and DISH Technologies L.L.C. and a second complaint against our wholly-owned subsidiary Sling TV L.L.C. in the United States District Court for the District of Colorado. The complaint against DISH Network L.L.C. and DISH Technologies L.L.C. alleges infringement of United States Patent No 6,502,133 (the "133 patent"), entitled "Real-Time Event Processing System with Analysis Engine Using Recovery Information" and both complaints allege infringement of United States Patent No. 6,708,213 (the "213 patent), entitled "Method for Streaming Multimedia Information Over Public Networks"; United States Patent No. 6,757,796 (the "796 patent"), entitled "Method and System for Caching Streaming Live Broadcasts transmitted Over a Network"; and United States Patent No. 6,725,456 (the "456 patent"), entitled "Methods and Apparatus for Ensuring Quality of Service in an Operating System." All but the 133 patent are also asserted in the complaint against Sling TV L.L.C.

On May 21, 2020, June 3, 2020, June 5, 2020 and July 10, 2020, DISH Network L.L.C., DISH Technologies L.L.C. and Sling TV L.L.C. filed petitions with the United States Patent and Trademark Office challenging the validity of, respectively, the 213 patent, the 133 patent, the 456 patent and the 796 patent. On November 25, 2020, the United States Patent and Trademark Office declined to review the validity of the 213 patent, and on September 29, 2021, denied a request for rehearing of that decision. On January 19, 2021, the United States Patent and Trademark Office agreed to institute proceedings on the 456 patent but declined to review the 133 patent. On February 24, 2021, the United States Patent and Trademark Office agreed to institute proceedings on the 796 patent. On January 18, 2022, the United States Patent and Trademark Office issued a final written decision holding that the challenged claim of the 456 patent is patentable, and on February 8, 2022, it issued a final written decision holding that the challenged claims of the 796 patent are patentable.

On March 22, 2022, DISH Network L.L.C., DISH Technologies L.L.C. and Sling TV L.L.C. filed a notice of appeal to the United States Court of Appeals for the Federal Circuit from the adverse final written decision regarding the 456 patent, and on April 8, 2022, they filed a notice of appeal to the same court from the adverse final written decision regarding the 796 patent. The appeal on the 456 patent was voluntarily dismissed on December 6, 2022. Appellate briefing on the 796 appeal was completed on January 19, 2023.

On April 20, 2022, DISH Network L.L.C., DISH Technologies L.L.C. and Sling TV L.L.C. filed a petition with the United States Patent and Trademark Office requesting ex parte reexamination of the validity of one of the asserted claims of the 213 patent, and reexamination was ordered on June 16, 2022. On January 18, 2023, they filed another petition requesting ex parte reexamination of the validity of the four additional asserted claims of the 213 patent.

We intend to vigorously defend these cases. In the event that a court ultimately determines that we infringe the asserted patents, we may be subject to substantial damages, which may include treble damages, and/or an injunction that could require us to materially modify certain features that we currently offer to consumers. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages. The plaintiff is an entity that seeks to license a patent portfolio without itself practicing any of the claims recited therein.

TQ Delta, LLC

On July 17, 2015, TQ Delta, LLC (“TQ Delta”) filed a complaint against us and our wholly-owned subsidiaries DISH DBS Corporation and DISH Network L.L.C. in the United States District Court for the District of Delaware. The Complaint alleges infringement of United States Patent No. 6,961,369 (the “369 patent”), which is entitled “System and Method for Scrambling the Phase of the Carriers in a Multicarrier Communications System”; United States Patent No. 8,718,158 (the “158 patent”), which is entitled “System and Method for Scrambling the Phase of the Carriers in a Multicarrier Communications System”; United States Patent No. 9,014,243 (the “243 patent”), which is entitled “System and Method for Scrambling Using a Bit Scrambler and a Phase Scrambler”; United States Patent No.7,835,430 (the “430 patent”), which is entitled “Multicarrier Modulation Messaging for Frequency Domain Received Idle Channel Noise Information”; United States Patent No. 8,238,412 (the “412 patent”), which is entitled “Multicarrier Modulation Messaging for Power Level per Subchannel Information”; United States Patent No. 8,432,956 (the “956 patent”), which is entitled “Multicarrier Modulation Messaging for Power Level per Subchannel Information”; and United States Patent No. 8,611,404 (the “404 patent”), which is entitled “Multicarrier Transmission System with Low Power Sleep Mode and Rapid-On Capability.”

On September 9, 2015, TQ Delta filed a first amended complaint that added allegations of infringement of United States Patent No. 9,094,268 (the "268 patent"), which is entitled "Multicarrier Transmission System With Low Power Sleep Mode and Rapid-On Capability." On May 16, 2016, TQ Delta filed a second amended complaint that added EchoStar Corporation and its then wholly-owned subsidiary EchoStar Technologies L.L.C. as defendants. TQ Delta alleges that our satellite TV service, Internet service, set-top boxes, gateways, routers, modems, adapters and networks that operate in accordance with one or more Multimedia over Coax Alliance Standards infringe the asserted patents.

TQ Delta has filed actions in the same court alleging infringement of the same patents against Comcast Corp., Cox Communications, Inc., DirecTV, Time Warner Cable Inc. and Verizon Communications, Inc. TQ Delta is an entity that seeks to license an acquired patent portfolio without itself practicing any of the claims recited therein.

On July 14, 2016, TQ Delta stipulated to dismiss with prejudice all claims related to the 369 patent and the 956 patent. On July 20, 2016, we filed petitions with the United States Patent and Trademark Office challenging the validity of all of the patent claims of the 404 patent and the 268 patent that have been asserted against us. Third parties filed petitions with the United States Patent and Trademark Office challenging the validity of all of the patent claims that have been asserted against us in the action. On November 4, 2016, the United States Patent and Trademark Office agreed to institute proceedings on the third-party petitions related to the 158 patent, the 243 patent, the 412 patent and the 430 patent.

On December 20, 2016, pursuant to a stipulation of the parties, the Court stayed the case until the resolution of all petitions to the United States Patent and Trademark Office challenging the validity of all of the patent claims at issue. On January 19, 2017, the United States Patent and Trademark Office granted our motions to join the instituted petitions on the 430 and 158 patents.

On February 9, 2017, the United States Patent and Trademark Office agreed to institute proceedings on our petition related to the 404 patent, and on February 13, 2017, the United States Patent and Trademark Office agreed to institute proceedings on our petition related to the 268 patent. On February 27, 2017, the United States Patent and Trademark Office granted our motions to join the instituted petitions on the 243 and 412 patents. On October 26, 2017, the United States Patent and Trademark Office issued final written decisions on the petitions challenging the 158 patent, the 243 patent, the 412 patent and the 430 patent, and it invalidated all of the asserted claims of those patents.

On February 7, 2018, the United States Patent and Trademark Office issued final written decisions on the petitions challenging the 404 patent, and it invalidated all of the asserted claims of that patent on the basis of our petition. On February 10, 2018, the United States Patent and Trademark Office issued a final written decision on our petition challenging the 268 patent, and it invalidated all of the asserted claims.

On March 12, 2018, the United States Patent and Trademark Office issued a final written decision on a third-party petition challenging the 268 patent, and it invalidated all of the asserted claims. All asserted claims have now been invalidated by the United States Patent and Trademark Office. TQ Delta filed notices of appeal from the final written decisions adverse to it. On May 9, 2019, the United States Court of Appeals for the Federal Circuit affirmed the invalidity of the 430 patent and the 412 patent. On July 10, 2019, the United States Court of Appeals for the Federal Circuit affirmed the invalidity of the asserted claims of the 404 patent. On July 15, 2019, the United States Court of Appeals for the Federal Circuit affirmed the invalidity of the asserted claims of the 268 patent. On November 22, 2019, the United States Court of Appeals for the Federal Circuit reversed the invalidity finding on the 243 patent and the 158 patent, and then, on March 29, 2020, denied a petition for panel rehearing as to those findings. On April 13, 2021, the Court lifted the stay, and the case is proceeding on the 243 patent and the 158 patent. On April 23 and April 26, 2021, the United States Patent and Trademark Office issued orders granting requests for ex parte reexamination of, respectively, the 243 patent and the 158 patent. In a proposed supplemental report, TQ Delta's damages expert contends that TQ Delta is entitled to $251 million in damages.

We intend to vigorously defend this case. In the event that a court ultimately determines that we infringe the asserted patents, we may be subject to substantial damages, which may include treble damages, and/or an injunction that could require us to materially modify certain features that we currently offer to consumers. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages.

Uniloc 2017 LLC

On January 31, 2019, Uniloc 2017 LLC ("Uniloc") filed a complaint against our wholly-owned subsidiary Sling TV L.L.C. in the United States District Court for the District of Colorado. The Complaint alleges infringement of United States Patent No. 6,519,005 (the "005 patent"), which is entitled "Method of Concurrent Multiple-Mode Motion Estimation for Digital Video"; United States Patent No. 6,895,118 (the "118 patent"), which is entitled "Method of Coding Digital Image Based on Error Concealment"; United States Patent No. 9,721,273 (the "273 patent"), which is entitled "System and Method for Aggregating and Providing Audio and Visual Presentations Via a Computer Network"); and United States Patent No. 8,407,609 (the "609 patent"), which is entitled "System and Method for Providing and Tracking the Provision of Audio and Visual Presentations Via a Computer Network."

On June 25, 2019, Sling TV L.L.C. filed a petition with the United States Patent and Trademark Office challenging the validity of all of the asserted claims of the 005 patent. On July 19, 2019 and July 22, 2019, respectively, Sling TV L.L.C. filed petitions with the United States Patent and Trademark Office challenging the validity of all asserted claims of the 273 patent and the 609 patent. On August 12, 2019, Sling TV L.L.C. filed a petition with the United States Patent and Trademark Office challenging the validity of all of the asserted claims of the 118 patent. On October 18, 2019, pursuant to a stipulation of the parties, the Court entered a stay of the trial proceedings.

On January 9, 2020, the United States Patent and Trademark Office agreed to institute proceedings on the petition challenging the 005 patent. On January 15, 2020, the United States Patent and Trademark Office agreed to institute proceedings on the petition challenging the 273 patent. On February 4, 2020, the United States Patent and Trademark Office agreed to institute proceedings on the petition challenging the 609 patent. On February 25, 2020, the United States Patent and Trademark Office declined to institute proceedings on the petition challenging the 118 patent.

On December 28, 2020, the United States Patent and Trademark Office issued a final written decision upholding the validity of the challenged claims of the 273 patent. Sling TV L.L.C. appealed that decision to the United States Court of Appeals for the Federal Circuit, and on February 2, 2022, the Federal Circuit vacated the final written decision and remanded to the United States Patent and Trademark Office to reconsider its ruling. On remand, on September 7, 2022, the United States Patent and Trademark Office issued a revised final written decision finding all challenged claims of the 273 patent invalid. On November 9, 2022, Uniloc filed a notice of appeal of that revised final written decision.

On January 5, 2021, the United States Patent and Trademark Office issued a final written decision invalidating all challenged claims of the 005 patent. On January 19, 2021, the United States Patent and Trademark Office issued a final written decision invalidating all challenged claims of the 609 patent (and a second final written decision invalidating all challenged claims of the 609 patent based on a third party's petition).

We intend to vigorously defend this case. In the event that a court ultimately determines that we infringe the asserted patents, we may be subject to substantial damages, which may include treble damages, and/or an injunction that could require us to materially modify certain features that we currently offer to consumers. We cannot predict with any degree of certainty the outcome of the suit or determine the extent of any potential liability or damages. Uniloc is an entity that seeks to license an acquired patent portfolio without itself practicing any of the claims recited therein.

Vermont National Telephone Company

On September 23, 2016, the United States District Court for the District of Columbia unsealed a qui tam complaint that, on May 13, 2015, Vermont National filed against us; our wholly-owned subsidiaries, American AWS-3 Wireless I L.L.C., American II, American III, and DISH Wireless Holding L.L.C.; Charles W. Ergen (our Chairman) and Cantey M. Ergen (a member of our board of directors); Northstar Wireless; Northstar Spectrum; Northstar Manager; SNR Wireless; SNR HoldCo; SNR Management; and certain other parties. The complaint alleges violations of the federal civil False Claims Act (the "FCA") based on, among other things, allegations that Northstar Wireless and SNR Wireless falsely claimed bidding credits of 25% in the AWS-3 Auction when they were allegedly under the de facto control of DISH Network and, therefore, were not entitled to the bidding credits as designated entities under applicable FCC rules. Vermont National participated in the AWS-3 Auction through its wholly-owned subsidiary, VTel Wireless. The complaint was unsealed after the United States Department of Justice notified the District Court that it had declined to intervene in the action. Vermont National seeks to recover on behalf of the United States government approximately $10 billion, which reflects the $3.3 billion in bidding credits that Northstar Wireless and SNR Wireless claimed in the AWS-3 Auction, trebled under the FCA. Vermont National also seeks civil penalties of not less than $5,500 and not more than $11,000 for each violation of the FCA. On March 2, 2017, the United States District Court for the District of Columbia entered a stay of the litigation until such time as the United States Court of Appeals for the District of Columbia (the "D.C. Circuit") issued its opinion in *SNR Wireless LicenseCo, LLC, et al. v. F.C.C.* The D.C. Circuit issued its opinion on August 29, 2017 and remanded the matter to the FCC for further proceedings. See *"Commitments – DISH Network Noncontrolling Investments in the Northstar Entities and the SNR Entities Related to AWS-3 Wireless Spectrum Licenses"* above for further information.

Thereafter, the District Court maintained the stay until October 26, 2018. On February 11, 2019, the District Court granted Vermont National's unopposed motion for leave to file an amended complaint. On March 28, 2019, the defendants filed a motion to dismiss Vermont National's amended complaint, and on March 23, 2021, the District Court granted the motion to dismiss. On April 21, 2021, Vermont National filed a notice of appeal to the United States Court of Appeals for the DC Circuit and, on May 17, 2022, that court reversed the District Court's dismissal of the complaint. On June 16, 2022, the Defendants-Appellees filed a petition for rehearing or rehearing en banc, but on August 17, 2022, that petition was denied.

We intend to vigorously defend this case. We cannot predict with any degree of certainty the outcome of this proceeding or determine the extent of any potential liability or damages.

Other

In addition to the above actions, we are subject to various other legal proceedings and claims that arise in the ordinary course of business, including, among other things, disputes with programmers regarding fees. In our opinion, the amount of ultimate liability with respect to any of these actions is unlikely to materially affect our financial condition, results of operations or liquidity, though the outcomes could be material to our operating results for any particular period, depending, in part, upon the operating results for such period.

DISH NETWORK CORPORATION
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11. Segment Reporting

Operating segments are components of an enterprise for which separate financial information is available and regularly evaluated by the chief operating decision maker(s) of an enterprise. Operating income is the primary measure used by our chief operating decision maker to evaluate segment operating performance. We currently operate two primary business segments: (1) Pay-TV; and (2) Wireless. See Note 1 for further information.

All other and eliminations primarily include intersegment eliminations related to intercompany debt and the related interest income and interest expense, which are eliminated in consolidation.

The total assets, revenue and operating income, and purchases of property and equipment (including capitalized interest related to FCC authorizations) by segment were as follows:

	As of	
	March 31, 2023	December 31, 2022
	(In thousands)	
Total assets:		
Pay-TV	$ 47,615,550	$ 46,295,495
Wireless (1)	47,415,364	46,261,004
Eliminations (1)	(41,468,860)	(39,949,937)
Total assets	$ 53,562,054	$ 52,606,562

(1) The increase primarily resulted from intercompany advances for capital expenditures related to our 5G Network Deployment.

	For the Three Months Ended March 31,	
	2023	2022
	(In thousands)	
Revenue:		
Pay-TV	$ 2,972,131	$ 3,167,563
Wireless	986,271	1,165,457
Eliminations	(1,420)	(2,400)
Total revenue	$ 3,956,982	$ 4,330,620
Operating income (loss):		
Pay-TV	$ 675,233	$ 752,046
Wireless	(351,810)	(201,686)
Total operating income (loss)	$ 323,423	$ 550,360
Purchases of property and equipment (including capitalized interest related to FCC authorizations):		
Pay-TV	$ 35,563	$ 32,006
Wireless	871,042	864,285
Total purchases of property and equipment (including capitalized interest related to FCC authorizations)	$ 906,605	$ 896,291

DISH NETWORK CORPORATION
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Geographic Information. Revenue is attributed to geographic regions based upon the location where the goods and services are provided. All service revenue was derived from the United States. Substantially all of our long-lived assets reside in the United States.

The following table summarizes revenue by geographic region:

Revenue:	For the Three Months Ended March 31, 2023	2022
	(In thousands)	
United States	$ 3,946,684	$ 4,322,176
Canada and Mexico	10,298	8,444
Total revenue	$ 3,956,982	$ 4,330,620

The revenue from external customers disaggregated by major revenue source was as follows:

Category:	For the Three Months Ended March 31, 2023	2022
	(In thousands)	
Pay-TV subscriber and related revenue	$ 2,942,310	$ 3,129,734
Wireless services and related revenue	867,111	945,388
Pay-TV equipment sales and other revenue	29,821	37,829
Wireless equipment sales and other revenue	119,160	220,069
Eliminations	(1,420)	(2,400)
Total	$ 3,956,982	$ 4,330,620

12. Contract Balances

Our valuation and qualifying accounts as of March 31, 2023 were as follows:

Allowance for credit losses	Balance at Beginning of Period	Current Period Provision for Expected Credit Losses	Write-offs Charged Against Allowance	Balance at End of Period
		(In thousands)		
For the three months ended March 31, 2023	$ 44,431	$ 12,151	$ (11,980)	$ 44,602

DISH NETWORK CORPORATION
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Contract liabilities arise when we bill our customers and receive consideration in advance of providing the service. Contract liabilities are recognized as revenue when the service has been provided to the customer. Contract liabilities are recorded in "Deferred revenue and other" and "Long-term deferred revenue and other long-term liabilities" on our Condensed Consolidated Balance Sheets.

	As of	
	March 31, 2023	**December 31, 2022**
	(In thousands)	
Contract liabilities	$ 662,963	$ 698,602

Our beginning of period contract liability recorded as customer contract revenue during 2023 was $660 million.

We apply a practical expedient and do not disclose the value of the remaining performance obligations for contracts that are less than one year in duration, which represent a substantial majority of our revenue. As such, the amount of revenue related to unsatisfied performance obligations is not necessarily indicative of our future revenue.

13. Related Party Transactions

Related Party Transactions with EchoStar

Following the Spin-off, we and EchoStar have operated as separate publicly-traded companies and neither entity has any ownership interest in the other. However, a substantial majority of the voting power of the shares of both companies is owned beneficially by Charles W. Ergen, our Chairman, and by certain entities established by Mr. Ergen for the benefit of his family.

In connection with and following the Spin-off, we and EchoStar have entered into certain agreements pursuant to which we obtain certain products, services and rights from EchoStar, EchoStar obtains certain products, services and rights from us, and we and EchoStar have indemnified each other against certain liabilities arising from our respective businesses. Pursuant to the Share Exchange Agreement, among other things, EchoStar transferred to us certain assets and liabilities of the EchoStar technologies and EchoStar broadcasting businesses. Pursuant to the Master Transaction Agreement, among other things, EchoStar transferred to us certain assets and liabilities of its EchoStar Satellite Services segment.

In connection with the Share Exchange and the Master Transaction Agreement, we and EchoStar and certain of their subsidiaries entered into certain agreements covering, among other things, tax matters, employee matters, intellectual property matters and the provision of transitional services. In addition, certain agreements that we had with EchoStar have terminated, and we entered into certain new agreements with EchoStar. We also may enter into additional agreements with EchoStar in the future. The following is a summary of the terms of our principal agreements with EchoStar that may have an impact on our financial condition and results of operations.

"Trade accounts receivable"

As of March 31, 2023 and December 31, 2022, trade accounts receivable from EchoStar was $1 million. These amounts are recorded in "Trade accounts receivable" on our Condensed Consolidated Balance Sheets.

"Trade accounts payable"

As of March 31, 2023 and December 31, 2022, trade accounts payable to EchoStar was $9 million and $4 million, respectively. These amounts are recorded in "Trade accounts payable" on our Condensed Consolidated Balance Sheets.

"Equipment sales and other revenue"

During the three months ended March 31, 2023 and 2022, we received $2 million and $1 million, respectively, for services provided to EchoStar. These amounts are recorded in "Equipment sales and other revenue" on our Condensed Consolidated Statements of Operations and Comprehensive Income (Loss). The agreements pertaining to these revenues are discussed below.

Real Estate Lease Agreements. We have entered into lease agreements pursuant to which we lease certain real estate to EchoStar. The rent on a per square foot basis for each of the leases is comparable to per square foot rental rates of similar commercial property in the same geographic areas, and EchoStar is responsible for its portion of the taxes, insurance, utilities and maintenance of the premises. The term of each lease is set forth below:

- *El Paso Lease Agreement.* During 2012, we began leasing certain space at 1285 Joe Battle Blvd., El Paso, Texas to EchoStar for an initial period ending on August 1, 2015, which also provides EchoStar with renewal options for four consecutive three-year terms. EchoStar exercised its renewal option for a period ending in July 2024.

- *90 Inverness Lease Agreement*. In connection with the completion of the Share Exchange, effective March 1, 2017, EchoStar leases certain space from us at 90 Inverness Circle East, Englewood, Colorado with renewal options for four consecutive three-year terms. EchoStar exercised its renewal option for a period ending in February 2025.

- *Cheyenne Lease Agreement*. In connection with the completion of the Share Exchange, effective March 1, 2017, EchoStar began leasing certain space from us at 530 EchoStar Drive, Cheyenne, Wyoming for a period ending in February 2019. In August 2018, EchoStar exercised its option to renew this lease for a one-year period ending in February 2020. EchoStar has the option to renew this lease for 12 one-year periods. In connection with the Master Transaction Agreement, we and EchoStar amended this lease to provide EchoStar with certain space for a period ending in September 2023, with the option for EchoStar to renew for a one-year period upon 180 days' written notice prior to the end of the term.

Collocation and Antenna Space Agreements. In connection with the completion of the Share Exchange, effective March 1, 2017, we entered into certain agreements pursuant to which we provide certain collocation and antenna space to HNS through February 2025 at the following locations: Cheyenne, Wyoming; Gilbert, Arizona; Monee, Illinois; Englewood, Colorado; and Spokane, Washington. During August 2017, we entered into certain other agreements pursuant to which we provide certain collocation and antenna space to HNS through August 2022 at the following locations: Monee, Illinois and Spokane, Washington. HNS has the option to renew each of these agreements for four three-year periods. In May 2022, HNS exercised its renewal option for a period ending in August 2025. HNS may terminate certain of these agreements with 180 days' prior written notice to us at the following locations: Englewood, Colorado; and Spokane, Washington. The fees for the services provided under these agreements depend, among other things, on the number of racks leased and/or antennas present at the location.

Also in connection with the Master Transaction Agreement, in September 2019, we entered into an agreement pursuant to which we provide HNS with antenna space and power in Cheyenne, Wyoming for a period of five years commencing no later than October 2020, with four three-year renewal terms, with prior written notice no more than 120 days but no less than 90 days prior to the end of the then-current term.

TT&C Agreement – Master Transaction Agreement. In September 2019, in connection with the Master Transaction Agreement, we entered into an agreement pursuant to which we provide TT&C services to EchoStar for a period ending in September 2021, with the option for EchoStar to renew for a one-year period upon written notice at least 90 days prior to the initial expiration (the "MTA TT&C Agreement"). The fees for services provided under the MTA TT&C Agreement are calculated at either: (i) a fixed fee or (ii) cost plus a fixed margin, which will vary depending on the nature of the services provided. Either party is able to terminate the MTA TT&C Agreement for any reason upon 12 months' notice. In June 2021, we amended the MTA TT&C Agreement to extend the term until September 2022 and added the option for EchoStar to renew for three one-year renewal terms. In August 2022, EchoStar exercised its first renewal option for a period ending in September 2023.

"Cost of services"

During each of the three months ended March 31, 2023 and 2022, we incurred $3 million of costs for services provided to us by EchoStar. These amounts are recorded in "Cost of services" on our Condensed Consolidated Statements of Operations and Comprehensive Income (Loss). The agreements pertaining to these expenses are discussed below.

Hughes Broadband Distribution Agreement. Effective October 1, 2012, dishNET Satellite Broadband L.L.C. ("dishNET Satellite Broadband"), our indirect wholly-owned subsidiary, and HNS entered into a Distribution Agreement (the "Distribution Agreement") pursuant to which dishNET Satellite Broadband has the right, but not the obligation, to market, sell and distribute the HNS satellite Internet service (the "Service"). dishNET Satellite Broadband pays HNS a monthly per subscriber wholesale service fee for the Service based upon the subscriber's service level, and, beginning January 1, 2014, certain volume subscription thresholds. The Distribution Agreement also provides that dishNET Satellite Broadband has the right, but not the obligation, to purchase certain broadband equipment from HNS to support the sale of the Service. On February 20, 2014, dishNET Satellite Broadband and HNS amended the Distribution Agreement which, among other things, extended the initial term of the Distribution Agreement through March 1, 2024.

Thereafter, the Distribution Agreement automatically renews for successive one year terms unless either party gives written notice of its intent not to renew to the other party at least 180 days before the expiration of the then-current term. Upon expiration or termination of the Distribution Agreement, the parties will continue to provide the Service to the then-current dishNET subscribers pursuant to the terms and conditions of the Distribution Agreement.

EchoStar IX. We lease certain satellite capacity from EchoStar on EchoStar IX. Subject to availability, we generally have the right to continue to lease satellite capacity from EchoStar on EchoStar IX on a month-to-month basis. This lease expired on December 31, 2022.

"Cost of sales – equipment and other"

During the three months ended March 31, 2023 and 2022, we incurred $2 million and $1 million, respectively, for satellite hosting, operations and maintenance services as well as transmission of certain data. These amounts are recorded in "Cost of sales – equipment and other" on our Condensed Consolidated Statements of Operations and Comprehensive Income (Loss). The agreements pertaining to these expenses are discussed below.

DBSD North America Agreement. On March 9, 2012, we completed the DBSD Transaction. During the second quarter of 2011, EchoStar acquired Hughes. Prior to our acquisition of DBSD North America and EchoStar's acquisition of Hughes, DBSD North America and HNS entered into an agreement pursuant to which HNS provides, among other things, hosting, operations and maintenance services for DBSD North America's satellite gateway and associated ground infrastructure. This agreement generally may be terminated by us at any time for convenience.

TerreStar Agreements. On March 9, 2012, we completed the TerreStar Transaction. Prior to our acquisition of substantially all the assets of TerreStar and EchoStar's acquisition of Hughes, TerreStar and HNS entered into various agreements pursuant to which HNS provides, among other things, hosting, operations and maintenance services for TerreStar's satellite gateway and associated ground infrastructure. These agreements generally may be terminated by us at any time for convenience.

Hughes Equipment and Services Agreement. In February 2019, we and HNS entered into an agreement pursuant to which HNS will provide us with HughesNet Service and HughesNet equipment for the transmission of certain data related to our 5G Network Deployment. This agreement has an initial term of five years with automatic renewal for successive one-year terms unless terminated by DISH Network with at least 180 days' written notice to HNS or by HNS with at least 365 days' written notice to DISH Network.

"Selling, general and administrative expenses"

During the three months ended March 31, 2023 and 2022, we incurred $3 million and $4 million, respectively, for selling, general and administrative expenses for services provided to us by EchoStar. These amounts are recorded in "Selling, general and administrative expenses" on our Condensed Consolidated Statements of Operations and Comprehensive Income (Loss). The agreements pertaining to these expenses are discussed below.

Real Estate Lease Agreements. We have entered into lease agreements pursuant to which we lease certain real estate from EchoStar. The rent on a per square foot basis for each of the leases is comparable to per square foot rental rates of similar commercial property in the same geographic area, and we are responsible for our portion of the taxes, insurance, utilities and maintenance of the premises. The term of each lease is set forth below:

- *Meridian Lease Agreement.* We lease all of 9601 S. Meridian Blvd. in Englewood, Colorado for a period ending on December 31, 2023.

- *100 Inverness Lease Agreement*. In connection with the completion of the Share Exchange, effective March 1, 2017, we lease certain space from EchoStar at 100 Inverness Terrace East, Englewood, Colorado for a period ending in December 2023. This agreement may be terminated by either party upon 180 days' prior notice.

Professional Services Agreement. Prior to 2010, in connection with the Spin-off, we entered into various agreements with EchoStar including the Transition Services Agreement, Satellite Procurement Agreement and Services Agreement, which all expired on January 1, 2010 and were replaced by a Professional Services Agreement. During 2009, we and EchoStar agreed that EchoStar shall continue to have the right, but not the obligation, to receive the following services from us, among others, certain of which were previously provided under the Transition Services Agreement: information technology, travel and event coordination, internal audit, legal, accounting and tax, benefits administration, program acquisition services and other support services. Additionally, we and EchoStar agreed that we shall continue to have the right, but not the obligation, to engage EchoStar to manage the process of procuring new satellite capacity for us (previously provided under the Satellite Procurement Agreement) and receive logistics, procurement and quality assurance services from EchoStar (previously provided under the Services Agreement) and other support services. In connection with the completion of the Share Exchange on February 28, 2017, DISH Network and EchoStar amended the Professional Services Agreement to, among other things, provide certain transition services to each other related to the Share Exchange Agreement. In addition, pursuant to the Master Transaction Agreement, we and EchoStar amended the Professional Services Agreement effective September 10, 2019 to, among other things, provide certain transition services to each other related to the Master Transaction Agreement and to remove certain services no longer necessary as a result of the Master Transaction Agreement. See above for further information on the Master Transaction Agreement.

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During March 2020, we and EchoStar added a service under the Professional Services Agreement whereby we provide EchoStar with rights to use certain satellite capacity in exchange for certain credits to amounts owed by us to EchoStar under the TerreStar Agreement described above. The Professional Services Agreement renewed on January 1, 2023 for an additional one-year period until January 1, 2024 and renews automatically for successive one-year periods thereafter, unless terminated earlier by either party upon at least 60 days' notice. However, either party may terminate the Professional Services Agreement in part with respect to any particular service it receives for any reason upon at least 30 days' notice.

Revenue for services provided by us to EchoStar under the Professional Services Agreement is recorded in "Equipment sales and other revenue" on our Condensed Consolidated Statements of Operations and Comprehensive Income (Loss).

Other Agreements - EchoStar

Tax Sharing Agreement. In connection with the Spin-off, we entered into a tax sharing agreement (the "Tax Sharing Agreement") with EchoStar which governs our respective rights, responsibilities and obligations after the Spin-off with respect to taxes for the periods ending on or before the Spin-off. Generally, all pre-Spin-off taxes, including any taxes that are incurred as a result of restructuring activities undertaken to implement the Spin-off, are borne by us, and we will indemnify EchoStar for such taxes. However, we are not liable for and will not indemnify EchoStar for any taxes that are incurred as a result of the Spin-off or certain related transactions failing to qualify as tax-free distributions pursuant to any provision of Section 355 or Section 361 of the Internal Revenue Code of 1986, as amended (the "Code") because of: (i) a direct or indirect acquisition of any of EchoStar's stock, stock options or assets; (ii) any action that EchoStar takes or fails to take; or (iii) any action that EchoStar takes that is inconsistent with the information and representations furnished to the Internal Revenue Service ("IRS") in connection with the request for the private letter ruling, or to counsel in connection with any opinion being delivered by counsel with respect to the Spin-off or certain related transactions. In such case, EchoStar is solely liable for, and will indemnify us for, any resulting taxes, as well as any losses, claims and expenses.

The Tax Sharing Agreement will only terminate after the later of the full period of all applicable statutes of limitations, including extensions, or once all rights and obligations are fully effectuated or performed. In light of the Tax Sharing Agreement, among other things, and in connection with our consolidated federal income tax returns for certain tax years prior to and for the year of the Spin-off, during 2013, we and EchoStar agreed upon a supplemental allocation of the tax benefits arising from certain tax items resolved in the course of the IRS' examination of these consolidated tax returns. As a result, we agreed to pay EchoStar $82 million of the tax benefit we received or will receive. Any payment to EchoStar, including accrued interest, will be made at such time as EchoStar would have otherwise been able to realize such tax benefit. As of March 31, 2023, we have paid $13 million of the tax benefit received, leaving $69 million remaining to be paid.

In addition, during 2013, we and EchoStar agreed upon a tax sharing arrangement for filing certain combined state income tax returns and a method of allocating the respective tax liabilities between us and EchoStar for such combined returns, through the taxable period ending on December 31, 2017 (the "State Tax Arrangement"). During the third quarter of 2018, we and EchoStar amended the Tax Sharing Agreement and the 2013 agreements (the "Amendment").

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Under the Amendment, among other things, we are entitled to apply the benefit of EchoStar's 2009 net operating losses to our federal tax return for the year ended December 31, 2008, in exchange for paying EchoStar over time the value of the net annual federal income taxes paid by EchoStar that would have been otherwise offset by their 2009 net operating loss. In addition, the Amendment extends the term of the State Tax Arrangement for filing certain combined state income tax returns to the earlier to occur of: (1) termination of the Tax Sharing Agreement; (2) a change in control of either us or EchoStar; or (3) for any particular state, if we and EchoStar no longer file a combined tax return for such state. Beginning in 2020 and as it relates to 2020's state tax returns, DISH Network and EchoStar no longer file combined tax returns in any states. Per the terms of the Amendment, certain tax benefits received or payable related to combined tax returns were satisfied in 2022.

Tax Matters Agreement – Share Exchange. In connection with the completion of the Share Exchange, we and EchoStar entered into a Tax Matters Agreement, which governs certain rights, responsibilities and obligations with respect to taxes of the Transferred Businesses pursuant to the Share Exchange. Generally, EchoStar is responsible for all tax returns and tax liabilities for the Transferred Businesses for periods prior to the Share Exchange, and we are responsible for all tax returns and tax liabilities for the Transferred Businesses from and after the Share Exchange. Both we and EchoStar have made certain tax-related representations and are subject to various tax-related covenants after the consummation of the Share Exchange. Both we and EchoStar have agreed to indemnify each other if there is a breach of any such tax representation or violation of any such tax covenant and that breach or violation results in the Share Exchange not qualifying for tax free treatment for the other party. In addition, we have agreed to indemnify EchoStar if the Transferred Businesses are acquired, either directly or indirectly (e.g., via an acquisition of us), by one or more persons and such acquisition results in the Share Exchange not qualifying for tax free treatment. The Tax Matters Agreement supplements the Tax Sharing Agreement described above, which continues in full force and effect.

Tax Matters Agreement – Master Transaction Agreement. In connection with the completion of the Master Transaction Agreement, we and EchoStar entered into a Tax Matters Agreement, which governs certain rights, responsibilities and obligations with respect to taxes of the BSS Business pursuant to the Master Transaction Agreement. Generally, EchoStar is responsible for all tax returns and tax liabilities for the BSS Business for periods prior to the Master Transaction Agreement, and we are responsible for all tax returns and tax liabilities for the BSS Business from and after the Master Transaction Agreement. Both we and EchoStar have made certain tax-related representations in contemplation of the Master Transaction Agreement. Both we and EchoStar have agreed to indemnify each other if there is a breach of any such tax representation and that breach results in the Master Transaction Agreement not qualifying for tax free treatment for the other party. In addition, we have agreed to indemnify EchoStar if the BSS Business is acquired, either directly or indirectly (e.g., via an acquisition of us), by one or more persons and such acquisition results in the Master Transaction Agreement not qualifying for tax free treatment. The Tax Matters Agreement - Master Transaction Agreement supplements the Tax Sharing Agreement described above, which continues in full force and effect.

Patent Cross-License Agreements. In December 2011, we and EchoStar entered into separate patent cross-license agreements with the same third party whereby: (i) EchoStar and such third-party licensed their respective patents to each other subject to certain conditions; and (ii) we and such third-party licensed our respective patents to each other subject to certain conditions (each, a "Cross-License Agreement"). Each Cross License Agreement covers patents acquired by the respective party prior to January 1, 2017 and aggregate payments under both Cross-License Agreements total less than $10 million. In December 2016, we and EchoStar independently exercised our respective options to extend each Cross-License Agreement to include patents acquired by the respective party prior to January 1, 2022.

Rovi License Agreement. On August 19, 2016, we entered into a ten-year patent license agreement (the "Rovi License Agreement") with Rovi Corporation ("Rovi") and, for certain limited purposes, EchoStar. EchoStar is a party to the Rovi License Agreement solely with respect to certain provisions relating to the prior patent license agreement between EchoStar and Rovi. There are no payments between us and EchoStar under the Rovi License Agreement.

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Hughes Broadband Master Services Agreement. In March 2017, DISH Network L.L.C. ("DNLLC") and HNS entered into the MSA pursuant to which DNLLC, among other things: (i) has the right, but not the obligation, to market, promote and solicit orders for the Hughes broadband satellite service and related equipment; and (ii) installs Hughes service equipment with respect to activations generated by DNLLC. Under the MSA, HNS will make certain payments to DNLLC for each Hughes service activation generated, and installation performed, by DNLLC. Payments from HNS for services provided are recorded in "Service revenue" on our Condensed Consolidated Statements of Operations and Comprehensive Income (Loss). For the three months ended March 31, 2023 and 2022, these payments were $1 million and $2 million, respectively. The MSA has an initial term of five years with automatic renewal for successive one-year terms. After the first anniversary of the MSA, either party has the ability to terminate the MSA, in whole or in part, for any reason upon at least 90 days' notice to the other party. Upon expiration or termination of the MSA, HNS will continue to provide the Hughes service to subscribers and make certain payments to DNLLC pursuant to the terms and conditions of the MSA. For the three months ended March 31, 2023 and 2022, we purchased broadband equipment from HNS of zero and $2 million, respectively, under the MSA.

Intellectual Property and Technology License Agreement – Share Exchange. In connection with the completion of the Share Exchange, effective March 1, 2017, we and EchoStar entered into an Intellectual Property and Technology License Agreement ("IPTLA"), pursuant to which we and EchoStar license to each other certain intellectual property and technology. The IPTLA will continue in perpetuity, unless mutually terminated by the parties. Pursuant to the IPTLA, EchoStar granted to us a license to its intellectual property and technology for use by us, among other things, in connection with our continued operation of the Transferred Businesses acquired pursuant to the Share Exchange Agreement, including a limited license to use the "ECHOSTAR" trademark during a transition period. EchoStar retains full ownership of the "ECHOSTAR" trademark. In addition, we granted a license back to EchoStar, among other things, for the continued use of all intellectual property and technology transferred to us pursuant to the Share Exchange Agreement that is used in EchoStar's retained businesses.

Intellectual Property and Technology License Agreement – Master Transaction Agreement. In connection with the completion of the Master Transaction Agreement, effective September 10, 2019, we and EchoStar entered into an IPTLA (the "MTA IPTLA"), pursuant to which we and EchoStar license to each other certain intellectual property and technology. The MTA IPTLA will continue in perpetuity, unless mutually terminated by the parties. Pursuant to the MTA IPTLA, EchoStar granted to us a license to its intellectual property and technology for use by us, among other things, in connection with our continued operation of the BSS Business acquired pursuant to the Master Transaction Agreement, including a limited license to use the "ESS" and "ECHOSTAR SATELLITE SERVICES" trademarks during a transition period. EchoStar retains full ownership of the "ESS" and "ECHOSTAR SATELLITE SERVICES" trademarks. In addition, we granted a license back to EchoStar, among other things, for the continued use of all intellectual property and technology transferred to us pursuant to the Master Transaction Agreement that is used in EchoStar's retained businesses.

Related Party Transactions with NagraStar L.L.C.

We own a 50% interest in NagraStar, a joint venture that is our primary provider of encryption and related security systems intended to assure that only authorized customers have access to our programming. Certain payments related to NagraStar are recorded in "Cost of services" on our Condensed Consolidated Statements of Operations and Comprehensive Income (Loss). In addition, certain other payments are initially included in "Inventory" and are subsequently capitalized as "Property and equipment, net" on our Condensed Consolidated Balance Sheets or expensed as "Selling, general and administrative expenses" or "Cost of services" on our Condensed Consolidated Statements of Operations and Comprehensive Income (Loss) when the equipment is deployed. We record all payables in "Trade accounts payable" or "Other accrued expenses" on our Condensed Consolidated Balance Sheets. Our investment in NagraStar is accounted for using the equity method.

DISH NETWORK CORPORATION
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS - Continued
(Unaudited)

The table below summarizes our transactions with NagraStar:

	For the Three Months Ended March 31,	
	2023	2022
	(In thousands)	
Purchases (including fees):		
Purchases from NagraStar	$ 9,545	$ 11,957

	As of	
	March 31, 2023	December 31, 2022
	(In thousands)	
Amounts Payable and Commitments:		
Amounts payable to NagraStar	$ 6,773	$ 7,422
Commitments to NagraStar	$ 4,000	$ 3,272

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following management's discussion and analysis of our financial condition and results of operations together with the condensed consolidated financial statements and notes to our financial statements included elsewhere in this Quarterly Report on Form 10-Q. This management's discussion and analysis is intended to help provide an understanding of our financial condition, changes in financial condition and results of our operations and contains forward-looking statements that involve risks and uncertainties. The forward-looking statements are not historical facts, but rather are based on current expectations, estimates, assumptions and projections about our industry, business and future financial results. Our actual results could differ materially from the results contemplated by these forward-looking statements due to a number of factors, including those discussed in our Annual Report on Form 10-K for the year ended December 31, 2022 and this Quarterly Report on Form 10-Q under the caption "Item 1A. Risk Factors." Furthermore, such forward-looking statements speak only as of the date of this Quarterly Report on Form 10-Q, and we expressly disclaim any obligation to update any forward-looking statements.

Overview

We currently operate two primary business segments, Pay-TV and Wireless. Our Wireless business segment consists of two business units, Retail Wireless and 5G Network Deployment.

Our Pay-TV business strategy is to be the best provider of video services in the United States by providing products with the best technology, outstanding customer service, and great value. We offer pay-TV services under the DISH® brand and the SLING® brand (collectively "Pay-TV" services). The DISH branded pay-TV service consists of, among other things, FCC licenses authorizing us to use direct broadcast satellite ("DBS") and Fixed Satellite Service ("FSS") spectrum, our owned and leased satellites, receiver systems, broadcast operations, a leased fiber optic network, in-home service and call center operations, and certain other assets utilized in our operations ("DISH TV"). We also design, develop and distribute receiver systems and provide digital broadcast operations, including satellite uplinking/downlinking, transmission and other services to third-party pay-TV providers. The SLING branded pay-TV services consist of, among other things, multichannel, live-linear and on-demand streaming over-the-top ("OTT") Internet-based domestic, international and Latino video programming services ("SLING TV"). We promote our Pay-TV services by providing our subscribers with a better "price-to-value" relationship and experience than those available from other subscription television service providers. We market our SLING TV services to consumers who do not subscribe to traditional satellite and cable pay-TV services, as well as to current and recent traditional pay-TV subscribers who desire a lower cost alternative.

Our Retail Wireless business unit offers prepaid and postpaid retail wireless services to subscribers primarily under our Boost Mobile, Boost Infinite and Gen Mobile brands, as well as a competitive portfolio of wireless devices. We offer customers value by providing choice and flexibility in our Retail Wireless services. We offer competitive consumer plans with no annual service contracts. Our Retail Wireless business strategy is to expand our current target segments and profitably grow our subscriber base by acquiring and retaining high quality subscribers while we complete our 5G Network Deployment. We intend to acquire high quality subscribers by providing competitive offers, choice and outstanding customer service that better meet those subscribers' needs and budget.

Our 5G Network Deployment business unit strategy is to commercialize our Wireless spectrum licenses through the completion of the nation's first cloud-native, Open Radio Access Network ("O-RAN") based 5G network (our "5G Network Deployment"). We have committed to deploy a facilities-based 5G broadband network capable of serving increasingly larger portions of the U.S. population at different deadlines, including 20% of the U.S. population by June 2022 and 70% of the U.S. population by June 2023. If by June 2023, we are offering 5G broadband service to at least 50% of the U.S. population but less than 70% of the U.S. population, the 70% June 2023 deadline will be extended automatically to June 2025; however, as a result, we may, under certain circumstances, potentially be subject to certain penalties.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS – Continued

On June 14, 2022, we announced we had successfully reached our 20% population coverage requirement. We are currently focused on our progression towards offering 5G broadband service to at least 70% of the U.S. population with a minimum of 15,000 5G sites. As of March 31, 2023, we had started construction on over 18,000 5G cell sites. We will need approximately 16,000 sites fully powered and fibered to provide 5G broadband service to over 70% of the U.S. population.

Recent Developments

Cyber-Security Incident

On February 23, 2023, we announced on our quarterly earnings call that we had experienced a network outage that affected internal servers and IT telephony. We immediately activated our incident response and business continuity plans designed to contain, assess and remediate the situation. We engaged the services of cyber-security experts and outside advisors to assist in the evaluation of the situation, and once we determined that the outage was due to a cyber-security incident, we promptly notified appropriate law enforcement authorities.

On February 28, 2023, we further disclosed that certain data had been extracted from our IT systems as part of this incident. Our investigation into the extent of the incident is now substantially completed. We have determined that our customer databases were not accessed in this incident. However, we have confirmed that certain employee-related records as well as a limited number of other records containing personal information were among the data extracted. We have taken steps to protect the affected records and personal information, and we received confirmation that the extracted data has been deleted. While we have no evidence that this data has been misused, we have started the process of notifying individuals whose data was extracted.

Our DISH TV, SLING TV and Retail Wireless services, along with our wireless and data networks remained operational at all times during the incident. As of March 31, 2023, all significant systems have been restored.

During the quarter ending March 31, 2023, we incurred certain cyber-security-related expenses, including, but not limited to, costs to remediate the incident and provide additional customer support. During the three months ended March 31, 2023, we have incurred approximately $30 million in cyber-security-related expenses, which are recorded in "Cost of services" on our Condensed Consolidated Statements of Operations and Comprehensive Income (Loss). We do not expect to incur material expenses in future periods resulting from the cyber-security incident.

Economic Environment

During 2022 and first three months of 2023, we experienced significant inflationary pressures in our commodity and labor costs resulting from the macroeconomic environment in the United States, which has significantly impacted our overall operating results.

COVID-19 Update

The COVID-19 pandemic created unanticipated circumstances and uncertainty, disruption, and significant volatility in the economic environment generally, which have adversely affected, and may continue to adversely affect, our business operations, including our supply chain, and could materially and adversely affect our business, financial condition and results of operations. In addition, any resurgence in COVID-19 could adversely affect our business, financial condition and results of operations.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS – Continued

EXPLANATION OF KEY METRICS AND OTHER ITEMS

Service revenue. "Service revenue" consists principally of Pay-TV and Wireless subscriber revenue. Certain of the amounts included in "Service revenue" are not recurring on a monthly basis.

Equipment sales and other revenue. "Equipment sales and other revenue" principally includes the sale of wireless devices and the non-subsidized sales of Pay-TV equipment.

Cost of services. "Cost of services" principally includes Pay-TV programming expenses and other operating costs related to our Pay-TV segment and costs of Wireless services (including costs incurred under the MNSA and NSA).

Cost of sales - equipment and other. "Cost of sales – equipment and other" principally includes the cost of wireless devices and other related items, certain direct costs of wireless mobile network operations to deliver wireless voice and data services, as well as costs related to the non-subsidized sales of Pay-TV equipment. Costs are generally recognized as products are delivered to customers and the related revenue is recognized.

Selling, general and administrative expenses. "Selling, general and administrative expenses" consists primarily of direct sales costs, advertising, third-party commissions related to the acquisition of subscribers and employee-related costs associated with administrative services such as legal, information systems, and accounting and finance. In addition, "Selling, general and administrative expenses" includes costs related to the installation of equipment for our new Pay-TV subscribers and the cost of subsidized sales of Pay-TV equipment for new subscribers.

Interest expense, net of amounts capitalized. "Interest expense, net of amounts capitalized" primarily includes interest expense associated with our long-term debt (net of capitalized interest), prepayment premiums, amortization of debt discounts and debt issuance costs associated with our long-term debt, and interest expense associated with our finance lease obligations.

Other, net. The main components of "Other, net" are gains and losses realized on the sale and/or conversion of marketable and non-marketable investment securities and derivative instruments, impairment of marketable and non-marketable investment securities, unrealized gains and losses from changes in fair value of certain marketable and non-marketable investment securities and derivative instruments, and equity in earnings and losses of our affiliates.

Earnings before interest, taxes, depreciation and amortization ("EBITDA"). EBITDA is defined as "Net income (loss) attributable to DISH Network" plus "Interest expense, net of amounts capitalized" and net of "Interest income," "Income tax (provision) benefit, net" and "Depreciation and amortization." This "non-GAAP measure" is reconciled to "Net income (loss) attributable to DISH Network" in our discussion of "Results of Operations" below.

Operating income before depreciation and amortization ("OIBDA"). OIBDA is defined as "Operating income (loss)" plus "Depreciation and amortization." This "non-GAAP measure" is reconciled to "Operating income (loss)" in our discussion of "Results of Operations" below.

DISH TV subscribers. We include customers obtained through direct sales, independent third-party retailers and other independent third-party distribution relationships in our DISH TV subscriber count. We also provide DISH TV services to hotels, motels and other commercial accounts. For certain of these commercial accounts, we divide our total revenue for these commercial accounts by $34.99, and include the resulting number, which is substantially smaller than the actual number of commercial units served, in our DISH TV subscriber count.

SLING TV subscribers. We include customers obtained through direct sales and third-party marketing agreements in our SLING TV subscriber count. SLING TV subscriber additions are recorded net of disconnects. SLING TV customers receiving service for no charge, under certain new subscriber promotions, are excluded from our SLING TV subscriber count. For customers who subscribe to multiple SLING TV packages, each customer is only counted as one SLING TV subscriber.

Pay-TV subscribers. Our Pay-TV subscriber count includes all DISH TV and SLING TV subscribers discussed above. For customers who subscribe to both our DISH TV services and our SLING TV services, each subscription is counted as a separate Pay-TV subscriber.

Pay-TV average monthly revenue per subscriber (“Pay-TV ARPU”). We are not aware of any uniform standards for calculating ARPU and believe presentations of ARPU may not be calculated consistently by other companies in the same or similar businesses. We calculate Pay-TV average monthly revenue per Pay-TV subscriber, or Pay-TV ARPU, by dividing average monthly Pay-TV segment “Service revenue,” excluding revenue from broadband services, for the period by our average number of Pay-TV subscribers for the period. The average number of Pay-TV subscribers is calculated for the period by adding the average number of Pay-TV subscribers for each month and dividing by the number of months in the period. The average number of Pay-TV subscribers for each month is calculated by adding the beginning and ending Pay-TV subscribers for the month and dividing by two. SLING TV subscribers on average purchase lower priced programming services than DISH TV subscribers, and therefore, as SLING TV subscribers increase as a percentage of total Pay-TV subscribers, it has had a negative impact on Pay-TV ARPU.

DISH TV average monthly subscriber churn rate (“DISH TV churn rate”). We are not aware of any uniform standards for calculating subscriber churn rate and believe presentations of subscriber churn rates may not be calculated consistently by different companies in the same or similar businesses. We calculate our “DISH TV churn rate” for any period by dividing the number of DISH TV subscribers who terminated service during the period by the average number of DISH TV subscribers for the same period, and further dividing by the number of months in the period. The average number of DISH TV subscribers is calculated for the period by adding the average number of DISH TV subscribers for each month and dividing by the number of months in the period. The average number of DISH TV subscribers for each month is calculated by adding the beginning and ending DISH TV subscribers for the month and dividing by two.

DISH TV SAC. Subscriber acquisition cost measures are commonly used by those evaluating traditional companies in the pay-TV industry. We are not aware of any uniform standards for calculating the “average subscriber acquisition costs per new DISH TV subscriber activation,” or DISH TV SAC, and we believe presentations of pay-TV SAC may not be calculated consistently by different companies in the same or similar businesses. Our DISH TV SAC is calculated using all costs of acquiring DISH TV subscribers (e.g., subsidized equipment, advertising, installation, commissions and direct sales, etc.) which are included in “Selling, general and administrative expenses,” plus capitalized payments made under certain sales incentive programs and the value of equipment capitalized under our lease program for new DISH TV subscribers, divided by gross new DISH TV subscriber activations. We include all new DISH TV subscribers in our calculation, including DISH TV subscribers added with little or no subscriber acquisition costs.

Wireless subscribers. We include prepaid and postpaid customers obtained through direct sales, independent third-party retailers and other independent third-party distribution relationships in our Wireless subscriber count. Our Wireless subscriber count includes all ACP/Gen Mobile subscribers discussed below. Our gross new Wireless subscriber activations exclude all ACP/Gen Mobile subscribers as we record these subscribers net of disconnects, as discussed below.

Affordable Connectivity Program/Gen Mobile subscribers (“ACP/Gen Mobile subscribers”). The Emergency Broadband Benefit Program (“EBBP”) was launched by the FCC in February of 2021 to support broadband services and devices to help low-income individuals that meet certain eligibility criteria. The Affordable Connectivity Program (“ACP”) replaced the EBBP on December 31, 2021. Our ACP/Gen Mobile subscribers have a significantly higher churn rate compared to our other Wireless subscribers and we incur lower costs to acquire these subscribers. Therefore, our ACP/Gen Mobile subscriber additions are recorded net of disconnects.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS – Continued

Wireless average monthly revenue per subscriber ("Wireless ARPU"). We are not aware of any uniform standards for calculating ARPU and believe presentations of ARPU may not be calculated consistently by other companies in the same or similar businesses. We calculate average monthly revenue per Wireless subscriber, or Wireless ARPU, by dividing average monthly Retail Wireless business unit "Service revenue" for the period by our average number of Wireless subscribers for the period. The average number of Wireless subscribers is calculated for the period by adding the average number of Wireless subscribers for each month and dividing by the number of months in the period. The average number of Wireless subscribers for each month is calculated by adding the beginning and ending Wireless subscribers for the month and dividing by two.

Wireless average monthly subscriber churn rate ("Wireless churn rate"). We are not aware of any uniform standards for calculating subscriber churn rate and believe presentations of subscriber churn rates may not be calculated consistently by different companies in the same or similar businesses. We calculate our "Wireless churn rate" for any period by dividing the number of Wireless subscribers who terminated service during the period by the average number of Wireless subscribers for the same period, and further dividing by the number of months in the period. The average number of Wireless subscribers is calculated for the period by adding the average number of Wireless subscribers for each month and dividing by the number of months in the period. The average number of Wireless subscribers for each month is calculated by adding the beginning and ending Wireless subscribers for the month and dividing by two. ACP/Gen Mobile subscribers are excluded from our calculation of our Wireless churn rate.

Free cash flow. We define free cash flow as "Net cash flows from operating activities" less "Purchases of property and equipment" and "Capitalized interest related to FCC authorizations," as shown on our Condensed Consolidated Statements of Cash Flows.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS – Continued

RESULTS OF OPERATIONS – Segments

Business Segments

We currently operate two primary business segments: (1) Pay-TV; and (2) Wireless. Our Wireless segment consists of two business units, the Retail Wireless business unit and 5G Network Deployment business unit. Revenue and operating income (loss) by segment are shown in the table below:

Three Months Ended March 31, 2023 Compared to the Three Months Ended March 31, 2022.

	For the Three Months Ended March 31,		Variance	
	2023	2022	Amount	%
	(In thousands)			
Revenue:				
Pay-TV	$ 2,972,131	$ 3,167,563	$ (195,432)	(6.2)
Wireless	986,271	1,165,457	(179,186)	(15.4)
Eliminations	(1,420)	(2,400)	980	40.8
Total revenue	$ 3,956,982	$ 4,330,620	$ (373,638)	(8.6)
Operating income (loss):				
Pay-TV	$ 675,233	$ 752,046	$ (76,813)	(10.2)
Wireless	(351,810)	(201,686)	(150,124)	(74.4)
Total operating income (loss)	$ 323,423	$ 550,360	$ (226,937)	(41.2)

*Percentage is not meaningful

Total revenue. Our consolidated revenue totaled $3.957 billion for the three months ended March 31, 2023, a decrease of $374 million or 8.6% compared to the same period in 2022. The net decrease primarily resulted from the decrease in revenue from our Pay-TV segment and our Wireless segment.

Total operating income (loss). Our consolidated operating income totaled $323 million for the three months ended March 31, 2023, a decrease of $227 million compared to the same period in 2022. The net decrease primarily resulted from the decrease in operating income from our Wireless segment and to a lesser extent our Pay-TV segment.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS – Continued

Pay-TV Segment

We offer Pay-TV services under the DISH® brand and the SLING® brand. As of March 31, 2023, we had 9.198 million Pay-TV subscribers in the United States, including 7.098 million DISH TV subscribers and 2.100 million SLING TV subscribers.

We promote our Pay-TV services by providing our subscribers with better service, technology and value than those available from other subscription television service providers. We offer a wide selection of video services under the DISH TV brand, with access to hundreds of channels depending on the level of subscription. Our standard programming packages generally include programming provided by national cable networks. We also offer programming packages that include local broadcast networks, specialty sports channels, premium movie channels and Latino and international programming. We market our SLING TV services to consumers who do not subscribe to traditional satellite and cable pay-TV services, as well as to current and recent traditional pay-TV subscribers who desire a lower cost alternative. Our SLING TV services require an Internet connection and are available on multiple streaming-capable devices including, among others, streaming media devices, TVs, tablets, computers, game consoles and phones. We offer SLING domestic, SLING International, and SLING Latino video programming services.

Trends in our Pay-TV Segment

Competition

Competition has intensified in recent years as the pay-TV industry has matured. We and our competitors increasingly must seek to attract a greater proportion of new subscribers from each other's existing subscriber bases rather than from first-time purchasers of pay-TV services. We face substantial competition from established pay-TV providers and broadband service providers and increasing competition from companies providing/facilitating the delivery of video content via the Internet to computers, televisions, and other streaming and mobile devices, including wireless service providers. In recent years, industry consolidation and convergence has created competitors with greater scale and multiple product/service offerings. These developments, among others, have contributed to intense and increasing competition, and we expect such competition to continue.

We incur significant costs to retain our existing DISH TV subscribers, generally as a result of upgrading their equipment to next generation receivers, primarily including our Hopper® receivers, and by providing retention credits. Our DISH TV subscriber retention costs may vary significantly from period to period.

Many of our competitors have been especially aggressive by offering discounted programming and services for both new and existing subscribers, including, but not limited to, bundled offers combining broadband, video and/or wireless services and other promotional offers. Certain competitors have been able to subsidize the price of video services with the price of broadband and/or wireless services.

Our Pay-TV services also face increased competition from programmers and other companies who distribute video directly to consumers over the Internet, as well as traditional satellite television providers, cable companies and large telecommunications companies that are increasing their Internet-based video offerings. We also face competition from providers of video content, many of which are providers of our programming content, that distribute content over the Internet including services with live-linear television programming, as well as single programmer offerings and offerings of large libraries of on-demand content, including in certain cases original content. These product offerings include, but are not limited to, Netflix, Hulu, Apple+, Prime Video, YouTube TV, Disney+, ESPN+, Paramount+, HBO Max, STARZ, Peacock, Fubo, Philo and Tubi.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS – Continued

Significant changes in consumer behavior regarding the means by which consumers obtain video entertainment and information in response to digital media competition could have a material adverse effect on our business, results of operations and financial condition or otherwise disrupt our business.

In particular, consumers have shown increased interest in viewing certain video programming in any place, at any time and/or on any broadband or Internet-connected device they choose. Online content providers may cause our subscribers to disconnect our DISH TV services ("cord cutting"), downgrade to smaller, less expensive programming packages ("cord shaving") or elect to purchase through these online content providers a certain portion of the services that they would have historically purchased from us.

Mergers and acquisitions, joint ventures and alliances among cable television providers, telecommunications companies, programming providers and others may result in, among other things, greater scale and financial leverage and increase the availability of offerings from providers capable of bundling video, broadband and/or wireless services in competition with our services and may exacerbate the risks described under the caption "Item 1A. Risk Factors" of our Annual Report on Form 10-K for the year ended December 31, 2022 and elsewhere in our public filings. These transactions may affect us adversely by, among other things, making it more difficult for us to obtain access to certain programming networks on nondiscriminatory and fair terms, or at all.

Our Pay-TV subscriber base has been declining due to, among other things, the factors described above. There can be no assurance that our Pay-TV subscriber base will not continue to decline and that the pace of such decline will not accelerate. As our Pay-TV subscriber base continues to decline, it could have a material adverse long-term effect on our business, results of operations, financial condition and cash flow.

Programming

Our ability to compete successfully will depend, among other things, on our ability to continue to obtain desirable programming and deliver it to our subscribers at competitive prices. Programming costs represent a large percentage of our "Cost of services" and the largest component of our total expense. We expect these costs to continue to increase due to contractual price increases and the renewal of long-term programming contracts on less favorable pricing terms and certain programming costs are rising at a much faster rate than wages or inflation. In particular, the rates we are charged for retransmitting local broadcast channels have been increasing substantially and may exceed our ability to increase our prices to our subscribers. Going forward, our margins may face pressure if we are unable to renew our long-term programming contracts on acceptable pricing and other economic terms or if we are unable to pass these increased programming costs on to our subscribers.

Increases in programming costs have caused us to increase the rates that we charge to our subscribers, which could in turn cause our existing Pay-TV subscribers to disconnect our services or cause potential new Pay-TV subscribers to choose not to subscribe to our services. Additionally, even if our subscribers do not disconnect our services, they may purchase through new and existing online content providers a certain portion of the services that they would have historically purchased from us.

Furthermore, our net Pay-TV subscriber additions, gross new DISH TV subscriber activations, and DISH TV churn rate may be negatively impacted if we are unable to renew our long-term programming carriage contracts. In the past, our net Pay-TV subscriber additions, gross new DISH TV subscriber activations, and DISH TV churn rate have been negatively impacted as a result of programming interruptions and threatened programming interruptions in connection with the scheduled expiration of programming carriage contracts with content providers. There can be no assurance that the removal of these or other channels will not have a material adverse effect on our business, results of operations and financial condition or otherwise disrupt our business. We cannot predict with any certainty the impact to our net Pay-TV subscriber additions, gross new DISH TV subscriber activations, and DISH TV churn rate resulting from additional programming interruptions or threatened programming interruptions that may occur in the future. As a result, we may at times suffer from periods of lower net Pay-TV subscriber additions or higher net Pay-TV subscriber losses.

Other Developments

Adaptive Bitrate Streaming Patents

Through our subsidiaries, we hold dozens of issued United States and foreign patents that relate to Adaptive Bitrate Streaming. On September 9, 2022, the chief administrative law judge at the United States International Trade Commission ("ITC") issued an Initial Determination holding that the video streaming in certain Peloton, NordicTrack and Mirror exercise equipment infringes four of those patents, and recommended that the ITC prevent the importation of the infringing products. On March 8, 2023, the ITC issued its Final Determination, which affirmed the Initial Determination for three of the four patents in all material aspects, and the recommended exclusion and cease and desist orders, which will become effective after a Presidential review period. On February 9, 2023, we entered into a confidential license agreement covering Mirror exercise equipment that resolves our litigation involving those products. On May 1, 2023, we entered into a $75 million license agreement covering Peloton exercise equipment that resolves our litigation involving those products. We have not reached a settlement with respect to the NordicTrack infringing products and we intend to enforce this litigation and to pursue our related patent infringement claims against them.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS – Continued

RESULTS OF OPERATIONS – Pay-TV Segment

Three Months Ended March 31, 2023 Compared to the Three Months Ended March 31, 2022.

Statements of Operations Data	For the Three Months Ended March 31, 2023	For the Three Months Ended March 31, 2022	Variance Amount	Variance %
	(In thousands)			
Revenue:				
Service revenue	$ 2,942,310	$ 3,129,734	$ (187,424)	(6.0)
Equipment sales and other revenue	29,821	37,829	(8,008)	(21.2)
Total revenue	2,972,131	3,167,563	(195,432)	(6.2)
Costs and expenses:				
Cost of services	1,833,299	1,864,378	(31,079)	(1.7)
% of Service revenue	**62.3 %**	**59.6 %**		
Cost of sales - equipment and other	21,065	25,426	(4,361)	(17.2)
Selling, general and administrative expenses	339,959	411,428	(71,469)	(17.4)
% of Total revenue	**11.4 %**	**13.0 %**		
Depreciation and amortization	102,575	114,285	(11,710)	(10.2)
Total costs and expenses	2,296,898	2,415,517	(118,619)	(4.9)
Operating income (loss)	$ 675,233	$ 752,046	$ (76,813)	(10.2)
Other data:				
Pay-TV subscribers, as of period end (in millions)	9.198	10.245	(1.047)	(10.2)
DISH TV subscribers, as of period end (in millions)	7.098	7.993	(0.895)	(11.2)
SLING TV subscribers, as of period end (in millions)	2.100	2.252	(0.152)	(6.7)
Pay-TV subscriber additions (losses), net (in millions)	(0.552)	(0.462)	(0.090)	(19.5)
DISH TV subscriber additions (losses), net (in millions)	(0.318)	(0.228)	(0.090)	(39.5)
SLING TV subscriber additions (losses), net (in millions)	(0.234)	(0.234)	—	*
Pay-TV ARPU	$ 102.71	$ 99.44	$ 3.27	3.3
DISH TV subscriber additions, gross (in millions)	0.113	0.159	(0.046)	(28.9)
DISH TV churn rate	1.98 %	1.59 %	0.39 %	24.5
DISH TV SAC	$ 1,055	$ 1,088	$ (33)	(3.0)
Purchases of property and equipment	$ 35,563	$ 32,006	$ 3,557	11.1
OIBDA	$ 777,808	$ 866,331	$ (88,523)	(10.2)

* Percentage is not meaningful.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS – Continued

Pay-TV Subscribers

DISH TV subscribers. We lost approximately 318,000 net DISH TV subscribers during the three months ended March 31, 2023 compared to the loss of approximately 228,000 net DISH TV subscribers during the same period in 2022. This increase in net DISH TV subscriber losses primarily resulted from lower gross new DISH TV subscriber activations and a higher DISH TV churn rate.

SLING TV subscribers. We lost approximately 234,000 net SLING TV subscribers during the three months ended March 31, 2023 compared to the loss of approximately 234,000 net SLING TV subscribers during the same period in 2022. The net SLING TV subscriber losses were primarily related to higher SLING TV subscriber activations, partially offset by higher subscriber disconnects in 2023. We continue to experience increased competition, including competition from other subscription video on-demand and live-linear OTT service providers.

DISH TV subscribers, gross. During the three months ended March 31, 2023, we activated approximately 113,000 gross new DISH TV subscribers compared to approximately 159,000 gross new DISH TV subscribers during the same period in 2022, a decrease of 28.9%. This decrease in our gross new DISH TV subscriber activations was primarily related to the lack of demand, shifting consumer behavior, and lower marketing expenditures, as well as increased competitive pressures, including aggressive short term introductory pricing and bundled offers combining broadband, video and/or wireless services and other discounted promotional offers, live-linear OTT service providers, and direct-to-consumer offerings by certain of our programmers. Our gross new DISH TV subscriber activations continue to be negatively impacted by an emphasis on acquiring higher quality subscribers.

DISH TV churn rate. Our DISH TV churn rate for the three months ended March 31, 2023 was 1.98% compared to 1.59% for the same period in 2022. Our DISH TV churn rate for the three months ended March 31, 2023 was briefly elevated due to the cyber-security incident. Our DISH TV churn rate continues to be adversely impacted by external factors, such as, among other things, cord cutting, shifting consumer behavior and increased competitive pressures, including aggressive marketing, bundled discount offers combining broadband, video and/or wireless services and other discounted promotional offers. Our DISH TV churn rate continues to be positively impacted by our emphasis on acquiring and retaining higher quality subscribers. Our DISH TV churn rate is also impacted by internal factors, such as, among other things, our ability to consistently provide outstanding customer service, price increases, our ability to control piracy and other forms of fraud, and the level of our retention efforts.

Our net Pay-TV subscriber additions, gross new DISH TV subscriber activations, and DISH TV churn rate have been negatively impacted as a result of programming interruptions and threatened programming interruptions in connection with the scheduled expiration of programming carriage contracts with content providers. We cannot predict with any certainty the impact to our net Pay-TV subscriber additions, gross new DISH TV subscriber activations, and DISH TV subscriber churn rate resulting from programming interruptions or threatened programming interruptions that may occur in the future. As a result, we may at times suffer from periods of lower net Pay-TV subscriber additions or higher net Pay-TV subscriber losses.

We have not always met our own standards for performing high-quality installations, effectively resolving subscriber issues when they arise, answering subscriber calls in an acceptable timeframe, effectively communicating with our subscriber base, reducing calls driven by the complexity of our business, improving the reliability of certain systems and subscriber equipment and aligning the interests of certain independent third-party retailers and installers to provide high-quality service. Most of these factors have affected both gross new DISH TV subscriber activations as well as DISH TV subscriber churn rate. Our future gross new DISH TV subscriber activations and our DISH TV subscriber churn rate may be negatively impacted by these factors, which could in turn adversely affect our revenue.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS – Continued

Service revenue. "Service revenue" totaled $2.942 billion for the three months ended March 31, 2023, a decrease of $187 million or 6.0% compared to the same period in 2022. The decrease in "Service revenue" compared to the same period in 2022 was primarily related to lower average Pay-TV subscriber base, partially offset by an increase in Pay-TV ARPU, discussed below.

Pay-TV ARPU. Pay-TV ARPU was $102.71 during the three months ended March 31, 2023 versus $99.44 during the same period in 2022. The $3.27 or 3.3% increase in Pay-TV ARPU was primarily attributable to the DISH TV and SLING TV programming price increases. The DISH TV and SLING TV programming package price increases were effective in the fourth quarter of 2022.

Cost of services. "Cost of services" totaled $1.833 billion during the three months ended March 31, 2023, a decrease of $31 million or 1.7% compared to the same period in 2022. The decrease in "Cost of services" was primarily attributable to a lower average Pay-TV subscriber base, partially offset by higher programming costs per subscriber and higher variable and retention costs per subscriber. Programming costs per subscriber increased during the three months ended March 31, 2023 due to rate increases in certain of our programming contracts, including the renewal of certain contracts at higher rates, particularly for local broadcast channels. In addition, variable and retention costs per subscriber increased during the three months ended March 31, 2023 due to, among other things, approximately $30 million in cyber-security-related expenses to remediate the incident and provide additional customer support. "Cost of services" represented 62.3% and 59.6% of "Service revenue" during the three months ended March 31, 2023 and 2022, respectively.

In the normal course of business, we enter into contracts to purchase programming content in which our payment obligations are generally contingent on the number of Pay-TV subscribers to whom we provide the respective content. Our "Cost of services" have and will continue to face further upward pressure from price increases and the renewal of long-term programming contracts on less favorable pricing terms. In addition, our programming expenses will increase to the extent we are successful in growing our Pay-TV subscriber base.

Selling, general and administrative expenses. "Selling, general and administrative expenses" totaled $340 million during the three months ended March 31, 2023, a $71 million or 17.4% decrease compared to the same period in 2022. This change was primarily driven by a decrease in subscriber acquisition costs resulting from lower marketing expenditures and lower gross new DISH TV subscriber activations.

Depreciation and amortization. "Depreciation and amortization" expense totaled $103 million during the three months ended March 31, 2023, a $12 million or 10.2% decrease compared to the same period in 2022. This change was primarily driven by a decrease in depreciation expense from equipment leased to new and existing DISH TV subscribers and the Anik F3 satellite. Through the first quarter of 2022, our Anik F3 satellite was accounted for as a finance lease. However, during April 2022, we extended the Anik F3 lease and, as a result, it is currently accounted for as an operating lease.

DISH TV SAC. DISH TV SAC was $1,055 during the three months ended March 31, 2023 compared to $1,088 during the same period in 2022, a decrease of $33 or 3.0%. This change was primarily attributable to a decrease in advertising costs per subscriber, partially offset by higher installation costs due to an increase in labor and other installation costs.

During each of the three months ended March 31, 2023 and 2022, the amount of equipment capitalized under our lease program for new DISH TV subscribers totaled $15 million.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS – Continued

To remain competitive, we upgrade or replace subscriber equipment periodically as technology changes, and the costs associated with these upgrades may be substantial. To the extent technological changes render a portion of our existing equipment obsolete, we would be unable to redeploy all returned equipment and consequently would realize less benefit from the DISH TV SAC reduction associated with redeployment of that returned lease equipment.

Our "DISH TV SAC" may materially increase in the future to the extent that we, among other things, transition to newer technologies, introduce more aggressive promotions, or provide greater equipment subsidies. See further information under *"Liquidity and Capital Resources – Subscriber Acquisition and Retention Costs."*

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS – Continued

Wireless Segment

Our Wireless business segment operates in two business units, Retail Wireless and 5G Network Deployment. Revenue and operating income (loss) by business unit are shown in the table below:

For the Three Months Ended March 31, 2023	Retail Wireless	5G Network Deployment	Eliminations	Total Wireless
		(In thousands)		
Total revenue	$ 974,866	$ 18,907	$ (7,502)	$ 986,271
Operating income (loss)	$ (18,207)	$ (333,603)	$ —	$ (351,810)

For the Three Months Ended March 31, 2022	Retail Wireless	5G Network Deployment	Eliminations	Total Wireless
		(In thousands)		
Total revenue	$ 1,152,420	$ 16,742	$ (3,705)	$ 1,165,457
Operating income (loss)	$ (56,554)	$ (145,132)	$ —	$ (201,686)

For the three months ended March 31, 2023 and 2022, total purchases of property and equipment for our Wireless segment were $672 million and $597 million, respectively. This increase primarily resulted from capital expenditures related to our 5G Network Deployment.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS – Continued

Wireless – Retail Wireless

We offer nationwide prepaid and postpaid Retail Wireless services to subscribers primarily under our Boost Mobile, Boost Infinite and Gen Mobile brands, as well as a competitive portfolio of wireless devices. Prepaid wireless subscribers generally pay in advance for monthly access to wireless talk, text, and data services. Postpaid wireless subscribers are qualified to pay after receiving wireless talk, text, and data services.

Boost Infinite. In the fourth quarter of 2022, we launched Boost Infinite, a postpaid wireless service, to a limited number of customers who had signed up for early registration. During 2023, we anticipate launching our nationwide expansion of Boost Infinite.

We are currently operating our Retail Wireless business unit primarily as a mobile virtual network operator ("MVNO") as we continue to complete our 5G Network Deployment. As an MVNO, today we depend on T-Mobile and AT&T to provide us with network services under the amended Master Network Services Agreement ("MNSA") and Network Services Agreement (the "NSA"), respectively. Under the NSA, we expect AT&T will become our primary network services provider.

Historically, a portion of our Wireless subscribers received services through T-Mobile's CDMA Network. However, T-Mobile previously provided notice that it intended to shutdown the CDMA Network on March 31, 2022. The shutdown began on March 31, 2022 and was completed during the second quarter of 2022. While we worked to mitigate the harms of this shutdown, we incurred significant costs to migrate subscribers on this timeline. We implemented targeted efforts and promotions directed at impacted customers, which resulted in the successful migration of the vast majority of our CDMA subscribers. The CDMA shutdown negatively impacted our gross new Wireless subscriber activations, our Wireless churn rate, and our results of operations during the first and second quarters of 2022. During the second quarter of 2022, we removed approximately 126,000 subscribers from our ending Wireless subscriber count representing Wireless subscribers who did not migrate off the CDMA network prior to the shutdown. The effect of the removal of the 126,000 subscribers was excluded from the calculation of our net Wireless subscriber additions/losses and Wireless churn rate.

On June 21, 2022, we and T-Mobile signed an amendment to the MNSA. In connection with this amendment, T-Mobile agreed to transfer to us (subject to required regulatory approvals) all Boost branded customers of former Sprint affiliates, Shentel and Swiftel, as well as Boost branded customers who were previously part of the California Public Utilities Commission CARE program (the "Boost Affiliate Subscribers"). We received regulatory approvals and on September 1, 2022 closed the transfer, upon which we received 139,000 subscribers. In addition, this amendment, among other things, settled all open disputes, including CDMA matters, with terms providing improved pricing and enhanced roaming solutions for our consumers. Prior to the signing of this agreement, the first and second quarters of 2022 were adversely impacted by, among other things, our CDMA migration costs and our ability to launch more competitive service plans in the marketplace. As a result, during the first and second quarters of 2022, we experienced lower gross new Wireless subscriber activations and higher Wireless churn.

During the second half of 2022, we began the process of migrating subscribers off the TSA with T-Mobile, including the billing systems, and onto our own billing and operational support systems. The migration of subscribers to our new billing and operational support systems accelerated during the fourth quarter of 2022 and continued in the first quarter of 2023. The migration of subscribers during the first quarter of 2023 negatively impacted our Wireless churn rate and our results of operations.

As of March 31, 2023, we had 7.913 million Wireless subscribers. Currently, we offer Wireless subscribers competitive consumer plans with no annual service contracts and monthly service plans including high-speed data and unlimited talk and text.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS – Continued

Other Developments

We regularly evaluate ways to enhance our business. As part of this process, we are in regular dialogue with interested parties who may assist us in accomplishing our goals, including ongoing conversations with CONX Corp. (an entity partially owned by Charles W. Ergen, our Chairman) regarding a transaction involving our Retail Wireless business unit. There can be no assurance that these discussions will lead to a transaction nor as to the structure or terms of any such transaction.

Competition

Retail wireless is a mature market with moderate year over year organic growth. Competitors include providers who offer similar communication services, such as talk, text and data. Competitive factors within the wireless communications services industry include, but are not limited to, pricing, market saturation, service and product offerings, customer experience and service quality. We compete with a number of national wireless carriers, including Verizon, AT&T and T-Mobile, all of which are significantly larger than us, serve a significant percentage of all wireless subscribers and enjoy scale advantages compared to us. Verizon, AT&T, and T-Mobile are currently the only nationwide MNOs in the United States.

Primary competitors to our Retail Wireless business unit include, but are not limited to, Metro PCS (owned by T-Mobile), Cricket Wireless (owned by AT&T), Visible (owned by Verizon), Tracfone Wireless (owned by Verizon), and other MVNOs such as Consumer Cellular, Mint Mobile (T-Mobile has reached an agreement to acquire) and Xfinity Mobile.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS – Continued

Wireless – 5G Network Deployment

We have invested a total of over $30 billion in Wireless spectrum licenses, which includes over $10 billion in noncontrolling investments in certain entities. The $30 billion of investments related to Wireless spectrum licenses does not include $8 billion of capitalized interest related to the carrying value of such licenses. See Note 2 and Note 10 in the Notes to our Condensed Consolidated Financial Statements for further information.

DISH Network Spectrum

We have invested a total of over $30 billion to acquire certain Wireless spectrum licenses. These Wireless spectrum licenses are subject to certain interim and final build-out requirements, as well as certain renewal requirements. We plan to commercialize our Wireless spectrum licenses through the completion of our 5G Network Deployment. We have committed to deploy a facilities-based 5G broadband network capable of serving increasingly larger portions of the U.S. population at different deadlines, including 20% of the U.S. population by June 2022 and 70% of the U.S. population by June 2023. If by June 2023, we are offering 5G broadband service to at least 50% of the U.S. population but less than 70% of the U.S. population, the 70% June 2023 deadline will be extended automatically to June 2025; however, as a result, we may, under certain circumstances, potentially be subject to certain penalties. On June 14, 2022, we announced we had successfully reached our 20% population coverage requirement. We are currently focused on our progression towards offering 5G broadband service to at least 70% of the U.S. population with a minimum of 15,000 5G sites. As of March 31, 2023, we had started construction on over 18,000 5G cell sites. We will need approximately 16,000 sites fully powered and fibered to provide 5G broadband service to over 70% of the U.S. population.

We may need to make significant additional investments or partner with others to, among other things, complete our 5G Network Deployment and further commercialize, build-out and integrate these licenses and related assets and any additional acquired licenses and related assets, as well as to comply with regulations applicable to such licenses. Depending on the nature and scope of such activities, any such investments or partnerships could vary significantly. In addition, as we complete our initial 5G Network Deployment, we have and may continue to incur significant additional expenses related to, among other things, research and development, wireless testing and ongoing upgrades to the wireless network infrastructure, software and third party integration. As a result of these investments, among other factors, we plan to raise additional capital, which may not be available on favorable terms. We may also determine that additional wireless spectrum licenses may be required to complete our 5G Network Deployment and to compete effectively with other wireless service providers. See Note 9 and Note 10 for further information in the Notes to our Condensed Consolidated Financial Statements for further information.

DISH Network Noncontrolling Investments in the Northstar Entities and the SNR Entities Related to AWS-3 Wireless Spectrum Licenses

During 2015, through our wholly-owned subsidiaries American AWS-3 Wireless II L.L.C. ("American II") and American AWS-3 Wireless III L.L.C. ("American III"), we initially made over $10 billion in certain noncontrolling investments in Northstar Spectrum, LLC ("Northstar Spectrum"), the parent company of Northstar Wireless, L.L.C. ("Northstar Wireless," and collectively with Northstar Spectrum, the "Northstar Entities"), and in SNR Wireless HoldCo, LLC ("SNR HoldCo"), the parent company of SNR Wireless LicenseCo, LLC ("SNR Wireless," and collectively with SNR HoldCo, the "SNR Entities"), respectively. On October 27, 2015, the FCC granted certain AWS-3 wireless spectrum licenses (the "AWS-3 Licenses") to Northstar Wireless and to SNR Wireless, respectively, which are recorded in "FCC authorizations" on our Condensed Consolidated Balance Sheets. Under the applicable accounting guidance in Accounting Standards Codification 810, *Consolidation* ("ASC 810"), Northstar Spectrum and SNR HoldCo are considered variable interest entities and, based on the characteristics of the structure of these entities and in accordance with the applicable accounting guidance, we consolidate these entities into our financial statements. See Note 2 in the Notes to our Condensed Consolidated Financial Statements for further information.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS – Continued

The AWS-3 Licenses are subject to certain interim and final build-out requirements, as well as certain renewal requirements. The Northstar Entities and/or the SNR Entities may need to raise significant additional capital in the future, which may be obtained from third party sources or from us, so that the Northstar Entities and the SNR Entities may commercialize, build-out and integrate these AWS-3 Licenses, comply with regulations applicable to such AWS-3 Licenses, and make any potential Northstar Re-Auction Payment and SNR Re-Auction Payment for the AWS-3 licenses retained by the FCC. Depending upon the nature and scope of such commercialization, build-out and integration efforts, regulatory compliance, and potential Northstar Re-Auction Payment and SNR Re-Auction Payment, any loans, equity contributions or partnerships could vary significantly. See Note 10 in the Notes to our Condensed Consolidated Financial Statements for further information.

We may need to raise significant additional capital in the future to fund the efforts described above, which may not be available on favorable terms. There can be no assurance that we, the Northstar Entities and/or the SNR Entities will be able to develop and implement business models that will realize a return on these Wireless spectrum licenses or that we, the Northstar Entities and/or the SNR Entities will be able to profitably deploy the assets represented by these Wireless spectrum licenses, which may affect the carrying amount of these assets and our future financial condition or results of operations. See Note 10 in the Notes to our Condensed Consolidated Financial Statements for further information.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS – Continued

RESULTS OF OPERATIONS – Wireless Segment – Retail Wireless Business Unit

Three Months Ended March 31, 2023 Compared to the Three Months Ended March 31, 2022.

Statements of Operations Data	For the Three Months Ended March 31, 2023	2022	Variance Amount	%
	(In thousands)			
Revenue:				
Service revenue	$ 867,111	$ 945,388	$ (78,277)	(8.3)
Equipment sales and other revenue	107,755	207,032	(99,277)	(48.0)
Total revenue	974,866	1,152,420	(177,554)	(15.4)
Costs and expenses:				
Cost of services	497,972	618,251	(120,279)	(19.5)
% of Service revenue	**57.4 %**	**65.4 %**		
Cost of sales - equipment and other	263,833	389,468	(125,635)	(32.3)
Selling, general and administrative expenses	178,423	156,400	22,023	14.1
% of Total revenue	**18.3 %**	**13.6 %**		
Depreciation and amortization	52,845	44,855	7,990	17.8
Total costs and expenses	993,073	1,208,974	(215,901)	(17.9)
Operating income (loss)	$ (18,207)	$ (56,554)	$ 38,347	67.8
Other data:				
Wireless subscribers, as of period end (in millions) **	7.913	8.203	(0.290)	(3.5)
Wireless subscriber additions, gross (in millions)	0.785	0.796	(0.011)	(1.4)
Wireless subscriber additions (losses), net (in millions) ***	(0.081)	(0.343)	0.262	76.4
Wireless ARPU	$ 36.43	$ 37.72	$ (1.29)	(3.4)
Wireless churn rate	4.24 %	4.64 %	(0.40)%	(8.6)
OIBDA	$ 34,638	$ (11,699)	$ 46,337	*

* Percentage is not meaningful.
**During the second quarter of 2022, we removed approximately 126,000 subscribers from our ending Wireless subscriber count representing Wireless subscribers who did not migrate off the CDMA network prior to the shutdown. The effect of the removal of the 126,000 Wireless subscribers was excluded from the calculation of our net Wireless subscriber additions/losses and Wireless churn rate. See "Wireless – Retail Wireless" for further information on the CDMA shutdown. In addition, during the third quarter of 2022, approximately 139,000 Boost Affiliate Subscribers were transferred to us and are included in our ending Wireless subscriber count and excluded from our gross new Wireless subscriber activations. See "Wireless – Retail Wireless" for further information on the amended MNSA.
***Includes ACP/Gen Mobile subscribers.

Item 2. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS – Continued

Wireless subscribers. We lost approximately 81,000 net Wireless subscribers during the three months ended March 31, 2023 compared to the loss of approximately 343,000 net Wireless subscribers during the same period in 2022. This decrease in net Wireless subscriber losses primarily resulted from a lower Wireless churn rate, partially offset by lower gross new Wireless subscriber activations.

Wireless subscribers, gross. During the three months ended March 31, 2023, we activated approximately 785,000 gross new Wireless subscribers compared to approximately 796,000 gross new Wireless subscribers during the same period in 2022, a decrease of 1.4%. This decrease in our gross new Wireless subscriber activations was primarily related to increased competitive pressures, including aggressive competitor marketing, discounted service plans and deeper wireless device subsidies.

Wireless churn rate. Our Wireless churn rate for the three months ended March 31, 2023 was 4.24% compared to 4.64% for the same period in 2022. Our Wireless churn rate for the three months ended March 31, 2023 was positively impacted by subscriber retention efforts, partially offset by competitive pressures, including deeper wireless device subsidies. In addition, our Wireless churn rate for the three months ended March 31, 2022 was negatively impacted by the shutdown of the CDMA Network.

Service revenue. “Service revenue” totaled $867 million for the three months ended March 31, 2023, a decrease of $78 million or 8.3% compared to the same period in 2022. The decrease in “Service revenue” compared to the same period in 2022 was primarily related to a lower average Wireless subscriber base and a decrease in Wireless ARPU, discussed below.

Wireless ARPU. Wireless ARPU was $36.43 during the three months ended March 31, 2023 versus $37.72 during the same period in 2022. The $1.29 or 3.4% decrease in Wireless ARPU was primarily attributable to, among other things, a shift in subscriber plan mix to lower priced service plans.

Equipment sales and other revenue. “Equipment sales and other revenue” totaled $108 million for the three months ended March 31, 2023, a decrease of $99 million or 48.0% compared to the same period in 2022. The decrease in “Equipment sales and other revenue” compared to the same period in 2022 was primarily related to a decrease in units shipped.

Cost of services. “Cost of services” totaled $498 million for the three months ended March 31, 2023, a decrease of $120 million or 19.5% compared to the same period in 2022. The decrease in “Cost of services” was primarily attributable to a lower average Wireless subscriber base and lower network services costs per subscriber, partially offset by higher customer data usage. Our lower network services costs per subscriber during the three months ended March 31, 2023 resulted from the new MVNO rates, as a result of our amendment to the MNSA with T-Mobile. These decreases were partially offset by the negative impact from migrating subscribers off the TSA with T-Mobile and onto our new billing and operational support systems. We are incurring duplicative costs related to our TSA with T-Mobile and our own billing and operational support systems as we work to migrate subscribers off the TSA with T-Mobile. The three months ended March 31, 2022 was negatively impacted by increased costs per subscriber as a result of the CDMA migration.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS – Continued

Cost of sales – equipment and other. "Cost of sales – equipment and other" totaled $264 million for the three months ended March 31, 2023, a decrease of $126 million or 32.3% compared to the same period in 2022. The decrease in "Cost of sales – equipment and other" compared to the same period in 2022 was primarily related to a decrease in units shipped, partially offset by higher costs per unit shipped due to unit mix. During the three months ended March 31, 2023, we shipped a higher percentage of devices that are compatible with our 5G Network. These devices have a higher cost per unit which contributed to the increase in costs per unit shipped.

Selling, general and administrative expenses. "Selling, general and administrative expenses" totaled $178 million during the three months ended March 31, 2023, a $22 million or 14.1% increase compared to the same period in 2022. This change was primarily driven by higher marketing expenditures and an increase in costs to support the Retail Wireless business unit, including costs of migrating subscribers off the TSA with T-Mobile and onto our new billing and operational support systems.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS – Continued

RESULTS OF OPERATIONS – Wireless Segment – 5G Network Deployment Business Unit

Three Months Ended March 31, 2023 Compared to the Three Months Ended March 31, 2022.

Statements of Operations Data	For the Three Months Ended March 31, 2023	For the Three Months Ended March 31, 2022	Variance Amount	Variance %
	(In thousands)			
Revenue:				
Equipment sales and other revenue	$ 18,907	$ 16,742	$ 2,165	12.9
Total revenue	18,907	16,742	2,165	12.9
Costs and expenses:				
Cost of sales - equipment and other	184,997	87,698	97,299	*
Selling, general and administrative expenses	69,886	53,270	16,616	31.2
Depreciation and amortization	97,627	20,906	76,721	*
Total costs and expenses	352,510	161,874	190,636	*
Operating income (loss)	$ (333,603)	$ (145,132)	$ (188,471)	*
Other data:				
OIBDA	$ (235,976)	$ (124,226)	$ (111,750)	(90.0)

* Percentage is not meaningful.

Cost of sales – equipment and other. "Cost of sales – equipment and other" totaled $185 million during the three months ended March 31, 2023, an increase of $97 million compared to the same period in 2022. The increase primarily resulted from an increase in lease expense on communication towers, transport, cloud services, and other costs related to our 5G network.

Selling, general and administrative expenses. "Selling, general and administrative expenses" totaled $70 million during the three months ended March 31, 2023, a $17 million increase compared to the same period in 2022. This change was primarily driven by an increase in costs to support our 5G Network Deployment.

Depreciation and amortization. "Depreciation and amortization" expense totaled $98 million during the three months ended March 31, 2023, a $77 million increase compared to the same period in 2022. This change was primarily driven by an increase in depreciation and amortization expense related to 5G Network Deployment assets being placed in service. We expect our depreciation and amortization expense to increase as we continue to place 5G Network Deployment assets into service.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS – Continued

OTHER CONSOLIDATED RESULTS

Three Months Ended March 31, 2023 Compared to the Three Months Ended March 31, 2022.

	For the Three Months Ended March 31,		Variance	
Statements of Operations Data	**2023**	**2022**	**Amount**	**%**
		(In thousands)		
Operating income (loss)	$ 323,423	$ 550,360	$ (226,937)	(41.2)
Other income (expense):				
Interest income	40,533	4,849	35,684	*
Interest expense, net of amounts capitalized	(7,772)	(4,601)	(3,171)	(68.9)
Other, net	(30,521)	42,548	(73,069)	*
Total other income (expense)	2,240	42,796	(40,556)	(94.8)
Income (loss) before income taxes	325,663	593,156	(267,493)	(45.1)
Income tax (provision) benefit, net	(82,425)	(144,310)	61,885	42.9
Effective tax rate	**25.3 %**	**24.3 %**		
Net income (loss)	243,238	448,846	(205,608)	(45.8)
Less: Net income (loss) attributable to noncontrolling interests, net of tax	20,533	16,195	4,338	26.8
Net income (loss) attributable to DISH Network	$ 222,705	$ 432,651	$ (209,946)	(48.5)

* Percentage is not meaningful.

Interest income. "Interest income" totaled $41 million during the three months ended March 31, 2023, an increase of $36 million compared to the same period in 2022. This increase primarily resulted from higher percentage returns earned on our cash and marketable investment securities, partially offset by lower average cash and marketable investment securities balances during the three months ended March 31, 2023.

Other, net. "Other, net" expense totaled $31 million during the three months ended March 31, 2023, compared to income of $43 million during the same period in 2022. This change primarily resulted from a $29 million decrease in the fair value of our option to purchase certain of T-Mobile's 800 MHz spectrum licenses during the three months ended March 31, 2023 compared to a $43 million increase during the three months ended March 31, 2022. See Note 5 in the Notes to our Condensed Consolidated Financial Statements for further information.

Income tax (provision) benefit, net. Our income tax provision was $82 million during the three months ended March 31, 2023, a decrease of $62 million compared to the same period in 2022. The decrease in the provision was primarily related to a decrease in "Income (loss) before income taxes," partially offset by an increase in our effective tax rate.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS – Continued

Non-GAAP Performance Measures and Reconciliation

It is management's intent to provide non-GAAP financial information to enhance the understanding of our GAAP financial information, and it should be considered by the reader in addition to, but not instead of, the financial statements prepared in accordance with GAAP. Each non-GAAP financial measure is presented along with the corresponding GAAP measure so as not to imply that more emphasis should be placed on the non-GAAP measure. We believe that providing these non-GAAP measures in addition to the GAAP measures allows management, investors and other users of our financial information to more fully and accurately assess both consolidated and segment performance. The non-GAAP financial information presented may be determined or calculated differently by other companies and may not be directly comparable to that of other companies.

Consolidated EBITDA

Consolidated EBITDA is not a measure determined in accordance with GAAP and should not be considered a substitute for operating income, net income or any other measure determined in accordance with GAAP. Consolidated EBITDA is used as a measurement of operating efficiency and overall financial performance and we believe it is a helpful measure for those evaluating operating performance in relation to our competitors. Conceptually, EBITDA measures the amount of income generated each period that could be used to service debt, pay taxes and fund capital expenditures. EBITDA should not be considered in isolation or as a substitute for measures of performance prepared in accordance with GAAP.

	For the Three Months Ended March 31,	
	2023	2022
	(In thousands)	
Net income (loss) attributable to DISH Network	$ 222,705	$ 432,651
Interest, net	(32,761)	(248)
Income tax provision (benefit), net	82,425	144,310
Depreciation and amortization	245,697	176,341
Consolidated EBITDA	$ 518,066	$ 753,054

The changes in Consolidated EBITDA during the three months ended March 31, 2023, compared to the same period in 2022, were primarily a result of the factors described in connection with operating revenues and operating expenses, including the impact from changes in the fair value of our option to purchase certain of T-Mobile's 800 MHz spectrum licenses.

Segment OIBDA

Segment OIBDA, which is presented below, is a non-GAAP measure and does not purport to be an alternative to operating income (loss) as a measure of operating performance. We believe this measure is useful to management, investors and other users of our financial information in evaluating operating profitability of our business units on a more variable cost basis as it excludes the depreciation and amortization expenses related primarily to capital expenditures and acquisitions for those business units, as well as in evaluating operating performance in relation to our competitors. Segment OIBDA is calculated by adding back depreciation and amortization expense to business unit operating income (loss). See Note 11 to the Notes to our Condensed Consolidated Financial Statements for further information.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS – Continued

For the Three Months Ended March 31, 2023	Pay-TV	Retail Wireless	5G Network Deployment	Wireless Eliminations	Consolidated
			(In thousands)		
Segment operating income (loss)	$ 675,233	$ (18,207)	$ (333,603)	$ —	$ 323,423
Depreciation and amortization	102,575	52,845	97,627	(7,350)	245,697
OIBDA	$ 777,808	$ 34,638	$ (235,976)	$ (7,350)	$ 569,120
For the Three Months Ended March 31, 2022					
Segment operating income (loss)	$ 752,046	$ (56,554)	$ (145,132)	$ —	$ 550,360
Depreciation and amortization	114,285	44,855	20,906	(3,705)	176,341
OIBDA	$ 866,331	$ (11,699)	$ (124,226)	$ (3,705)	$ 726,701

The changes in OIBDA during the three months ended March 31, 2023, compared to the same period in 2022, were primarily a result of the factors described in connection with operating revenues and operating expenses.

GUARANTOR FINANCIAL INFORMATION

Our DISH Senior Secured Notes are fully and unconditionally guaranteed, jointly and severally, by certain of our restricted subsidiaries on a senior secured basis (the "Secured Guarantors") and certain other material subsidiaries (the "Unsecured Guarantors").

The indentures relating to our 11 3/4% Senior Notes due 2027 provide that, a guarantor will be released from its obligations to guarantee the 11 3/4% Senior Notes due 2027 as the case may be: (i) if pursuant to any direct or indirect sale of assets (including, if applicable, all of the capital stock of any guarantor) or other disposition by way of merger, consolidation or otherwise the assets sold include all or substantially all of the assets of any guarantor or all of the capital stock of any such guarantor provided that in the event of an asset sale, the net proceeds from such sale or other disposition are applied in accordance with the provisions of the related indenture; (ii) if such guarantor is dissolved or liquidated; (iii) if in the case of an unsecured guarantor, if such unsecured guarantor no longer constitutes a material subsidiary; or (iv) if we exercise our option to effect legal defeasance or covenant defeasance or if our obligations under the related indenture are discharged.

The following tables include summarized financial information of the obligor group of the DISH Senior Secured Notes. The summarized financial information of the obligor group is presented on a combined basis with balances and transactions within the obligor group eliminated. Investments in and the equity in earnings of non-guarantor subsidiaries, which would otherwise be consolidated in accordance with U.S. GAAP, are excluded from the below summarized financial information pursuant to SEC Regulation S-X Rule 13-01.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS – Continued

The summarized balance sheet information for the combined obligor group of the DISH Senior Secured Notes is presented in the table below:

	As of	
	March 31, 2023	December 31, 2022
	(In thousands)	
Current assets	$ 419,615	$ 428,133
Noncurrent assets	18,114,911	17,208,781
Total assets	$ 18,534,526	$ 17,636,914
Current liabilities	$ 2,562,608	$ 2,826,627
Long-term obligations, net of current portion	13,620,191	12,338,368
Total liabilities	$ 16,182,799	$ 15,164,995

The summarized results of operations information for the combined obligor group of the DISH Senior Secured Notes is presented in the table below:

	For the Three Months Ended March 31,
	2023
	(In thousands)
Total revenue	$ 897,975
Total costs and expenses	1,230,809
Net income (loss)	(359,716)

LIQUIDITY AND CAPITAL RESOURCES

Cash, Cash Equivalents and Current Marketable Investment Securities

We consider all liquid investments purchased with a remaining maturity of 90 days or less at the date of acquisition to be cash equivalents. See Note 5 in the Notes to our Condensed Consolidated Financial Statements for further information regarding our marketable investment securities. As of March 31, 2023, cash, cash equivalents and current marketable investment securities totaled $2.544 billion compared to $2.621 billion as of December 31, 2022, a decrease of $77 million. This decrease in cash, cash equivalents and current marketable investment securities primarily resulted from capital expenditures of $907 million (including capitalized interest related to FCC authorizations) and the repurchases and redemption of our 5% Senior Notes due 2023 with a remaining principal balance of $1.443 billion, partially offset by cash generated from operating activities of $737 million and $1.522 billion in net proceeds from the issuance of our 11 3/4% Senior Notes due 2027.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS – Continued

Cash Flow

The following discussion highlights our cash flow activities during the three months ended March 31, 2023.

Cash flows from operating activities

For the three months ended March 31, 2023, we reported "Net cash flows from operating activities" of $737 million primarily attributable to $601 million of "Net income (loss)" adjusted to exclude the non-cash items for "Depreciation and amortization" expense, "Realized and unrealized losses (gains) on investments, derivatives and other," "Non-cash, stock-based compensation" expense, and "Deferred tax expense (benefit)." In addition, "Net cash flows from operating activities" was impacted by the timing difference between book expense and cash payments, including income taxes.

Cash flows from investing activities

For the three months ended March 31, 2023, we reported outflows from "Net cash flows from investing activities" of $361 million primarily related to capital expenditures of $907 million (including capitalized interest related to FCC authorizations), partially offset by $546 million in net sales of marketable investment securities. The capital expenditures included $672 million of capital expenditures for our Retail Wireless and 5G Network Deployment business units, $199 million of capitalized interest related to FCC authorizations, $21 million for new and existing DISH TV subscriber equipment and $15 million of satellite and other corporate capital expenditures.

Cash flows from financing activities

For the three months ended March 31, 2023, we reported inflows from "Net cash flows from financing activities" of $85 million primarily related to $1.522 billion in net proceeds from the issuance of our 11 3/4% Senior Notes due 2027, partially offset by the repurchases and redemption of our 5% Senior Notes due 2023 with a remaining principal balance of $1.443 billion.

Free Cash Flow

We define free cash flow as "Net cash flows from operating activities" less "Purchases of property and equipment," and "Capitalized interest related to FCC authorizations," as shown on our Condensed Consolidated Statements of Cash Flows. We believe free cash flow is an important liquidity metric because it measures, during a given period, the amount of cash generated that is available to repay debt obligations, make investments (including strategic wireless investments), fund acquisitions and for certain other activities. Free cash flow is not a measure determined in accordance with GAAP and should not be considered a substitute for "Operating income," "Net income," "Net cash flows from operating activities" or any other measure determined in accordance with GAAP. Since free cash flow includes investments in operating assets, we believe this non-GAAP liquidity measure is useful in addition to the most directly comparable GAAP measure "Net cash flows from operating activities."

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS – Continued

Free cash flow can be significantly impacted from period to period by changes in "Net income (loss)" adjusted to exclude certain non-cash charges, operating assets and liabilities, "Purchases of property and equipment," and "Capitalized interest related to FCC authorizations." These items are shown in the "Net cash flows from operating activities" and "Net cash flows from investing activities" sections on our Condensed Consolidated Statements of Cash Flows included herein. Operating asset and liability balances can fluctuate significantly from period to period and there can be no assurance that free cash flow will not be negatively impacted by material changes in operating assets and liabilities in future periods, since these changes depend upon, among other things, management's timing of payments and control of inventory levels, and cash receipts. In addition to fluctuations resulting from changes in operating assets and liabilities, free cash flow can vary significantly from period to period depending upon, among other things, subscriber additions (losses), service revenue, subscriber churn, subscriber acquisition and retention costs including amounts capitalized under our equipment lease programs for DISH TV subscribers, operating efficiencies, increases or decreases in purchases of property and equipment, expenditures related to our 5G Network Deployment and other factors.

The following table reconciles free cash flow to "Net cash flows from operating activities."

	For the Three Months Ended March 31,	
	2023	2022
	(In thousands)	
Net cash flows from operating activities	$ 737,374	$ 705,344
Purchases of property and equipment (including capitalized interest related to FCC authorizations)	(906,605)	(896,291)
Free cash flow	$ (169,231)	$ (190,947)

Operational Liquidity

We make general investments in property such as, among others, satellites, wireless devices, set-top boxes, information technology and facilities that support our Pay-TV segment and Retail Wireless business unit. We are also making significant additional investments and will need to continue making these investments and/or partner with others to, among other things, complete our 5G Network Deployment and further commercialize, build-out, and integrate our Wireless spectrum licenses and related assets. Moreover, since we are primarily a subscriber-based company, we also make subscriber-specific investments to acquire new subscribers and retain existing subscribers. While the general investments may be deferred without impacting the business in the short-term, the subscriber-specific investments are less discretionary. Our overall objective is to generate sufficient cash flow over the life of each subscriber to provide an adequate return against the upfront investment. Once the upfront investment has been made for each subscriber, the subsequent cash flow is generally positive, but there can be no assurance that over time we will recoup or earn a return on the upfront investment.

There are a number of factors that impact our future cash flow compared to the cash flow we generate at a given point in time. The first factor is our churn rate and how successful we are at retaining our current subscribers. To the extent we lose subscribers from our existing base, the positive cash flow from that base is correspondingly reduced. The second factor is how successful we are at maintaining our service margins. To the extent our "Cost of services" grow faster than our "Service revenue," the amount of cash flow that is generated per existing subscriber is reduced. Our Pay-TV service margins have been reduced by, among other things, higher programming costs. Our Retail Wireless service margins are impacted by, among other things, our MNSA agreement with T-Mobile and our NSA agreement with AT&T and the speed with which we are able to convert Wireless subscribers onto our 5G Network. The third factor is the rate at which we acquire new subscribers. The faster we acquire new subscribers, the more our positive ongoing cash flow from existing subscribers is offset by the negative upfront cash flow associated with acquiring new subscribers. Conversely, the slower we acquire subscribers, the more our operating cash flow is enhanced in that period.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS – Continued

Finally, our future cash flow is impacted by, among other things, the rate at which we complete our 5G Network Deployment, incur litigation expense, and any cash flow from financing activities. We anticipate total expenditures for our 5G Network Deployment to increase during 2023 and in future periods as we commercialize our 5G Network. As a result, our historical cash flow is not necessarily indicative of our future cash flows. As of March 31, 2023, as a result of, among other things, capital expenditures for our 5G Network Deployment, we experienced negative free cash flow. We expect that this trend will continue in 2023 and in future periods. In addition, declines in our Pay-TV and Wireless subscriber base and any decrease in subscriber-related margins negatively impact our cash flow, and there can be no assurance that our subscriber declines will not continue.

Subscriber Base – Pay TV Segment and Retail Wireless Business Unit

See "Results of Operations" above for further information.

Subscriber Acquisition and Retention Costs

We incur significant upfront costs to acquire Pay-TV and Wireless subscribers, including, but not limited to, advertising, independent third-party retailer incentives, payments made to third-parties, equipment and wireless device subsidies, installation services, and/or new customer promotions. While we attempt to recoup these upfront costs over the lives of their subscription, there can be no assurance that we will be successful in achieving that objective. With respect to our DISH TV services, we employ business rules such as minimum credit requirements for prospective customers and contractual commitments to receive service for a minimum term. We strive to provide outstanding customer service to increase the likelihood of customers keeping their Pay-TV services over longer periods of time. Subscriber acquisition costs for SLING TV subscribers are significantly lower than those for DISH TV subscribers. Our subscriber acquisition costs may vary significantly from period to period.

We incur significant costs to retain our existing DISH TV subscribers, generally as a result of upgrading their equipment to next generation receivers, primarily including our Hopper® receivers, and by providing retention credits. As with our subscriber acquisition costs, our retention upgrade spending includes the cost of equipment and installation services. In certain circumstances, we also offer programming at no additional charge and/or promotional pricing for limited periods to existing customers in exchange for a contractual commitment to receive service for a minimum term. A component of our retention efforts includes the installation of equipment for customers who move. Retention costs for Wireless subscribers are primarily related to promotional pricing on upgraded wireless devices for qualified existing subscribers. Our DISH TV and Wireless subscriber retention costs may vary significantly from period to period.

Seasonality

Historically, the first half of the year generally produces fewer gross new DISH TV subscriber activations than the second half of the year, as is typical in the pay-TV industry. In addition, the first and fourth quarters generally produce a lower DISH TV churn rate than the second and third quarters. However, in recent years, as the pay-TV industry has matured, we and our competitors increasingly must seek to attract a greater proportion of new subscribers from each other's existing subscriber bases rather than from first-time purchasers of pay-TV services. As a result, historical trends in seasonality described above may not be indicative of future trends.

Our net SLING TV subscriber additions are impacted by, among other things, certain major sporting events and other major television events. The first and third quarters generally produce higher gross new Wireless subscriber activations. The historical trends discussed above, for net DISH TV subscriber additions, net SLING TV subscriber additions and gross new Wireless subscriber activations, may not be indicative of future trends.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS – Continued

Satellites

Operation of our DISH TV services requires that we have adequate satellite transmission capacity for the programming that we offer. Moreover, competitive conditions may require that we expand our offering of new programming. While we generally have had in-orbit satellite capacity sufficient to transmit our existing channels and some backup capacity to recover the transmission of certain critical programming, our backup capacity is limited. In the event of a failure or loss of any of our owned or leased satellites, we may need to acquire or lease additional satellite capacity or relocate one of our other satellites and use it as a replacement for the failed or lost satellite. Such a failure could result in a prolonged loss of critical programming or a significant delay in our plans to expand programming as necessary to remain competitive and cause us to expend a significant portion of our cash to acquire or lease additional satellite capacity.

Covenants and Restrictions Related to our Long-Term Debt

We are subject to the covenants and restrictions set forth in the indentures related to our long-term debt. In particular, the indentures related to our outstanding senior notes issued by DISH DBS Corporation ("DISH DBS") contain restrictive covenants that, among other things, impose limitations on the ability of DISH DBS and its restricted subsidiaries to: (i) incur additional indebtedness; (ii) enter into sale and leaseback transactions; (iii) pay dividends or make distributions on DISH DBS' capital stock or repurchase DISH DBS' capital stock; (iv) make certain investments; (v) create liens; (vi) enter into certain transactions with affiliates; (vii) merge or consolidate with another company; and (viii) transfer or sell assets. The indentures related to our outstanding senior secured notes contain restrictive covenants that, among other things, impose limitations on our ability and certain of our subsidiaries to: (i) incur additional indebtedness; (ii) enter into sale and leaseback transactions; (iii) pay dividends or make distributions on our capital stock or repurchase our capital stock; (iv) make certain investments of spectrum collateral; (v) create liens; (vi) enter into certain transactions with affiliates; (vii) merge or consolidate with another company; and (viii) transfer or sell assets. Should we fail to comply with these covenants, all or a portion of the debt under the senior notes, senior secured notes and our other long-term debt could become immediately payable. The senior notes and senior secured notes also provide that the debt may be required to be prepaid if certain change-in-control events occur. In addition, the Convertible Notes provide that, if a "fundamental change" (as defined in the related indenture) occurs, holders may require us to repurchase for cash all or part of their Convertible Notes. As of the date of filing of this Quarterly Report on Form 10-Q, we and DISH DBS were in compliance with the covenants and restrictions related to our respective long-term debt.

Other

We are also vulnerable to fraud, particularly in the acquisition of new subscribers. While we are addressing the impact of subscriber fraud through a number of actions, there can be no assurance that we will not continue to experience fraud, which could impact our subscriber growth and churn. Economic weakness may create greater incentive for signal theft, piracy and subscriber fraud, which could lead to higher subscriber churn and reduced revenue.

Obligations and Future Capital Requirements

Contractual Obligations

See Note 10 in the Notes to our Condensed Consolidated Financial Statements for further information.

Future Capital Requirements

We expect to fund our future working capital, capital expenditures, other investments, and debt service requirements from cash generated from operations, existing cash, restricted cash, cash equivalents and marketable investment securities balances, and cash generated through raising additional capital. We may need to make significant additional investments to, among other things, complete our 5G Network Deployment and further commercialize, build-out and integrate our Wireless spectrum licenses and related assets. The amount of capital required to fund our future working capital, capital expenditure and other investment needs varies, depending on, among other things, the rate at which we complete our 5G Network Deployment, the purchase of additional wireless spectrum licenses and the rate at which we acquire new subscribers and the cost of subscriber acquisition and retention, including, but not limited to, capitalized costs associated with our new and existing subscriber equipment lease programs.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS – Continued

Certain of our capital expenditures for 2023 are expected to be driven by the rate of our 5G Network Deployment as well as costs associated with subscriber premises equipment. These expenditures are necessary for our 5G Network Deployment as well as to operate and maintain our DISH TV services. Consequently, we consider them to be non-discretionary.

Our capital expenditures vary depending on, among other things, the number of satellites leased or under construction at any point in time and could increase materially as a result of increased competition, significant satellite failures, or economic weakness and uncertainty. Our DISH TV subscriber base has been declining and there can be no assurance that our DISH TV subscriber base will not continue to decline and that the pace of such decline will not accelerate. In the event that our DISH TV subscriber base continues to decline, it will have a material adverse long-term effect on our cash flow.

On November 15, 2021 the SNR Put Right was exercised. On October 21, 2022 the Northstar Put Right was exercised. As of March 31, 2023, the aggregate value of Northstar Manager's ownership interest in Northstar Spectrum and SNR Management's ownership interest in SNR HoldCo was $485 million, recorded as "Redeemable noncontrolling interests" on our Condensed Consolidated Balance Sheets.

We have and expect to continue to incur significant expenditures in 2023 related to our 5G Network Deployment, including, but not limited to, capital expenditures associated with our 5G Network Deployment, and the potential purchase of additional wireless spectrum licenses, including, but not limited to, Northstar Spectrum and SNR HoldCo's ownership interests. The amount of capital required will also depend on, among other things, the levels of investment necessary to support potential strategic initiatives that may arise from time to time. These factors, including, but not limited to, a reduction in our available future cash flows as a result of our 5G Network Deployment, will require us to raise additional capital in the future, which may not be available on favorable terms.

Volatility in the financial markets has made it more difficult at times for issuers of high-yield indebtedness, such as us, to access capital markets at favorable terms. These developments may have a significant effect on our cost of financing and our liquidity position.

Wireless – 5G Network Deployment

See Note 10 in the Notes to our Condensed Consolidated Financial Statements for further information.

Availability of Credit and Effect on Liquidity

The ability to raise capital has generally existed for us despite economic weakness and uncertainty. While modest fluctuations in the cost of capital will not likely impact our current operational plans, significant fluctuations could have a material adverse effect on our business, results of operations and financial condition.

Debt Issuances and Maturity

Our 5% Senior Notes due 2023 with an aggregate principal balance of $1.5 billion were repurchased or redeemed as of March 15, 2023.

Our 2 3/8% Convertible Notes due in 2024 with an aggregate principal balance of $1.0 billion mature on March 15, 2024. Due to capital expenditures related to our 5G Network Deployment, among other things, we do not currently have cash, marketable investment securities balances and/or projected future cash flows to fully fund this obligation. We will raise additional capital prior to the maturity of this obligation, which may not be available at the historical interest rates of our long-term debt due to, among other things, the current market rate environment.

New Accounting Pronouncements

See Note 2 in the Notes to our Condensed Consolidated Financial Statements for further information.

Item 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

There have been no material changes in our market risk during the three months ended March 31, 2023. For additional information, see Item 7A. Quantitative and Qualitative Disclosures About Market Risk in Part II of our Annual Report on Form 10-K for the year ended December 31, 2022.

Item 4. CONTROLS AND PROCEDURES

Conclusion regarding disclosure controls and procedures

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we evaluated the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934) as of the end of the period covered by this report. Based upon that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of the end of the period covered by this report.

Changes in internal control over financial reporting

There has been no change in our internal control over financial reporting (as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934) during our most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II — OTHER INFORMATION

Item 1. LEGAL PROCEEDINGS

See Note 10 "*Commitments and Contingencies – Litigation*" in the Notes to our Condensed Consolidated Financial Statements for information regarding certain legal proceedings in which we are involved.

Item 1A. RISK FACTORS

Item 1A, "Risk Factors," of our Annual Report on Form 10-K for the year ended December 31, 2022 includes a detailed discussion of our risk factors. The information presented below updates, and should be read in conjunction with, the risk factors and information disclosed in our Annual Report on Form 10-K for the year ended December 31, 2022.

We have experienced and may continue to experience cyber-attacks or other malicious activities that disrupted or may continue to disrupt our business and any future failure or disruption of our information technology infrastructure and communications systems or those of third parties that we use in our operations, could harm our business.

In February 2023, we disclosed that our systems were subject to a cyber-security incident that compromised certain data. The services of cyber-security experts and outside advisors were retained to assist in the evaluation of the situation. We determined that the outage was due to a cyber-security incident and notified appropriate law enforcement authorities. We are incurring certain cyber-security-related expenses, including, but not limited to, costs to remediate the incident and provide additional customer support. We do not expect to incur material expenses in future periods resulting from the cyber-security incident.

We are subject to persistent cyber-security incidents and threats to our networks and systems. Although we take protective measures designed to secure our information technology systems and endeavor to modify such protective measures as circumstances warrant, our information technology hardware and software infrastructure and communications systems, or those of third parties that we use in our operations, may be vulnerable to a variety of interruptions, including, without limitation, natural disasters, terrorist attacks, telecommunications failures, cyber-attacks and other malicious activities such as unauthorized access, physical or electronic break-ins, misuse, computer viruses or other malicious code, computer denial of service attacks and other events that could disrupt or harm our business. The protective measures we take may not be sufficient for all eventualities and may themselves be vulnerable to hacking, malfeasance, system error or other irregularities. For example, certain parties may attempt to fraudulently induce employees or subscribers into disclosing usernames, passwords or other sensitive information, which may in turn be used to access our information technology systems.

In addition, the capacity, reliability and security of our information technology hardware and software infrastructure (including, but not limited to, our billing systems) and communications systems, or those of third parties that we use in our operations, are important to the operation of our business, which would suffer in the event of system failures or cyber-attacks. Likewise, our ability to expand and update our information technology infrastructure in response to our growth and changing needs is important to the continued implementation of our new service offering initiatives. Our inability to expand or upgrade our technology infrastructure could have adverse consequences, which could include, among other things, the delayed implementation of new service offerings, service or billing interruptions, and the diversion of resources that would otherwise be invested in expanding our business and operations. We rely on certain third parties for key components of our information technology and communications systems and ongoing service, all of which affect our Pay-TV and Wireless services. Some of our key systems and operations, including, but not limited to, those supplied by third-party providers, are not fully redundant, and our disaster recovery planning cannot account for all eventualities. Interruption and/or failure of these systems has in the past disrupted our operations, and could interrupt our services, result in significant financial expenditures and damage our reputation, thus adversely impacting our ability to retain our current subscribers and attract new Pay-TV and Wireless subscribers.

In addition, third-party providers of some of our key systems may also experience interruptions to their information technology hardware and software infrastructure and communications systems that could adversely impact us and over which we may have limited or no control. We may obtain certain confidential, proprietary and personal information about our subscribers, personnel and vendors, and may provide this information to third parties in connection with our business. If one or more of such interruptions or failures occur to us or our third-party providers, it potentially could jeopardize such information and other information processed and stored in, and transmitted through, our or our third-party providers' information technology hardware and software infrastructure and communications systems, or otherwise cause interruptions or malfunctions in our operations, which could result in, among other things, lawsuits, government claims, investigations or proceedings, significant losses or reputational damage. Due to the fast-moving pace of technology, it may be difficult to detect, contain and remediate every such event in a timely manner or at all. We may be required to expend significant additional resources to modify our protective measures or to investigate and remediate vulnerabilities or other exposures, and we may be subject to financial losses. In addition, this may divert management's attention and resources away from our business, therefore adversely affect our business. Furthermore, the amount and scope of insurance we maintain may not cover all expenses related to such activities or all types of claims that may arise.

As a result of the increasing awareness concerning the importance of safeguarding personal information, the potential misuse of such information and legislation that has been adopted or is being considered regarding the protection, privacy and security of personal information, the potential liability associated with information-related risks is increasing, particularly for businesses like ours that handle personal subscriber data. The occurrence of any network or information system related events or security breaches could have a material adverse effect on our reputation, business, financial condition and results of operations. Significant incidents could result in a disruption of our operations, subscriber dissatisfaction, damage to our reputation or a loss of subscribers and revenues.

We cannot provide any assurances that actions taken by us, or our third-party providers, will adequately repel a future cyber-security incident or prevent or substantially mitigate the impacts of cyber-security breaches or misuses of or unauthorized access to our networks or systems or those of third-party environments, or that we, or our third-party providers, will be able to effectively identify, investigate, and remediate such incidents in a timely manner or at all. We expect to continue to be the target of cyber-security incidents, given the nature of our business, and we expect the same with respect to our third-party providers. If we fail to protect confidential information or to prevent operational disruptions from future cyber-security incidents, there may be a material adverse effect on our business, reputation, financial condition, cash flows, and operating results.

Item 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

Issuer Purchases of Equity Securities

The following table provides information regarding repurchases of our Class A common stock from January 1, 2023 through March 31, 2023:

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Programs	Maximum Approximate Dollar Value of Shares that May Yet be Purchased Under the Programs (1)
		(In thousands, except share data)		
January 1, 2023 - January 31, 2023	—	$ —	—	$ 1,000,000
February 1, 2023 - February 28, 2023	—	$ —	—	$ 1,000,000
March 1, 2023 - March 31, 2023	—	$ —	—	$ 1,000,000
Total	—	$ —	—	$ 1,000,000

(1) On October 21, 2022, our Board of Directors authorized stock repurchases of up to $1.0 billion of our outstanding Class A common stock through and including December 31, 2023. Purchases under our repurchase program may be made through open market purchases, privately negotiated transactions, or Rule 10b5-1 trading plans, subject to market conditions and other factors. We may elect not to purchase the maximum amount of shares allowable under this program and we may also enter into additional share repurchase programs authorized by our Board of Directors.

Item 6. EXHIBITS

(a) *Exhibits.*

31.1☐	Section 302 Certification of Chief Executive Officer.
31.2☐	Section 302 Certification of Chief Financial Officer.
32.1☐	Section 906 Certification of Chief Executive Officer.
32.2☐	Section 906 Certification of Chief Financial Officer.
101☐	The following materials from the Quarterly Report on Form 10-Q of DISH Network for the quarter ended March 31, 2023 filed on May 8, 2023, formatted in Inline eXtensible Business Reporting Language (“iXBRL”): (i) Condensed Consolidated Balance Sheets, (ii) Condensed Consolidated Statements of Operations and Comprehensive Income (Loss), (iii) Condensed Consolidated Statements of Changes in Stockholders’ Equity (Deficit), (iv) Condensed Consolidated Statements of Cash Flows and (v) related notes to these financial statements.
104☐	Cover Page Interactive Data File (the cover page XBRL tags are embedded in the Inline XBRL document).

☐ Filed herewith

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

DISH NETWORK CORPORATION

By: /s/ *W. Erik Carlson*
W. Erik Carlson
President and Chief Executive Officer
(Duly Authorized Officer)

By: */s/ Paul W. Orban*
Paul W. Orban
Executive Vice President and Chief Financial Officer
(Principal Financial Officer)

By: */s/ James S. Allen*
James S. Allen
Senior Vice President and Chief Accounting Officer
(Principal Accounting Officer)

Date: May 8, 2023

EXHIBIT 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
Section 302 Certification

I, W. Erik Carlson, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of DISH Network Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant’s other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant’s other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: May 8, 2023

/s/ W. Erik Carlson
President and Chief Executive Officer

EXHIBIT 31.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER
Section 302 Certification

I, Paul W. Orban, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of DISH Network Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 8, 2023

/s/ Paul W. Orban
Executive Vice President and Chief Financial Officer

EXHIBIT 32.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
Section 906 Certification

Pursuant to 18 U.S.C. § 1350, the undersigned officer of DISH Network Corporation (the "Company") hereby certifies that to the best of his knowledge the Company's Quarterly Report on Form 10-Q for the three months ended March 31, 2023 (the "Report") fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934 and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: May 8, 2023

Name: */s/ W. Erik Carlson*

Title: President and Chief Executive Officer

The foregoing certification is being furnished solely pursuant to 18 U.S.C. § 1350 and is not being filed as part of the Report or as a separate disclosure document.

A signed original of this written statement required by Section 906, or other document authenticating, acknowledging, or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

EXHIBIT 32.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER
Section 906 Certification

Pursuant to 18 U.S.C. § 1350, the undersigned officer of DISH Network Corporation (the "Company") hereby certifies that to the best of his knowledge the Company's Quarterly Report on Form 10-Q for the three months ended March 31, 2023 (the "Report") fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934 and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: May 8, 2023

Name: */s/ Paul W. Orban*

Title: Executive Vice President and Chief Financial Officer

The foregoing certification is being furnished solely pursuant to 18 U.S.C. § 1350 and is not being filed as part of the Report or as a separate disclosure document.

A signed original of this written statement required by Section 906, or other document authenticating, acknowledging, or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.