Novelis Corporation

Financial Statements and Related Notes As of March 31, 2021

(Unaudited)

Table of Contents

	Page Number
CERTIFICATION	2
STATEMENT OF OPERATIONS (UNAUDITED)	3
STATEMENT OF COMPREHENSIVE (LOSS) INCOME (UNAUDITED)	4
BALANCE SHEET (UNAUDITED)	5
STATEMENT OF CASH FLOWS (UNAUDITED)	6
STATEMENT OF SHAREHOLDER'S EQUITY (UNAUDITED)	7
NOTES TO THE FINANCIAL STATEMENTS	8
Note 1 — Business and Summary of Significant Accounting Policies	8
Note 2 — Revenue	18
Note 3 — Restructuring and Impairment	19
Note 4 — Accounts Receivable	20
Note 5 — Inventories	21
Note 6 — Property, Plant and Equipment	22
Note 7 — Goodwill and Intangible Assets	23
Note 8 — Investments in Subsidiaries and Related Party Transactions	24
Note 9 - Leases	25
Note 10 — Accrued Expenses and Other Current Liabilities	27
Note 11 — Debt	28
Note 12 — Share-Based Compensation	30
Note 13 — Postretirement Benefit Plans	33
Note 14 — Currency Losses (Gains)	38
Note 15 — Financial Instruments and Commodity Contracts	39
Note 16 — Accumulated Other Comprehensive Loss	41
Note 17 — Fair Value Measurements	42
Note 18 — Other Expense (Income)	44
Note 19 — Income Taxes	45
Note 20 — Commitments and Contingencies	47

Novelis Corporation

CERTIFICATION

I, Stephanie Rauls, have reviewed the attached unaudited standalone financial statements for Novelis Corporation and certify that the information included therein accurately reflects the financial position of Novelis Corporation as of March 31, 2021 and the results of its operations for the year then ended.

By: Stephanie Rauls
Name: Stephanie Rauls
Title: Chief Accounting Officer & Controller
May 18, 2021

Novelis Corporation
STATEMENT OF OPERATIONS (unaudited)
(in millions)

	Year Ended March 31,	
	2021	**2020**
Net sales:		
— third parties	$ 3,568	$ 3,936
— related parties	458	495
Total net sales	$ 4,026	$ 4,431
Cost of goods sold, including related parties (exclusive of depreciation and amortization)	3,278	3,733
Selling, general and administrative expenses	174	204
Depreciation and amortization	150	146
Research and development expenses	62	71
Interest expense		
— third parties	159	157
— related parties	35	37
Loss on early extinguishment of debt	—	65
Gain on assets held for sale	—	—
Gain on change in fair value of derivative instruments, net	117	(83)
Restructuring and impairment, net	1	4
Other income, net	(15)	(64)
	$ 3,961	$ 4,270
Income before income taxes	65	161
Income tax provision (benefit)	19	36
Net income	$ 46	$ 125

See accompanying notes to financial statements.

Novelis Corporation
STATEMENT OF COMPREHENSIVE INCOME (unaudited)
(in millions)

	Year Ended March 31,	
	2021	**2020**
Net income	$ 46	$ 125
Other comprehensive income (loss):		
Currency translation adjustment	37	(11)
Change in pension and other benefits, net	142	(47)
Other comprehensive income before income tax effect	$ 179	$ (58)
Income tax (benefit) provision related to items of other comprehensive income	34	(11)
Other comprehensive income (loss), net of tax	$ 145	$ (47)
Comprehensive income	$ 191	$ 78

See accompanying notes to financial statements.

Novelis Corporation
BALANCE SHEET (unaudited)
(in millions, except number of shares)

	March 31,	
	2021	**2020**
ASSETS		
Current assets		
Cash and cash equivalents	$ 13	$ 1,505
Accounts receivable, net		
— third parties	307	222
— related parties	292	177
Inventories	610	487
Prepaid expenses and other current assets	26	28
Fair value of derivative instruments	93	82
Total current assets	$ 1,341	$ 2,501
Property, plant and equipment, net	1,332	1,294
Goodwill	275	275
Intangible assets, net	126	161
Other long–term assets	1,397	656
Total assets	$ 4,471	$ 4,887
LIABILITIES AND EQUITY (DEFICIT)		
Current liabilities		
Current portion of long–term debt	$ 197	$ —
Short–term borrowings		
— third parties	89	—
— related parties	184	984
Accounts payable		
— third parties	768	472
— related parties	78	109
Fair value of derivative instruments	144	47
Accrued expenses and other current liabilities		
— third parties	171	145
— related parties	3	61
Total current liabilities	$ 1,634	$ 1,818
Long–term debt, net of current portion		
— third parties	3,059	3,052
— related parties	183	457
Deferred income tax liabilities	139	147
Accrued postretirement benefits	99	257
Other long–term liabilities	50	40
Total liabilities	$ 5,164	$ 5,771
Commitments and contingencies		
Shareholder's deficit		
Common stock, $0.01 par value; 10,000 common shares authorized; 4,945 shares issued and outstanding as of March 31, 2021 and 2020	—	—
Additional paid–in capital	—	—
Accumulated deficit	(738)	(784)
Accumulated other comprehensive income (loss)	45	(100)
Total shareholder's deficit	$ (693)	$ (884)
Total liabilities and deficit	$ 4,471	$ 4,887

See accompanying notes to financial statements.

Novelis Corporation
STATEMENT OF CASH FLOWS (unaudited)
(in millions)

	Year Ended March 31,	
	2021	**2020**
OPERATING ACTIVITIES		
Net income	$ 46	$ 125
Adjustments to determine net cash provided by operating activities:		
Depreciation and amortization	150	146
Loss (gain) on unrealized derivatives and undesignated realized derivatives in investing activities, net	117	—
Loss on sale of assets	4	2
Non-cash impairment charges	1	4
Loss on extinguishment of debt	—	65
Deferred income taxes	(39)	18
Amortization of debt issuance costs and carrying value adjustment	6	4
Other, net	—	1
Changes in assets and liabilities including assets and liabilities held for sale (net of effects from divestitures):		
Accounts receivable	(199)	81
Inventories	(123)	32
Accounts payable	276	(30)
Other current assets	2	(13)
Other current liabilities	(32)	22
Other noncurrent assets	(727)	(136)
Other noncurrent liabilities	(17)	1
Net cash provided by operating activities	$ (535)	$ 322
INVESTING ACTIVITIES		
Capital expenditures	(169)	(322)
Inflows (outflows) from settlement of other undesignated derivative instruments, net	(37)	(28)
Net cash used in investing activities	$ (206)	$ (350)
FINANCING ACTIVITIES		
Proceeds from issuance of long-term and short-term borrowings	89	1,603
Inflows from issuance of debt, related parties	189	—
Principal payments of long-term and short-term borrowings, net		(1,204)
Principal payments of long-term borrowings, related parties	(266)	—
Short-term borrowings, related parties	(800)	981
Debt issuance costs		(32)
Net cash provided by (used in) financing activities	$ (788)	$ 1,348
Net increase (decrease) in cash and cash equivalents	(1,529)	1,320
Effect of exchange rate changes on cash	37	(12)
Cash and cash equivalents — beginning of period	1,505	197
Cash and cash equivalents — end of period	$ 13	$ 1,505
Supplemental Disclosures:		
Interest paid	$ 249	$ 164
Income taxes paid	—	27
Accrued capital expenditures as of March 31	24	35

See accompanying notes to financial statements.

Novelis Corporation
STATEMENT OF SHAREHOLDER'S EQUITY (unaudited)
(in millions, except number of shares)

	Preferred Shares		Common Shares					
	Shares	Amount	Shares	Amount	Additional Paid-in Capital	Retained Earnings (Accumulated Deficit)	Accumulated Other Comprehensive Loss (AOCI)	Total Equity
Balance as of March 31, 2019	10,000	—	4,945	—	—	(909)	(53)	(962)
Net income	—	—	—	—	—	125	—	125
Currency translation adjustment, net of tax in AOCI	—	—	—	—	—	—	(11)	(11)
Change in pension and other benefits, net of tax provision of $9 million included in AOCI	—	—	—	—	—	—	(36)	(36)
Balance as of March 31, 2020	10,000	—	4,945	—	—	(784)	(100)	(884)
Net income	—	—	—	—	—	46	—	46
Currency translation adjustment, net of tax in AOCI	—	—	—	—	—	—	37	37
Change in pension and other benefits, net of tax provision of $5 million included in AOCI	—	—	—	—	—	—	108	108
Balance as of March 31, 2021	10,000	$ —	4,945	$ —	$ —	$ (738)	$ 45	$ (693)

See accompanying notes to financial statements.

1. BUSINESS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

References herein to the "Company," "we," "our," or "us" refer to Novelis Corporation unless the context specifically indicates otherwise.

Organization and Description of Business

Novelis Corporation was formed in the United States of America on January 1, 2005. All of Novelis Corporation's common shares are directly held by Novelis Holdings, Inc. All of Novelis Corporation's preferred shares were directly held by Novelis Inc. (Canada). All of Novelis Holdings Inc.'s shares are directly held by Novelis Inc. (Canada). The Company's functional and reporting currency is United States Dollar (USD).

Included within Novelis Corporation are manufacturing facilities that produce aluminum sheet and light gauge products for use in the packaging market, which includes beverage, food can and foil products, as well as for use in the automotive, transportation, electronics, architectural and industrial product markets. We also have recycling operations in many of our plants to recycle post-consumer aluminum, such as used beverage cans (UBCs), and post-industrial aluminum, such as class scrap, mostly for other Novelis Inc. owned entities.

Locations	Plant Processes	Major Products
Ashville, Ohio	Coating and finishing	Coated coil for specialties
Berea, Kentucky	Recycling and sheet ingot casting	Sheet ingot from recycled metal for can body and can end stock
Buckhannon, West Virginia	Cold rolling and finishing	Mill finish coil and light-gauge sheet for specialties
Clayton, New Jersey	Cold rolling and finishing	Foil and light-gauge coiled sheet for specialties
Davenport, Iowa(1)	Casting, hot rolling, and recycling	Hot rolled coil from recycled material
Davenport, Iowa(1)	Cold rolling and finishing	Painted coil and mill finish coil
Fairmont, West Virginia	Cold rolling and finishing	Aluminum sheet and light-gauge foil for specialties
Greensboro, Georgia	Recycling and sheet ingot casting	Sheet ingot from recycled metal for can body and can end stock
Guthrie, Kentucky(2)	Pre-treatment and heat treatment	Automotive sheet
Kingston, Ontario	Cold rolling and finishing	Automotive sheet and specialty material
Lincolnshire, Illinois	Cold rolling and finishing	Mill finish coil
Oswego, New York	Sheet ingot casting, hot rolling, cold rolling, recycling, and finishing	Can stock, automotive sheet, construction sheet, industrial sheet, and painted sheet
Richmond, Virginia	Pellet casting, hot rolling, cold rolling, finishing, and recycling	Mill finish sheet for building and construction
Russellville, Kentucky(3)	Sheet ingot casting, hot rolling, cold rolling, finishing, and recycling	Can stock and aluminum sheet and coil for specialties
Terre Haute, Indiana	Cold rolling and finishing	Foil stock for specialties
Uhrichsville, Ohio	Casting, hot rolling, cold rolling, finishing, and recycling	Transportation sheet and aluminum sheet for specialties
Warren, Ohio	Coating and finishing	Coated can sheet

(1) The Company operates two separate facilities in Davenport, Iowa, one finishing mill and one casting facility.
(2) In January 2018, we announced a greenfield expansion to be located in Guthrie, Kentucky that would include heat treatment and pre-treatment lines for automotive sheet finishing. The first customer coils were shipped from the Guthrie facility in fiscal 2021. Customer qualifications will continue into fiscal 2022, and production at this facility is expected to increase in the coming fiscal year.
(3) Logan Aluminum Inc. (Logan) is operated as a joint venture between Novelis and Tri-Arrows Aluminum Inc. (Tri- Arrows). We own 40% of the outstanding common shares of Logan.

Use of Estimates and Assumptions

The preparation of our financial statements in conformity with accounting principles generally accepted in the United States of America (U.S. GAAP) requires us to make estimates and assumptions. These estimates and assumptions affect the reported amounts of assets and liabilities and the disclosures of contingent assets and liabilities as of the date of the financial statements, and the reported amounts of revenues and expenses during the reporting periods. The principal areas of judgment relate to (1) the fair value of derivative financial instruments; (2) impairment of goodwill; (3) impairment of long lived assets and other intangible assets; (4) impairment and assessment of consolidation of equity investments; (5) actuarial assumptions related to pension and other postretirement benefit plans; (6) tax uncertainties and valuation allowances; and (7) assessment of loss contingencies, including environmental and litigation liabilities. Future events and their effects cannot be predicted with certainty, and accordingly, our accounting estimates require the exercise of judgment. The accounting estimates used in the preparation of our financial statements may change as new events occur, as more experience is acquired, as additional information is obtained and as our operating environment changes. We evaluate and update our assumptions and estimates on an ongoing basis and may employ outside experts to assist in our evaluations. Actual results could differ from the estimates we have used.

Basis of Presentation

These financial statements have been prepared to satisfy the reporting requirements of the ultimate parent company, Hindalco Industries Limited, for the sole purpose of complying with the Companies Act, 2013 (“The 2013 Act”). In accordance with Sections 136 and 137 of The 2013 Act, it is required to present separate subsidiary financial statements, and Section 137 further requires entities with foreign subsidiaries to submit individual financial statements of such foreign subsidiaries along with its own standalone and financial statements. Thus, the results of the Company's separate financial statements are included in the financial statements of our direct parent, Novelis Inc. and our ultimate parent, Hindalco Industries Limited, and those financial statements are publicly available.

U.S. GAAP requires that wholly-owned subsidiaries, majority-owned subsidiaries over which we exercise control, entities in which we have a controlling financial interest and entities for which we are deemed to be the primary beneficiary be consolidated. The books and records of Novelis Corporation are prepared and recorded under U.S. GAAP. Accordingly, we have presented these financial statements on a standalone unconsolidated basis, which is a deviation from U.S. GAAP as it is not feasibly possible to present these statements in another basis of accounting other than books and records of the subsidiary. Otherwise, these separate financial statements are prepared in accordance with U.S. GAAP. These statements have not been audited, as there is no local jurisdictional requirement to present audited standalone subsidiary financial statements. When applicable, Investments in subsidiaries are presented using the cost method.

Revision of Previously Issued Financial Statements

During the preparation of the condensed consolidated financial statements for the period ended September 30, 2020, we identified a misstatement related to the calculation of accrued capital expenditures within the statement of cash flows in our previously issued Form 10-Ks for the year ended March 31, 2020 and the interim periods within these years. As a result, the previously reported amounts for capital expenditures were understated by $11 million, changes in accounts payable were overstated by $11 million, and accrued capital expenditures, presented in supplemental disclosures, were overstated by $44 million for the year ended March 31, 2020.

Risks and Uncertainties

We are exposed to a number of risks in the normal course of our operations that could potentially affect our financial position, results of operations, and cash flows.

Laws and regulations

We operate in an industry that is subject to a broad range of environmental, health and safety laws and regulations in the jurisdictions in which we operate. These laws and regulations impose increasingly stringent environmental, health and safety protection standards and permitting requirements regarding, among other things, air emissions, wastewater storage, treatment and discharges, the use and handling of hazardous or toxic materials, waste disposal practices, the remediation of environmental contamination, post-mining reclamation and working conditions for our employees. Some environmental laws, such as the U.S. Comprehensive Environmental Response, Compensation, and Liability Act, also known as CERCLA or Superfund, and comparable state laws, impose joint and several liability for the cost of environmental remediation, natural resource damages, third party claims, and other expenses, without regard to the fault or the legality of the original conduct.

The costs of complying with these laws and regulations, including participation in assessments and remediation of contaminated sites and installation of pollution control facilities, have been, and in the future could be, significant. In addition, these laws and regulations may also result in substantial environmental liabilities associated with divested assets, third party locations and past activities. In certain instances, these costs and liabilities, as well as related action to be taken by us, could be accelerated or increased if we were to close, divest of or change the principal use of certain facilities with respect to which we may have environmental liabilities or remediation obligations. Currently, we are involved in a number of compliance efforts, remediation activities and legal proceedings concerning environmental matters, including certain activities and proceedings arising under U.S. Superfund and comparable laws in other jurisdictions where we have operations.

We have established liabilities for environmental remediation where appropriate. However, the cost of addressing environmental matters (including the timing of any charges related thereto) cannot be predicted with certainty, and these liabilities may not ultimately be adequate, especially in light of potential changes in environmental conditions, changing interpretations of laws and regulations by regulators and courts, the discovery of previously unknown environmental conditions, the risk of governmental orders to carry out additional compliance on certain sites not initially included in remediation in progress, our potential liability to remediate sites for which provisions have not been previously established and the adoption of more stringent environmental laws. Such future developments could result in increased environmental costs and liabilities and could require significant capital expenditures, any of which could have a material adverse effect on our financial position or results of operations, or cash flows. Furthermore, the failure to comply with our obligations under the environmental laws and regulations could subject us to administrative, civil or criminal penalties, obligations to pay damages or other costs, and injunctions or other orders, including orders to cease operations. In addition, the presence of environmental contamination at our properties could adversely affect our ability to sell a property, receive full value for a property or use a property as collateral for a loan.

Some of our current and potential operations are located or could be located in or near communities that may regard such operations as having a detrimental effect on their social and economic circumstances. Environmental laws typically provide for participation in permitting decisions, site remediation decisions and other matters. Concern about environmental justice issues may affect our operations. Should such community objections be presented to government officials, the consequences of such a development may have a material adverse impact upon the profitability or, in extreme cases, the viability of an operation. In addition, such developments may adversely affect our ability to expand or enter into new operations in such location or elsewhere and may also have an effect on the cost of our environmental remediation projects.

Materials and labor

In the aluminum rolled products industry, our raw materials are subject to continuous price volatility. We may not be able to pass on the entire cost of the increases to our customers or offset fully the effects of higher raw material costs through productivity improvements, which may cause our profitability to decline. In addition, there is a potential time lag between changes in prices under our purchase contracts and the point when we can implement a corresponding change under our sales contracts with our customers. As a result, we could be exposed to fluctuations in raw materials prices which could have a material adverse effect on our financial position, results of operations, and cash flows. Significant price increases may result in our customers substituting other materials, such as plastic or glass, for aluminum or switching to another aluminum rolled products producer, which could have a material adverse effect on our financial position, results of operations, and cash flows.

We consume substantial amounts of energy in our rolling operations and our cast house operations. The factors that affect our energy costs and supply reliability tend to be specific to each of our facilities. A number of factors could materially adversely affect our energy position including, but not limited to: (a) increases in the cost of natural gas; (b) increases in the cost of supplied electricity or fuel oil related to transportation; (c) interruptions in energy supply due to equipment failure or other causes and (d) the inability to extend energy supply contracts upon expiration on favorable terms. A significant increase in energy costs or disruption of energy supplies or supply arrangements could have a material adverse effect on our financial position, results of operations, and cash flows.

A substantial portion of our employees are represented by labor unions under a large number of collective bargaining agreements with varying durations and expiration dates. Although we have not experienced a strike or work stoppage in recent years, we may not be successful in preventing such an event from occurring in the future at one or more of our manufacturing facilities. In addition, we may not be able to satisfactorily renegotiate our collective bargaining agreements when they expire. Any work stoppages or material changes in the terms of our labor agreements could have an adverse impact on our financial condition.

Other risk and uncertainties

In addition, refer to Note 17 — Fair Value Measurements and Note 20 — Commitments and Contingencies for a discussion of financial instruments and commitments and contingencies.

Cost of Goods Sold, including related parties (Exclusive of Depreciation and Amortization)

"Cost of goods sold, including related parties (exclusive of depreciation and amortization)" includes all costs associated with inventories, including the procurement of materials, the conversion of such materials into finished product, and the costs of warehousing and distributing finished goods to customers. Material procurement costs include inbound freight charges as well as purchasing, receiving, inspection and storage costs. Conversion costs include the costs of direct production inputs such as labor and energy, as well as allocated overheads from indirect production centers and plant administrative support areas. Warehousing and distribution expenses include inside and outside.

Selling, General and Administrative Expenses

"Selling, general and administrative expenses" include selling, marketing and advertising expenses; salaries, travel and office expenses of administrative employees and contractors; legal and professional fees and software license fees.

Research and Development

We incur costs in connection with research and development programs that are expected to contribute to future earnings, and charge such costs against income as incurred. Research and development costs consist primarily of salaries and administrative costs.

Restructuring Activities

Restructuring charges, which are recorded within "Restructuring and impairment, net" in our statement of operations, include employee severance and benefit costs, impairments of assets, and other costs associated with exit activities. We apply the provisions of ASC 420, Exit or Disposal Cost Obligations (ASC 420). Severance costs accounted for under ASC 420 are recognized when management with the proper level of authority has committed to a restructuring plan and communicated those actions to employees. Impairment losses are based upon the estimated fair value less costs to sell, with fair value estimated based on existing market prices for similar assets. Other exit costs include environmental remediation costs and contract termination costs, primarily related to equipment and facility lease obligations. At each reporting date, we evaluate the accruals for restructuring costs to ensure the accruals are still appropriate. See Note 3 — Restructuring and Impairment for further discussion.

Cash and Cash Equivalents

"Cash and cash equivalents" includes investments that are highly liquid and have maturities of three months or less when purchased. The carrying values of cash and cash equivalents approximate their fair value due to the short-term nature of these instruments.

We maintain amounts on deposit with various financial institutions, which may, at times, exceed federally insured limits. However, management periodically evaluates the credit-worthiness of those institutions, and we have not experienced any losses on such deposits.

Accounts Receivable

Our accounts receivable are geographically dispersed. We do not obtain collateral relating to our accounts receivable. We do not believe there are any significant concentrations of revenues from any particular customer or group of customers that would subject us to any significant credit risks in the collection of our accounts receivable. We report accounts receivable at the estimated net realizable amount we expect to collect from our customers.

Additions to the allowance for credit losses are made by means of the provision for credit losses. We write-off uncollectible accounts receivable against the allowance for credit losses after exhausting collection efforts. For each of the periods presented, we performed an analysis of our historical cash collection patterns and considered the impact of any known material events in determining the allowance for credit losses. See Note 4 — Accounts Receivable for further discussion

Derivative Instruments

We hold derivatives for risk management purposes and not for trading. We use derivatives to mitigate uncertainty and volatility caused by underlying exposures to aluminum prices, foreign exchange rates, and energy prices. The fair values of all derivative instruments are recognized as assets or liabilities at the balance sheet date and are reported gross.

We may be exposed to losses in the future if the counterparties to our derivative contracts fail to perform. We are satisfied that the risk of such non-performance is remote due to our monitoring of credit exposures. Additionally, we enter into master netting agreements with contractual provisions that allow for netting of counterparty positions in case of default, and we do not face credit contingent provisions that would result in the posting of collateral.

We do not apply hedge accounting; therefore, all derivative gains or losses are recognized in "Loss on change in fair value of derivative instruments, net" in our statement of operations. We classify cash settlement amounts as part of investing activities in the statement of cash flows.

The majority of our derivative contracts are valued using industry-standard models that use observable market inputs as their basis, such as time value, forward interest rates, volatility factors, and current (spot) and forward market prices for foreign exchange rates. See Note 15 — Financial Instruments and Commodity Contracts and Note 17 — Fair Value Measurements for additional discussion related to derivative instruments.

Inventories

We carry our inventories at the lower of their cost or market value, reduced for obsolete and excess inventory. We use the average cost method to determine cost. Included in inventories are stores inventories, which are carried at cost; determined based on the first-in first-out method. See Note 5 — Inventories for further discussion.

Property, Plant and Equipment

We record land, buildings, leasehold improvements and machinery and equipment at cost. We record assets under capital lease obligations at the lower of their fair value or the present value of the aggregate future minimum lease payments as of the beginning of the lease term. We generally depreciate our assets using the straight-line method over the shorter of the estimated useful life of the assets or the lease term, excluding any lease renewals, unless the lease renewals are reasonably assured. See Note 6 — Property, Plant and Equipment for further discussion.

The ranges of estimated useful lives are as follows:

	Years
Buildings	30 to 40
Leasehold improvements	7 to 20
Machinery and equipment	2 to 25
Furniture, fixtures and equipment	3 to 10
Equipment under capital lease obligations	5 to 15

As noted above, our machinery and equipment have useful lives of 2 to 25 years. Most of our large scale machinery, cold mills, furnaces and finishing mills have useful lives of 15 to 25 years. Supporting machinery and equipment, including automation and work rolls, have useful lives of 2 to 15 years.

Maintenance and repairs of property and equipment are expensed as incurred. We capitalize replacements and improvements that increase the estimated useful life of an asset. We also capitalize construction costs and interest incurred while major construction and development projects are in progress. These amounts are capitalized as construction in progress within property, plant and equipment until the asset is placed into service. Once placed into service, the asset, including the associated capitalized interest, is reclassified from construction in progress to the appropriate property, plant and equipment component and depreciation commences.

We retain fully depreciated assets in property and accumulated depreciation accounts until they are removed from service. In the case of sale, retirement, or disposal, the asset cost and related accumulated depreciation balances are removed from the respective accounts, and the resulting net amount, after consideration of any proceeds, is included as a gain or loss in other expenses, net or gain on assets held for sale in our statements of operations.

We account for operating leases under the provisions of ASC 842, Leases. This pronouncement requires us to recognize escalating rents, including any rent holidays, on a straight-line basis over the term of the lease for those lease agreements where we receive the right to control the use of the entire leased property at the beginning of the lease term.

Goodwill

We test for impairment at least annually as of the last day of each fiscal year, unless a triggering event occurs that would require an interim impairment assessment. We do not aggregate components of operating segments to arrive at our reporting units and, as such, our reporting units are the same as our operating segments.

In performing our goodwill impairment test, we have the option to first assess qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not that the estimated fair value of a reporting unit is less than its carrying amount. If we perform a qualitative assessment and determine that an impairment is more likely than not, then we perform the one-step quantitative impairment test, otherwise no further analysis is required. We also may elect not to perform the qualitative assessment and, instead, proceed directly to the one-step quantitative impairment test.

The ultimate outcome of the goodwill impairment assessment will be the same whether we choose to perform the qualitative assessment or proceed directly to the one-step quantitative impairment test.

For the years ended March 31, 2021 and 2020 we elected to perform the one-step quantitative impairment test. No goodwill impairment was identified in any of the years. See Note 7 — Goodwill and Intangible Assets for further discussion.

We use the present value of estimated future cash flows to establish the estimated fair value of our reporting units as of the testing date. This approach includes many assumptions related to future growth rates, discount factors, and tax rates, among other considerations. Changes in economic and operating conditions impacting these assumptions could result in goodwill impairment in future periods. Additionally, we use the market approach to corroborate the estimated fair value. Both approaches are weighted equally when calculating our estimated fair value. If the carrying amount of a reporting unit's goodwill exceeds its estimated fair value, we would recognize an impairment charge in an amount equal to that excess in our statements of operations.

When a business within a reporting unit is disposed of, goodwill is allocated to the gain or loss on disposition using the relative fair value methodology.

Long-Lived Assets and Other Intangible Assets

We amortize the cost of intangible assets over their respective estimated useful lives to their estimated residual value. See Note 7 — Goodwill and Intangible Assets for further discussion.

We assess the recoverability of long-lived assets (excluding goodwill) and finite-lived intangible assets, whenever events or changes in circumstances indicate that we may not be able to recover the asset’s carrying amount. We measure the recoverability of assets to be held and used by a comparison of the carrying amount of the asset (groups) to the expected, undiscounted future net cash flows to be generated by that asset (groups), or, for identifiable intangible assets, by determining whether the amortization of the intangible asset balance over its remaining life can be recovered through undiscounted future cash flows. The amount of impairment of identifiable intangible assets is based on the present value of estimated future cash flows. We measure the amount of impairment of other long-lived assets and intangible assets (excluding goodwill) as the amount by which the carrying value of the asset exceeds the fair value of the asset, which is generally determined as the present value of estimated future cash flows or as the appraised value. Impairments of long-lived assets and intangible assets are included in restructuring and impairment, net in the statement of operations. See Note 3 — Restructuring and Impairment to our accompanying financial statements for discussion on impairments.

Investments in Subsidiaries

For purposes of these standalone financial statements, we account for our investments in subsidiaries using the cost method. See Note 8 — Investments in Subsidiaries and Related Party Transactions for further discussion.

Financing Costs

We amortize financing costs and premiums, and accrete discounts, over the remaining life of the related debt using the effective interest amortization method. The expense is included in “Interest expense and amortization of debt issuance costs” in our statement of operations. We record discounts or premiums as a direct deduction from, or addition to, the face amount of the financing.

Fair Value of Financial Instruments

ASC 820, Fair Value Measurements and Disclosures (ASC 820), defines fair value, establishes a framework for measuring fair value under U.S. GAAP, and expands disclosures about fair value measurements. ASC 820 also applies to measurements under other accounting pronouncements, such as ASC 825, Financial Instruments (ASC 825) that require or permit fair value measurements. ASC 825 requires disclosures of the fair value of financial instruments. Financial instruments we commonly encounter include: cash and cash equivalents; certificates of deposit; accounts receivable; accounts payable; foreign currency, energy and interest rate derivative instruments; cross-currency swaps; metal option and forward contracts; related party notes receivable and payable; letters of credit; short-term borrowings and long-term debt.

The carrying amounts of cash and cash equivalents, certificates of deposit, accounts receivable, accounts payable and current related party notes receivable, notes payable and related party debt approximate their fair value because of the short-term maturity and highly liquid nature of these instruments. The fair value of our letters of credit is deemed to be the amount of payment guaranteed on our behalf by third party financial institutions. We determine the fair value of our short-term borrowings and long-term debt based on various factors including maturity schedules, call features and current market rates. We also use quoted market prices, when available, or the present value of estimated future cash flows to determine fair value of short-term borrowings and long-term debt. When quoted market prices are not available for various types of financial instruments (such as currency, energy and interest rate derivative instruments, swaps, options and forward contracts), we use

standard pricing models with market-based inputs, which take into account the present value of estimated future cash flows. See Note 17 — Fair Value Measurements for further discussion.

Pensions and Postretirement Benefits

Our pension obligations relate to unfunded defined benefit pension plans in the U.S. Our other postretirement obligations include unfunded health care and life insurance benefits provided to retired employees in the U.S.

We account for our pensions and other postretirement benefits in accordance with ASC 715, *Compensation - Retirement Benefits* (ASC 715). We recognize the funded status of our benefit plans as a net asset or liability, with an offsetting adjustment to accumulated other comprehensive income in shareholder's (deficit) equity. The funded status is calculated as the difference between the fair value of plan assets and the benefit obligation. For the years ended March 31, 2021 and 2020, we used March 31 as the measurement date.

We use standard actuarial methods and assumptions to account for our pension and other postretirement benefit plans. Pension and postretirement benefit obligations are actuarially calculated using management's best estimates of the rate used to discount the future estimated liability, the long-term rate of return on plan assets, and several assumptions related to the employee workforce (compensation increases, health care cost trend rates, expected service period, retirement age, and mortality). Pension and postretirement benefit expense includes the actuarially computed cost of benefits earned during the current service period, the interest cost on accrued obligations, the expected return on plan assets based on fair market value and the straight-line amortization of net actuarial gains and losses and adjustments due to plan amendments, curtailments, and settlements. Net actuarial gains and losses are amortized over periods of 15 years or less, which represent the group's average future service life of the employees or the group's average life expectancy. See Note 13 — Postretirement Benefit Plans for further discussion.

Environmental Liabilities

We record accruals for environmental matters when it is probable that a liability has been incurred and the amount of the liability can be reasonably estimated, based on current law and existing technologies. We adjust these accruals periodically as assessment and remediation efforts progress or as additional technical or legal information becomes available. Accruals for environmental liabilities are stated at undiscounted amounts. Environmental liabilities are included in our balance sheets in "Accrued expenses and other current liabilities" and "Other long-term liabilities," depending on their short- or long-term nature. Any receivables for related insurance or other third party recoveries for environmental liabilities are recorded when it is probable that a recovery will be realized and are included in our balance sheets in "Prepaid expenses and other current assets."

Costs related to environmental matters are charged to expense. Estimated future incremental operations, maintenance and management costs directly related to remediation are accrued in the period in which such costs are determined to be probable and estimable. See Note 20 — Commitments and Contingencies for further discussion.

Litigation Contingencies

We accrue for loss contingencies associated with outstanding litigation, claims and assessments for which management has determined it is probable that a loss contingency exists and the amount of loss can be reasonably estimated. We expense professional fees associated with litigation claims and assessments as incurred. See Note 20 — Commitments and Contingencies for further discussion.

Income Taxes

We account for income taxes using the asset and liability method. This approach recognizes the amount of income taxes payable or refundable for the current year, as well as deferred tax assets and liabilities for the future tax consequence of events recognized in the financial statements and income tax returns. Deferred income tax assets and liabilities are adjusted to recognize the effects of changes in tax laws or enacted tax rates. Under ASC 740, Income Taxes ("ASC 740"), a valuation allowance is required when it is more likely than not that some portion of the deferred tax assets will not be realized. Realization is dependent on generating sufficient taxable income through various sources.

We record tax benefits related to uncertain tax positions taken or expected to be taken on a tax return when such benefits meet a more than likely than not threshold. Otherwise, these tax benefits are recorded when a tax position has been effectively settled, the statute of limitation has expired or the appropriate taxing authority has completed their examination. Interest and penalties related to uncertain tax positions are recognized as part of the provision for income taxes and are accrued beginning in the period that such interest and penalties would be applicable under relevant tax law until such time that the related tax benefits are recognized. See Note 19 — Income Taxes for further discussion.

We used the benefits-for-loss method of tax allocation so that net operating losses are characterized as realized (or realizable). Net operating losses (or other current or deferred tax attributes) are characterized as realized (or realizable) when those tax attributes are realized (or realizable) by the group of Novelis Holdings Inc. even if Novelis Corporation would not otherwise have realized the attributes on a stand-alone basis.

Share-Based Compensation

In accordance with ASC 718, Compensation - Stock Compensation (ASC 718), we recognize compensation expense for a share-based award over an employee's requisite service period based on the award's grant date fair value, subject to adjustment. Our share-based awards are settled in cash and are accounted for as liability based awards. As such, liabilities for awards under these plans are required to be measured at fair value at each reporting date until the date of settlement. See Note 12 — Share-Based Compensation for further discussion.

Foreign Currency Translation

The assets and liabilities of foreign operations, whose functional currency is other than the U.S. dollar are translated to U.S. dollars at the period end exchange rates and revenues and expenses are translated at average exchange rates for the period. Differences arising from this translation are included in the currency translation adjustment (CTA) component of AOCI and Noncontrolling Interest, both of which are on the balance sheet. If there is a planned or completed sale or liquidation of our ownership in a foreign operation, the relevant CTA is recognized in our standalone unconsolidated statement of operations.

For all operations, the monetary items denominated in currencies other than the functional currency are remeasured at period-end exchange rates and transaction gains and losses are included in "Other expenses, net" in our standalone unconsolidated statements of operations. Non-monetary items are remeasured at historical rates.

Operating Guarantees

We have issued guarantees on behalf of certain of Novelis Corporation's subsidiaries. The indebtedness guaranteed is for trade accounts payable to third parties. Some of the guarantees have annual terms while others have no expiration and have termination notice requirements. Neither we nor any of the other subsidiaries hold any assets of any third parties as collateral to offset the potential settlement of these guarantees.

Recently Adopted Accounting Standards

Standard	Adoption	Description	Disclosure Impact
Accounting Standards Update ("ASU") 2020-04, *Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting* along with additional technical improvements and clarifications since issued (Issued March 2020)	April 1, 2020	The standard provides transitional guidance and optional expedients and exceptions for applying U.S. GAAP to contract modifications and hedging relationships which reference LIBOR or another reference rate expected to be discontinued.	The Company has evaluated the impact of this standard, noting that there is no impact to our current contracts or hedging relationships. The Company will monitor the impact on future transactions through December 31, 2022.
ASU 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes* (Issued December 2019)	April 1, 2020	The standard simplifies the accounting for income taxes by eliminating certain exceptions in ASC 740 related to the methodology for calculating income taxes in an interim period. It also clarifies and simplifies other aspects of the accounting for income taxes, improving the consistent application and simplification of U.S. GAAP.	The Company elected to early adopt the standard on a prospective basis. The most significant impact to the Company is the removal of a limit on the tax benefit recognized on pre-tax losses in interim periods. The adoption of this standard removed the limit on the tax benefit recognized on pre-tax losses during an interim period, which allowed the Company to recognize a higher tax benefit in the first quarter than previously allowable.
ASU 2019-04, *Codification Improvements to Topic 326, Financial Instruments - Credit Losses, Topic 815, Derivatives and Hedging, and Topic 825, Financial Instruments*	April 1, 2020	The standard provides various codification updates and improvements to address comments received.	The adoption of this standard did not have a material impact on the financial statements or disclosures.
ASU 2018-17, *Consolidation (Topic 810): Targeted Improvements to Related Party Guidance for Variable Interest Entities* (Issued October 2018)	April 1, 2020	This standard eliminates the requirement that entities consider indirect interests held through related parties under common control in their entirety when assessing whether a decision-making fee is a variable interest. Instead, the reporting entity must consider such indirect interests on a proportionate basis.	The Company has evaluated the impact of this standard, noting that there is no impact to our current variable interests. We have updated our accounting policies to ensure appropriate treatment if these are entered into in the future. The adoption of this standard did not have a material impact on the financial statements or disclosures.
ASU 2018-15, *Intangibles—Goodwill and Other—Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract* (Issued August 2018)	April 1, 2020	This standard requires capitalization of implementation costs incurred in a hosting arrangement that is a service contract. This change will better align with requirements for capitalizing implementation costs incurred to develop or obtain internal-use software (and hosting arrangements that include an internal-use software license). The accounting for the service element of a hosting arrangement that is a service contract is not affected.	The Company has evaluated the impact of this standard, noting that we do not have these types of arrangements. We have updated our accounting policies to ensure appropriate treatment if these are entered into in the future. The adoption of this standard did not have a material impact on the financial statements or disclosures.

ASU 2018-14, *Compensation —Retirement Benefits— Defined Benefit Plans— General (Subtopic 715-20): Disclosure Framework— Changes to the Disclosure Requirements for Defined Benefit Plans* (Issued August 2018)	April 1, 2020	This standard added requirements for new disclosures such as requiring a narrative description of the reasons for significant gains and losses affecting the benefit obligation for the period and also an explanation of any other significant changes in the benefit obligation or plan assets that are not otherwise apparent in the other disclosures required by ASC 715. Further, the standard removes some currently required disclosures such as (a) the requirement (for public entities) to disclose the effects of a one-percentage-point change on the assumed health care costs and the effect of this change in rates on service cost, interest cost, and the benefit obligation for postretirement health care benefits and (b) the amounts in accumulated other comprehensive income expected to be recognized in net periodic benefit costs over the next fiscal year.	The Company has evaluated the impact of this standard. We have updated our pension and postretirement disclosure accordingly, which did not have a material impact on the financial statements.
ASU 2017-04, *Intangibles— Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment* (Issued January 2017)	April 1, 2020	This standard removes Step 2 from the goodwill impairment test. As amended, the goodwill impairment test will consist of one step comparing the fair value of a reporting unit with its carrying amount. Under the simplified model, a goodwill impairment is calculated as the difference between the carrying amount of the reporting unit and its fair value, but not to exceed the carrying amount of goodwill allocated to that reporting unit. This standard will need to be considered each time Novelis performs an assessment of goodwill for impairment under the quantitative test.	The Company has evaluated the impact of this standard. We have updated our goodwill impairment assessment process accordingly, which did not have a material impact on the financial statements.
ASU 2016-13, *Financial Instrument-Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments* along with additional technical improvements and clarifications since issued (Issued June 2016)	April 1, 2020	The standard provides financial statement users with more decision-useful information about expected credit losses on financial instruments and other commitments to extend credit held by a reporting entity at each reporting date. The current expected credit loss ("CECL") model requires the Company to measure all expected credit losses for financial instruments held at the reporting date based on historical experience, current conditions, and reasonable supportable forecasts.	We have updated our policies and processes for reserves against our financial instruments to factor in expected credit losses. This adoption did not have a material impact on the financial statements.
ASU 2018-18, *Collaborative Arrangements (Topic 808): Clarifying the interaction between Topic 808 and Topic 606* (Issued November 2018)	October 1, 2020	The standard clarifies the interaction between Topic 808, collaborative agreements, and Topic 806, Revenue from Contracts with Customers. Targeted improvements served to clarify when transactions between collaborative arrangement participants should be accounted for as revenue under Topic 606.	The Company has evaluated the impact of this standard, noting that the adoption has no impact on our financial statements. We will apply this guidance to any collaborative arrangements entered into in the future.
ASU 2019-07, Codification Updates to SEC Sections (Issued July 2019)	July 1, 2019	The standard provides various codification updates and improvements to address comments received.	Management determined that the adoption of this standard does not have an impact on our standalone financial statements.
ASU 2018-16, Derivatives and Hedging (Topic 815): Inclusion of the Secured Overnight Financing Rate (SOFR) Overnight Index Swap (OIS) Rate as a Benchmark Interest Rate for Hedge Accounting Purposes (Issued October 2018)	April 1, 2019	The standard permits the use of the OIS based on the SOFR as a U.S. benchmark interest rate for purposes of hedge accounting under Topic 815 as requested by the Federal Reserve Board during deliberations leading to the issuance of ASU 2017-12. The FASB recognized that although the OIS rate based on SOFR is not yet widely recognized and quoted within the U.S. financial market, the attributes of the repo rates underlying the calculation of SOFR are recognized.	Management determined that the adoption of this standard does not have an impact on our standalone financial statements.
ASU 2018-09, Codification Improvements (Issued July 2018)	April 1, 2019	The standard provides various codification updates and improvements to address comments received.	Management determined that the adoption of this standard does not have an impact on our standalone financial statements.
ASU 2016-02, Leases (Topic 842) along with additional technical improvements, practical expedients, and clarifications since issued. (Issued February 2016)	April 1, 2019	The standard requires organizations that lease assets to recognize assets and liabilities for the rights and obligations created by the leases on balance sheet. The standard requires qualitative and quantitative disclosures to help investors and financial statement users better understand the amount, timing and uncertainty of cash flows arising from leases.	We recognized right-of-use assets and lease liabilities on our balance sheet with no impact to the opening balance of retained earnings. The adoption of this standard did not have a material effect on the statement of operations or the statement of cash flows. See Note 9 – Leases for further details on the adoption of this standard.
ASU 2018-02, Income Statement — Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income (Issued February 2018)	April 1, 2018	The standard provides an option to reclassify stranded tax effects within Accumulated other comprehensive income (loss) (AOCI) to Retained earnings due to the U.S. federal corporate income tax rate change in the U.S. Tax Cuts and Jobs Act of 2017 (the Act).	We early adopted this accounting standard in the first quarter of fiscal 2019 and reclassified $13 million into retained earnings of our common shareholder from AOCI. This reclassification consists of deferred taxes originally recorded in AOCI at rates that exceeded the newly enacted U.S. federal corporate tax rate. There was no impact to net income.
ASU 2018-13, Fair Value Measurement (Topic 820) Disclosure Framework - Change to the Disclosure Requirements for Fair Value Measurement (Issued August 2018)	April 1, 2018	The standard modifies the disclosure requirements on fair value measurements in Topic 820 including the consideration of costs and benefits. The amendments relate to changes in disclosures on unrealized gains and losses, the disclosure of the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements, and the narrative description of measurement uncertainty were applied prospectively, where applicable.	Due to the immateriality of the electricity swap, which is our only Level 3 derivative contract, the adoption of this standard does not have a material impact on the standalone unconsolidated financial statements and disclosures.

ASU 2014-09, Revenue from Contracts with Customers (Topic 606), and all the related amendments, which supersedes the former standard, ASC 605, Revenue Recognition (Issued May 2014)	April 1, 2018	The standard requires entities to recognize revenue based on the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for these goods or services.	We adopted Topic 606 using the modified retrospective transition approach. We determined that our existing revenue recognition policies were in compliance with Topic 606. Accordingly, there was no cumulative effect adjustment to the opening balance of retained earnings in the standalone unconsolidated balance sheet in the first quarter of fiscal 2019, as the adoption did not result in a change to our timing of revenue recognition. See Note 2 - Revenue for additional disclosures related to the adoption of this standard.
ASU 2017-07, Compensation - Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost (Issued March 2017)	April 1, 2018	The standard requires entities to (1) disaggregate the current service cost component from the other components of net benefit cost (the "other components") and present the other components within non-operating income and (2) present the other components elsewhere in the results of operations and outside of income from operations if that subtotal is presented. In addition, the new standard requires entities to disclose the results of operations line items that contain the other components if they are not presented on appropriately described separate lines.	We adopted this standard on a retrospective basis and utilized the practical expedient.
ASU 2016-18, Statement of Cash Flows (Topic 230) - Restricted Cash. (Issued November 2016)	April 1, 2018	The standard requires that a statement of cash flows explain the change during the period in the total of cash, cash equivalents, and amounts generally described as restricted cash or restricted cash equivalents.	We adopted this standard on a retrospective basis, however, there was no impact for the current or comparable periods as the Company does not currently hold any cash meeting the requirement for such restrictions.
ASU 2016-16, Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory (Issued October 2016)	April 1, 2018	The standard eliminates the exception for all intra-entity sales of assets other than inventory. It requires the tax effect of intra-entity sales of assets other than inventory to be recognized currently which will impact Novelis' effective tax rate. The changes require the current and deferred income tax consequences of the intra-entity transfer to be recorded when the transaction occurs.	Management determined that the adoption of this standard does not have an impact on our standalone unconsolidated financial statements.
ASU 2016-15, Statement of Cash Flows (Topic 230) - Classification of Certain Cash Receipts and Cash Payments (Issued August 2016)	April 1, 2018	The standard addresses eight specific cash flow items to provide clarification and reduce the diversity in presentation of these items.	Management determined that the adoption of this standard does not have an impact on our standalone unconsolidated financial statements.
ASU 2017-09, Compensation-Stock Compensation (Topic 718): Scope of Modification Accounting (Issued May 2017)	April 1, 2018	The standard provides clarity and reduces both (1) diversity in practice and (2) cost and complexity when applying the standard in Topic 718, Compensation-Stock Compensation, to a change to the terms or conditions of a share-based payment award. An entity may change the terms or conditions of a share-based payment award for many different reasons, and the nature and effect of the change can vary significantly. This standard requires modification accounting only if the fair value, the vesting conditions, or the classification of the award (as equity or liability) changes as a result of the change in terms or conditions.	Management has determined that the adoption of this standard does not have a material impact on the standalone unconsolidated financial statements. This standard will need to be considered if Novelis Inc. initiates a modification that is determined to be a substantive change to an outstanding stock-based award.
ASU 2017-05, Other Income-Gains and Losses from the Derecognition of Non-financial Assets (Subtopic 610-20): Clarifying the Scope of Asset Derecognition Guidance and Accounting for Partial Sales of Non-financial Assets (Issued February 2017)	April 1, 2018	The standard includes (i) clarification that non-financial assets within the scope of ASC 610-20 may include non-financial assets transferred within a legal entity to a counterparty; (ii) clarification that an entity should allocate consideration to each distinct asset by applying the standard in ASC 606 on allocating the transaction price to performance obligations; and (iii) a requirement for entities to derecognize a distinct non-financial asset or distinct in substance non-financial asset in a partial sale transaction when it does not have (or ceases to have) a controlling financial interest in the legal entity that holds the asset in accordance with ASC 610, and transfers control of the asset in accordance with ASC 606.	Management determined that the adoption of this standard does not have an impact on our standalone unconsolidated financial statements.
ASU 2017-01, Clarifying the Definition of a Business (Topic 805) (Issued January 2017)	April 1, 2018	The standard provides guidance on evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. It amends ASC 805 to provide a more robust framework to use in determining when a set of assets and activities is a business.	Management determined that the adoption of this standard does not have an impact on our standalone unconsolidated financial statements.

2. REVENUE FROM CONTRACTS WITH CUSTOMERS

The Company's contracts with customers are comprised of purchase orders with standard terms and conditions. These contracts typically consist of the manufacture of products, which represent single performance obligations that are satisfied upon transfer of control of the product to the customer at a point in time. Transfer of control is assessed based on alternative use of the products we produce and our enforceable right to payment for performance to date under the contract terms. Transfer of control and revenue recognition generally occur upon shipment or delivery of the product, which is when title, ownership, and risk of loss pass to the customer and is based on the applicable shipping terms. The shipping terms vary across all businesses and depend on the product, the country of origin, and the type of transportation (truck, train, or vessel). The length of payment terms can vary per contract, but none extend beyond one year. Revenue is recognized net of any volume rebates or other incentives.

3. RESTRUCTURING AND IMPAIRMENT

There were no restructuring related charges and $1 million of other impairment charges related to the impairment of certain tangible assets for the year ended March 31, 2021. There were no restructuring and $4 million of other impairment charges related to the impairment of intangible assets unrelated to restructuring for the year ended March 31, 2020.

The following table summarizes our restructuring liability activity and other impairment charges (in millions).

	Total restructuring liabilities	Other impairments[1]	Total Restructuring and impairments, net
Balance as of March 31, 2019	$ —		
Fiscal 2020 Activity:			
Expenses	—	$ 4	$ 4
Cash payments	—		
Balance as of March 31, 2020	—		
Fiscal 2021 Activity:			
Expenses	—	$ 1	$ 1
Cash payments	—		
Balance as of March 31, 2021	$ —		

(1) Other impairment charges not related to a restructuring activity.

4. ACCOUNTS RECEIVABLE

"Accounts receivable, net" consists of the following (in millions).

	March 31,	
	2021	2020
Trade accounts receivable - third parties	$ 264	$ 185
Other accounts receivable - third parties	44	39
Accounts receivable — third parties	308	224
Allowance for credit losses — third parties	(1)	(2)
Accounts receivable, net — third parties	$ 307	$ 222
Trade accounts receivable — related parties	$ 292	$ 177

Factoring of Trade Receivables

We factor trade receivables based on local cash needs and in an attempt to balance the timing of cash flows of trade payables and receivables. Factored invoices are not included in our balance sheets when we do not retain a financial or legal interest. If a financial or legal interest is retained, we classify these factorings as secured borrowings.

The following tables summarize amounts relating to our factoring activities (in millions).

	Year Ended March 31,	
	2021	2020
Factoring expense	$ 6	$ 10

	Year Ended March 31,	
	2021	2020
Factored receivables outstanding	$ 325	$ 303

5. INVENTORIES

"Inventories" consists of the following (in millions).

	March 31,	
	2021	2020
Finished goods	$ 136	$ 152
Work in process	285	230
Raw materials	157	76
Supplies	32	29
Inventories	$ 610	$ 487

6. PROPERTY, PLANT AND EQUIPMENT

"Property, plant and equipment, net" consists of the following (in millions).

	March 31,	
	2021	2020
Land and property rights	$ 45	$ 44
Buildings	599	585
Machinery and equipment	1,551	1,513
	2,195	2,142
Accumulated depreciation and amortization	(1,295)	(1,204)
	900	938
Construction in progress	432	356
Property, plant and equipment, net	$ 1,332	$ 1,294

For the years ended March 31, 2021 and 2020, we capitalized $11 million of interest related to construction of property, plant and equipment and intangibles under development, respectively. Depreciation expense related to property, plant, and equipment, net is shown in the table below (in millions).

	Year Ended March 31,	
	2021	2020
Depreciation expense related to property, plant and equipment, net	$ 112	$ 108

Asset impairments

Impairment charges are recorded in "Restructuring and impairment, net." See Note 3 — Restructuring and Impairment for additional information.

7. GOODWILL AND INTANGIBLE ASSETS

There were no changes to the gross carrying amount or accumulated impairment of goodwill during fiscal 2021.The following table summarizes "Goodwill" (in millions) for the years ended March 31, 2021 and 2020.

	March 31, 2021			March 31, 2020		
	Gross Carrying Amount	Accumulated Impairment	Net Carrying Value	Gross Carrying Amount	Accumulated Impairment	Net Carrying Value
Goodwill	$ 1,135	$ (860)	$ 275	$ 1,135	$ (860)	$ 275

The components of "Intangible assets, net" are as follows (in millions).

		March 31, 2021			March 31, 2020		
	Weighted Average Life	Gross Carrying Amount	Accumulated Impairment	Net Carrying Value	Gross Carrying Amount	Accumulated Impairment	Net Carrying Value
Technology and software	11.6	$ 252	$ (220)	$ 32	$ 249	$ (197)	$ 52
Customer-related intangible assets	20.0	305	(211)	94	305	(196)	109
	16.3	$ 557	$ (431)	$ 126	$ 554	$ (393)	$ 161

In the fiscal years ended March 31, 2020, we recorded impairment charges related to certain intangible software assets. In the fiscal year ended March 31, 2021 we did not record any impairments. All intangible assets are amortized using the straight-line method. For additional information refer to Note 3 — Restructuring and Impairment

Amortization expense related to "Intangible assets, net" is as follows (in millions).

	Year Ended March 31,	
	2021	2020
Amortization expense related to intangible assets included in "Depreciation and amortization"	$ 38	$ 38

Estimated total amortization expense related to "Intangible assets, net" for each of the five succeeding fiscal years is as follows (in millions). Actual amounts may differ from these estimates due to such factors as customer turnover, raw material consumption patterns, impairments, additional intangible asset acquisitions and other events.

Fiscal Year Ending March 31,	
2022	$ 38
2023	25
2024	25
2025	25
2026	25

8. INVESTMENTS IN SUBSIDIARIES AND RELATED PARTY TRANSACTIONS

The following table summarizes our ownership percentage of our subsidiaries in which we have an investment as of March 31, 2021 and March 31, 2020 (in millions) using the cost method.

	March 31,		As of March 31, 2021
	2021	2020	Participation
Shareholdings - Common Shares[1]			
Novelis Services (North America) Inc.	$ —	$ —	100%
Logan Aluminum Inc.	—	—	40%
Novelis de Mexico, SA de CV	—	—	99.99%
	$ —	$ —	

(1) As of March 31, 2021 and 2020, these investments were less than $1 million.

Included in the accompanying financial statements are transactions and balances arising from business we conduct with our indirect parent, Novelis Inc., and its wholly-owned subsidiaries, which we classify as related party transactions and balances. The following table describes the period-end account balances that we had with these related parties, shown as related party balances in the accompanying balance sheet (in millions). See Note 11 — Debt for further information on our Long term debt-related parties and Short term borrowings-related parties.

	March 31,	
	2021	2020
Accounts receivable - related parties	$ 292	$ 177
Loans Receivable - related parties[1]	199	110
Interest Receivable - related parties	12	—
Other Long-Term Assets - related parties[2]	1,356	642
Accounts payable - related parties	78	109
Interest payable - related parties[3]	3	61

(1) Loan receivable represents Demand Note due from Novelis Inc. as of March 31, 2021, included in "Accounts Receivable - related parties."
(2) Included in “Other long-term assets."
(3) Included in “Accrued expenses and other current liabilities — related parties."

Below is the interest income and interest expense related to the short term and long term notes and loans we have with our subsidiaries (in millions). See Note 11 — Debt for additional information on notes and loans due to related parties.

	March 31,	
	2021	2020
Interest expense - related parties	$ 35	$ 37

During the years ended March 31, 2021 and 2020, “Net product sales — related parties” were $458 million and $495 million, respectively.

9. LEASES

We lease certain land, buildings and equipment under non-cancelable operating leases expiring at various dates.

We used the following policies and/or assumptions in evaluating our lease population:

- Lease determination: Novelis considers a contract to be or to contain a lease if the contract conveys the right to control the use of identified property, plant, or equipment (an identified asset) for a period of time in exchange for consideration.
- Discount rate: When our lease contracts do not provide a readily determinable implicit rate, we use the estimated incremental borrowing rate based on information available at the inception of the lease. The discount rate is determined by region and asset class.
- Variable payments: Novelis includes payments that are based on an index or rate within the calculation of right of use leased assets and lease liabilities, initially measured at the lease commencement date. Other variable lease payments include, but are not limited to, maintenance, service, and supply costs. These costs are disclosed as a component of total lease costs.
- Purchase options: Certain leases include options to purchase the leased property. The depreciable life of assets and leasehold improvements are limited by the expected lease term, unless there is a transfer of title or purchase option reasonably certain of exercise.
- Renewal options: Most leases include one or more options to renew, with renewal terms that can extend the lease term from one or more years. The exercise of lease renewal options is at our sole discretion.
- Residual value guarantees, restrictions, or covenants: Our lease agreements do not contain any material residual value guarantees or material restrictive covenants.
- Short-term leases: Leases with an initial term of 12 months or less are not recorded on the balance sheet; we recognize lease expense for these leases on a straight-line basis over the lease term and expense the associated operating lease costs to "Selling, general, and administrative expenses" on the statement of operations.
- Non-lease components: Leases that contain non-lease components (primarily equipment maintenance) are accounted for as a single component and recorded on the balance sheet for certain asset classes including real estate and certain equipment. Non-lease components include, but are not limited to, common area maintenance, service arrangements, and supply agreements.

The table below presents the classification of leasing assets and liabilities (in millions).

Leases	Balance Sheet Classification	March 31, 2021	March 31, 2020
Assets			
Operating lease right-of-use assets	Other long–term assets	$ 21	$ 13
Finance lease assets[1]	Property, plant and equipment, net	—	1
Total lease assets		$ 21	$ 14
Liabilities			
Current:			
Operating lease liabilities	Accrued expenses and other current liabilities	$ 3	$ 3
Long-term:			
Operating lease liabilities	Other long–term liabilities	15	12
Total lease liabilities		$ 18	$ 15

(1) Finance lease assets are recorded net of accumulated depreciation of less than $1 million as of March 31, 2021 and 2020.

The table below presents the classification of lease related expenses or income as reported on the statements of operations (in millions). Amortization of and interest on liabilities related to finance leases were less than $1 million during the fiscal year ended March 31, 2021 and 2020.

Expense Type	Income Statement Classification	Fiscal Year Ended March 31, 2021	Fiscal Year Ended March 31, 2020
Operating lease costs[1]	Selling, general and administrative expenses	10	9

(1) Operating lease costs include short-term leases and variable lease costs.

Future minimum lease payments as of March 31, 2021, for our operating leases having an initial or remaining non-cancellable lease term in excess of one year are as follows (in millions).

Year Ending March 31,	Operating Leases[1]
2022	$ 4
2023	3
2024	3
2025	3
2026	3
Thereafter	5
Total minimum lease payments	21
Less: interest	3
Present value of lease liabilities	$ 18

(1) Operating lease payments related to options to extend lease terms that are reasonably certain of being exercised are immaterial and we do not have leases signed but not yet commenced as of March 31, 2021.

The following table presents the weighted-average remaining lease term and discount rates.

	As of March 31, 2021	As of March 31, 2020
Weighted-average remaining lease term (years)		
Operating leases	6.5	5.6
Finance leases	2.5	3.4
Weighted-average discount rate		
Operating leases	4.16 %	4.78 %
Finance leases	3.69 %	3.94 %

The following table presents supplemental information on our operating leases for the fiscal years ended March 31, 2021 and 2020 (in millions). Operating and financing cash flows from finance leases were immaterial for the fiscal year ended March 31, 2021. Leased assets obtained in exchange for new operating and financing lease liabilities were $11 million for the fiscal year ended March 31, 2021, individually and in the aggregate.

Supplemental information	Fiscal Year Ended March 31, 2021	Fiscal Year Ended March 31, 2020
Cash paid for amounts included in the measurement of lease liabilities		
Operating cash flows from operating leases	$ 13	$ 9

10. ACCRUED EXPENSES AND OTHER CURRENT LIABILITIES

"Accrued expenses and other current liabilities" consists of the following (in millions).

	March 31,	
	2021	2020
Accrued compensation and benefits	$ 49	$ 35
Accrued income taxes	55	—
Accrued interest payable — third parties	47	49
Other current liabilities	20	61
Accrued expenses and other current liabilities — third parties	$ 171	$ 145
Accrued interest payable[1]	$ 3	$ 61
Accrued expenses and other current liabilities — related party	$ 3	$ 61

(1) This represents interest on related party debt with Novelis Corporation and Novelis Holdings. See Note 11 — Debt for additional information on related party debt with Novelis Inc. and Novelis Holdings.

11. DEBT

Debt consists of the following (in millions).

		March 31, 2021			March 31, 2020		
	Interest Rates[1]	Principal	Carrying Value Adjustments[2]	Carrying Value	Principal	Carrying Value Adjustments[2]	Carrying Value
Third party debt:							
Short term borrowings		$ 89	—	$ 89	—	—	—
4.75% Senior notes, due January 2030	4.75 %	1,600	(13)	1,587	1,600	(32)	1,568
5.875% Senior Notes, due December 2026	5.875 %	1,500	(28)	1,472	1,500	(16)	1,484
Total debt — third parties		$ 3,189	$ (41)	$ 3,148	$ 3,100	$ (48)	$ 3,052
Less: Short term borrowings		(89)	—	(89)	—	—	—
Long-term debt, net of current portion — third parties:		$ 3,100	$ (41)	$ 3,059	$ 3,100	$ (48)	$ 3,052
Related party debt[3]:							
Short term borrowings	4.79 %	$ 184	$ —	$ 184	$ 984	$ —	$ 984
6.8% Fixed, due April 2021 (Novelis Inc.)	6.8 %	197	—	197	194	—	194
6.8% Fixed, due October 2022 (Novelis North America Holdings)	6.8 %	—	—	—	260	—	260
3.5% Fixed, due December 2022 (Aleris International Inc.)	3.50 %	180	—	180	—	—	—
Debt Refinancing Fees paid on behalf of Novelis Corporation		3	—	3	3	—	3
Total debt — related parties		564	—	564	1,441	—	1,441
Less: Short term borrowings		(184)	—	(184)	(984)	—	(984)
Less: Current portion of long-term debt		(197)	—	(197)	—	—	—
Long-term debt, net of current portion — related parties		$ 183	$ —	$ 183	$ 457	$ —	$ 457

(1) Interest rates are the stated rates of interest on the debt instrument (not the effective interest rate) as of March 31, 2021. We present stated rates of interest because they reflect the rate at which cash will be paid for future debt service.
(2) Amounts include unamortized debt issuance costs, fair value adjustments, and debt discounts.
(3) Related party long term debt represents:
- A promissory note due to Novelis Inc. (indirect parent), with a maturity date of April 7, 2021, bearing interest at a fixed rate of 6.8% per annum.
- A promissory note due to Aleris International Inc with a maturity date of December 19, 2022, bearing interest at a fixed rate of 3.5% per annum.
- An interest free loan due to Novelis Inc. for fees related to the January 2020 debt issuance paid on behalf of Novelis Corporation by Novelis Inc.

Principal repayment requirements for our total debt over the next five years and thereafter (excluding unamortized carrying value adjustments and using exchange rates as of March 31, 2021 for our debt denominated in foreign currencies) are as follows (in millions).

As of March 31, 2021	Amount
Short-term borrowings and Current portion of long term debt due within one year	$ 470
2 years	180
3 years	—
4 years	—
5 years	—
Thereafter	3,103
Total debt	$ 3,753

Senior Notes

In September 2016, Novelis Corporation, an indirect wholly owned subsidiary of Novelis Inc., issued $1.5 billion in aggregate principal amount of 5.875% Senior Notes Due 2026 (the “2026 Senior Notes”). The 2026 Senior Notes are subject to semi-annual interest payments and mature on September 30, 2026.

In January 2020, Novelis Corporation issued $1.6 billion in aggregate principal amount of 4.75% Senior Notes due 2030 (the "2030 Senior Notes"). The proceeds were used to refinance all of Novelis Corporation's 6.25% Senior Notes due 2024 and the remainder was utilized to pay a portion of the consideration for the acquisition of Aleris. The 2030 Senior Notes are subject to semi-annual interest payments and mature on January 30, 2030.

As a result of this refinancing as well as the expiration of our 2018 Term Loan Increase Joinder Amendment and Short Term Credit Agreement, we recorded $65 million of loss on extinguishment of debt on our statement of operations for fiscal 2020.

The Senior Notes are guaranteed, jointly and severally, on a senior unsecured basis, by Novelis Inc. and certain of its subsidiaries. The Senior Notes contain customary covenants and events of default that will limit our ability and, in certain instances, the ability of certain of our subsidiaries to (1) incur additional debt and provide additional guarantees, (2) pay dividends or return capital beyond certain amounts and make other restricted payments, (3) create or permit certain liens, (4) make certain asset sales, (5) use the proceeds from the sales of assets and subsidiary stock, (6) create or permit restrictions on the ability of certain of Novelis' subsidiaries to pay dividends or make other distributions to Novelis, (7) engage in certain transactions with affiliates, (8) enter into sale and leaseback transactions, (9) designate subsidiaries as unrestricted subsidiaries and (10) consolidate, merge or transfer all or substantially all of our assets and the assets of certain of our subsidiaries. During any future period in which either Standard & Poor's Ratings Group, Inc. or Moody's Investors Service, Inc. have assigned an investment grade credit rating to the Senior Notes and no default or event of default under the indenture has occurred and is continuing, most of the covenants will be suspended. The Senior Notes include a cross-acceleration event of default triggered if any other indebtedness with an aggregate principal amount of more than $100 million is (1) accelerated prior to its maturity or (2) not repaid at its maturity. The Senior Notes also contain customary call protection provisions for our bondholders that extend through September 2024 for the 2026 Senior Notes and through January 2028 for the 2030 Senior Notes.

As of March 31, 2021, we were in compliance with the covenants for our Senior Notes.

12. SHARE-BASED COMPENSATION

The Company's board of directors has authorized long term incentive plans (LTIPs), under which Hindalco stock appreciation rights (Hindalco SARs), Novelis stock appreciation rights (Novelis SARs), phantom restricted stock units (RSUs), and Novelis Performance Units (Novelis PUs) are granted to certain executive officers and key employees.

The Hindalco SARs vest at the rate of 33% per year, subject to the achievement of an annual performance target. Fiscal 2012 through fiscal 2016 SARs expire in May of the seventh year from the original grant date, while Fiscal 2017 and onwards SARs expire seven years from their original grant date. The performance criterion for vesting of the Hindalco SARs is based on the actual overall Novelis operating EBITDA compared to the target established and approved each fiscal year. The minimum threshold for vesting each year is 75% of each annual target operating EBITDA. Given that the performance criterion is based on an earnings target in a future period for each fiscal year, the grant date of the awards for accounting purposes is generally not established until the performance criterion has been defined.

Each Hindalco SAR is to be settled in cash based on the difference between the market value of one Hindalco share on the date of grant and the market value on the date of exercise. Each Novelis SAR is to be settled in cash based on the difference between the fair value of one Novelis phantom share on the original date of grant and the fair value of a phantom share on the date of the exercise. The amount of cash paid to settle Hindalco SARs and Novelis SARs is limited to three times the target payout, depending on the plan year. The Hindalco SARs and Novelis SARs do not transfer any shareholder rights in Hindalco or Novelis to a participant. The Hindalco SARs and Novelis SARs are classified as liability awards and are remeasured at fair value each reporting period until the SARs are settled.

In May 2016, the Company's board of directors approved the issuance of Novelis PUs which have a fixed $100 value per unit and will vest in full three years from the grant date, subject to specific performance criteria compared to the established target. The Company made a voluntary offer to the participants with outstanding Novelis SARs granted for fiscal years 2012 through 2016 to exchange their Novelis SARs for an equivalently valued number of Novelis PUs. The voluntary exchange resulted in 140,674 Novelis SARs being modified into PUs which are not based on Novelis' nor Hindalco's fair values and are accounted for outside the scope of ASC 718, Compensation - Stock Compensation. This exchange was accounted for as a modification. There were 1,063 of Novelis SARs that remain outstanding as of March 31, 2021.

The RSUs are based on Hindalco's stock price. The RSUs vest either in full three years from the grant date or 33% per year over three years, subject to continued employment with the Company, but are not subject to performance criteria. Each RSU is to be settled in cash equal to the market value of one Hindalco share. The payout on the RSUs is limited to three times the market value of one Hindalco share measured on the original date of grant. The RSUs are classified as liability awards and expensed over the requisite service period (three years) based on the Hindalco stock price as of each balance sheet date.

Total compensation expense related to Hindalco SARs, Novelis SARs, and RSUs under the plans for the respective periods is presented in the table below (in millions). These amounts are included in “Selling, general and administrative expenses” in our statements of operations. As the performance criteria for fiscal years 2022, 2023, and 2024 have not yet been established, measurement periods for Hindalco SARs and Novelis SARs relating to those periods have not yet commenced. As a result, only compensation expense for vested and current year Hindalco SARs and Novelis SARs has been recorded.

	Year Ended March 31,	
	2021	2020
Total compensation expense (income)	$ 6	$ —

The table below shows the RSUs activity for the year ended March 31, 2021.

	Number of RSUs	Grant Date Fair Value (in Indian Rupees)	Aggregate Intrinsic Value (USD in millions)
RSUs outstanding as of March 31, 2020	867,076	207.73	$ 1
Granted	827,650	118.56	—
Exercised	(447,252)	206.12	1
Forfeited/Canceled	(40,735)	156.31	—
RSUs outstanding as of March 31, 2021	1,206,739	148.90	$ 5

During fiscal 2020, we granted 447,431 RSUs with a grant date fair value of INR 198.88, and the aggregate intrinsic value of RSUs exercised was $2 million.

During fiscal 2019, we granted 455,724 RSUs with a grant date fair value of INR 230.98, and the aggregate intrinsic value of RSUs exercised was $2 million.

Total cash payments made to settle Hindalco RSUs were less than $1 million, $1.7 million, and $2 million in the fiscal years ended March 31, 2021, 2020, and 2019, respectively.

As of March 31, 2021, unrecognized compensation expense related to the RSUs was $1.7 million, which will be recognized over the remaining weighted average vesting period of 1.4 years.

The table below shows Hindalco SARs activity for the year ended March 31, 2021.

	Number of Hindalco SARs	Weighted Average Exercise Price (in Indian Rupees)	Weighted Average Remaining Contractual Term (In years)	Aggregate Intrinsic Value (USD in millions)
SARs outstanding as of March 31, 2020	1,310,580	172.81	3.8	$ —
Granted	625,174	118.20	5.1	3
Exercised	(695,682)	156.20	—	1
Forfeited/Canceled	(60,405)	106.00	—	—
SARs outstanding as of March 31, 2021	1,179,667	157.10	5.1	3
SARs exercisable as of March 31, 2021	317,285	187.60	3.5	$ 1

During fiscal 2020, we granted 279,572 Hindalco SARs with a grant date fair value of INR 198.88, and the aggregate intrinsic value of Hindalco SARs exercised was less than $1 million.
During fiscal 2019, we granted 238,350 Hindalco SARs with a grant date fair value of INR 230.70, and the aggregate intrinsic value of Hindalco SARs exercised was $1.0 million.

The cash payments made to settle Hindalco SAR liabilities were $1.2 million, less than $1 million, and less than $1 million, in the fiscal years ended March 31, 2021, 2020, and 2019, respectively.

As of March 31, 2021, unrecognized compensation expense related to the non-vested Hindalco SARs (assuming all future performance criteria are met) was less than $1 million which is expected to be recognized over a weighted average period of 1.3 years.

The table below shows Novelis SARs activity for the year ended March 31, 2021.

	Number of Novelis SARs	Weighted Average Exercise Price (in USD)	Weighted Average Remaining Contractual Term (In years)	Aggregate Intrinsic Value (USD in millions)
SARs outstanding as of March 31, 2020	2,956	$ 84.38	1.2	$ —
Granted	—	—	—	—
Exercised	(1,893)	88.50	—	—
Forfeited/Canceled	—	—	—	—
SARs outstanding as of March 31, 2021	1,063	77.00	0.8	—
SARs exercisable as of March 31, 2021	1,063	$ 76.96		

During fiscal 2020, the aggregate intrinsic value of Novelis SARs exercised was less than $1 million.

The cash payments made to settle Novelis SAR liabilities were less than $1 million in the fiscal years ended March 31, 2021, 2020, and 2019, respectively.

The fair value of each unvested Hindalco SAR was estimated using the following assumptions:

	Year ended March 31,	
	2021	2020
Risk-free interest rate	3.32% - 6.18%	4.73% - 6.89%
Dividend yield	0.32 %	1.27 %
Volatility	40% - 57%	36% - 85%

The fair value of each unvested Novelis SAR was estimated using the following assumptions:

	Year ended March 31,	
	2021	2020
Risk-free interest rate	0.03% - 0.08%	0.00% - 0.35%
Dividend yield	— %	—%
Volatility	28.2% - 45.1%	24% - 40%

The fair value of each unvested Hindalco SAR was based on the difference between the fair value of a long call and a short call option. The fair value of each of these call options was determined using the Monte Carlo Simulation model. We used historical stock price volatility data of Hindalco on the National Stock Exchange of India to determine expected volatility assumptions. The risk-free interest rate is based on Indian treasury yields interpolated for a time period corresponding to the remaining contractual life. The forfeiture rate is estimated based on actual historical forfeitures. The dividend yield is estimated to be the annual dividend of the Hindalco stock over the remaining contractual lives of the Hindalco SARs. The value of each vested Hindalco SAR is remeasured at fair value each reporting period based on the excess of the current stock price over the exercise price, not to exceed the maximum payout as defined by the plans. The fair value of the Hindalco SARs is being recognized over the requisite performance and service period of each tranche, subject to the achievement of any performance criteria.

The fair value of each unvested Novelis SAR was based on the difference between the fair value of a long call and a short call option. The fair value of each of these call options was determined using the Monte Carlo Simulation model. We used the historical volatility of comparable companies to determine expected volatility assumptions. The risk-free interest rate is based on U.S. treasury yields for a time period corresponding to the remaining contractual life. The forfeiture rate is estimated based on actual historical forfeitures of Hindalco SARs. The value of each vested Novelis SAR is remeasured at fair value each reporting period based on the percentage increase in the current Novelis phantom stock price over the exercise price, not to exceed the maximum payout as defined by the plans. The fair value of the Novelis SARs is being recognized over the requisite performance and service period of each tranche, subject to the achievement of any performance criteria.

13. POST RETIREMENT BENEFIT PLANS

Our pension obligations relate to funded defined benefit pension plans in the U.S. Our other postretirement obligations (Other Benefits, as shown in certain tables below) include unfunded health care and life insurance benefits provided to retired employees in the U.S.

During the second quarter of fiscal 2021, Novelis announced the freeze of future benefit accruals under the Novelis Pension Plan and the Terre Haute Pension Plan in the U.S., effective December 31, 2020. Novelis elected to remeasure both plans' plan assets and obligations as of August 31, 2020, which was the nearest calendar month-end date to the announcements of said freezes. A curtailment loss of $1 million was recorded related to the Terre Haute plan. On May 6, 2021, Novelis announced the freeze of future benefit accruals under the Canada Pension Plan, effective for union participants as of December 31, 2021 and for non-union participants as of December 31, 2023. Novelis will remeasure the plan's assets and obligations as of April 30, 2021, which is the nearest calendar month-end to the announcement of this freeze. We are still determining the financial impact of the remeasurement as of the date of this filing.

Employer Contributions to Plans

For pension plans, our policy is to fund an amount required to provide for contractual benefits attributed to service to-date, and amortize unfunded actuarial liabilities typically over periods of 15 years or less. We also participate in savings plans in the U.S., as well as defined contribution pension plans in the U.S. We contributed the following amounts (in millions) to all plans.

	Year Ended March 31,	
	2021	2020
Funded pension plans	$ 26	$ 16
Unfunded pension plans	2	2
Savings and defined contribution pension plans	34	30
Total contributions	$ 62	$ 48

During fiscal year 2022, we expect to contribute $13 million to our funded pension plans and $37 million to our savings and defined contribution pension plans.

Benefit Obligations, Fair Value of Plan Assets, Funded Status and Amounts Recognized in Financial Statements

The following tables present the change in benefit obligation, change in fair value of plan assets, and the funded status for pension and other benefits. The increase in discount rates in fiscal 2021, as compared to fiscal 2020, and higher mortality rates during the year was the primary driver of actuarial gains in fiscal 2021.

	Pension Benefits		Other Benefits	
	Year Ended March 31,		Year Ended March 31,	
in millions	2021	2020	2021	2020
Benefit obligation at beginning of period	$ 693	$ 640	$ 36	$ 35
Service cost	9	11	1	1
Interest cost	22	26	1	2
Benefits paid	(27)	(25)	(2)	(2)
Curtailments and settlements	(42)	—	—	—
Actuarial losses (gains)	(11)	43	(1)	—
Other	—	(2)	—	—
Benefit obligation at end of period	$ 644	$ 693	$ 35	$ 36
Benefit obligation of funded plans	$ 644	$ 693	$ —	$ —
Benefit obligation of unfunded plans	—	—	35	36
Benefit obligation at end of period	$ 644	$ 693	$ 35	$ 36

	Pension Benefits	
	Year Ended March 31,	
	2021	2020
Change in fair value of plan assets		
Fair value of plan assets at beginning of period	$ 470	$ 462
Actual return on plan assets	110	19
Benefits paid	(27)	(25)
Company contributions	26	16
Other	(1)	(2)
Fair value of plan assets at end of period	$ 578	$ 470

	March 31,			
	2021		2020	
	Pension Benefits	Other Benefits	Pension Benefits	Other Benefits
Funded status				
Funded status at end of period:				
Assets less the benefit obligation of funded plans	$ (65)	$ —	$ (223)	$ —
Benefit obligation of unfunded plans	—	(35)	—	(36)
	$ (65)	$ (35)	$ (223)	$ (36)
As included on the balance sheet within Total assets (Total liabilities)				
Accrued expenses and other current liabilities	$ —	$ (2)	$ —	$ (2)
Accrued postretirement benefits	(65)	(33)	(223)	(34)
	$ (65)	$ (35)	$ (223)	$ (36)

The postretirement amounts recognized in “Accumulated other comprehensive loss,” are presented in the table below (in millions). Amounts are amortized to net periodic benefit cost over the group’s average future service life of the employees or the group's average life expectancy.

	March 31,			
	2021		2020	
	Pension Benefits	Other Benefits	Pension Benefits	Other Benefits
Net actuarial (loss) / gain	$ 15	$ 5	$ (125)	$ 4
Prior service (cost) credit	—	4	(1)	4
Total postretirement amounts recognized in Accumulated other comprehensive (loss) income	$ 15	$ 9	$ (126)	$ 8

The postretirement changes recognized in "Accumulated other comprehensive loss," are presented in the table below (in millions), and include the impact related to our equity method investments.

	March 31,			
	2021		2020	
	Pension Benefits	Other Benefits	Pension Benefits	Other Benefits
Beginning balance in Accumulated other comprehensive (loss) income	$ (126)	$ 8	$ (80)	$ 10
Curtailments and settlements	—	—	—	—
Plan amendment	—	—	—	—
Net actuarial gain	130	2	(56)	(1)
Amortization of:		—	—	
Prior service credits (costs)	—	—	—	—
Actuarial loss (gain)	11	(1)	10	(1)
Total postretirement amounts recognized in Accumulated other comprehensive (loss) income	$ 15	$ 9	$ (126)	$ 8

Pension Plan Obligations

The projected benefit obligation, accumulated benefit obligation and fair value of plan assets are presented in the table below (in millions).

	March 31,	
	2021	2020
The projected benefit obligation and accumulated benefit obligation for all defined benefit pension plans:		
Projected benefit obligation	$ 644	$ 693
Accumulated benefit obligation	644	651
Pension plans with projected benefit obligations in excess of plan assets:		
Projected benefit obligation	$ 644	$ 693
Fair value of plan assets	578	470
Pension plans with accumulated benefit obligations in excess of plan assets:	0	
Accumulated benefit obligation	$ 644	$ 651
Fair value of plan assets	578	470

Future Benefit Payments

Expected benefit payments to be made during the next ten fiscal years are listed in the table below (in millions).

	Pension Benefits	Other Benefits
2022	$ 29	$ 2
2023	31	2
2024	32	2
2025	34	2
2026	35	2
2027 through 2031	180	11
Total	$ 341	$ 21

Components of Net Periodic Benefit Cost

The components of net periodic benefit cost for the respective periods are listed in the table below (in millions).

	Pension Benefits		Other Benefits	
	Year Ended March 31,		Year Ended March 31,	
	2021	2020	2021	2020
Net periodic benefit cost				
Service cost	$ 9	$ 11	$ 2	$ 1
Interest cost	22	26	1	2
Expected return on assets	(35)	(32)	—	—
Amortization — losses	11	10	(1)	(1)
Amortization — prior service cost (credit)	—	—	—	—
Curtailment/settlement losses	1	—	—	—
Net periodic benefit cost (income)	$ 8	$ 15	$ 2	$ 2

Actuarial Assumptions and Sensitivity Analysis

The weighted average assumptions used to determine benefit obligations and net periodic benefit costs for the respective periods are listed in the table below.

	Pension Benefits		Other Benefits	
	Year Ended March 31,		Year Ended March 31,	
	2021	2020	2021	2020
Weighted average assumptions used to determine benefit obligations				
Discount rate	3.4 %	3.4 %	3.4 %	3.4 %
Average compensation growth	— %	3 %	— %	— %
Weighted average assumptions used to determine net periodic benefit cost				
Discount rate	3.4 %	4.0 %	3.2 %	3.4 %
Average compensation growth	2.5 %	3 %	— %	— %
Expected return on plan assets	6.6 %	7 %	— %	— %

In selecting the appropriate discount rate for each pension and postretirement plan in the United States, we used spot rate yield curves and individual bond matching models.

In estimating the expected return on assets of a pension plan, consideration is given primarily to its target allocation, the current yield on long-term bonds in the country where the plan is established, and the historical risk premium of equity or real estate over long-term bond yields in each relevant country. The approach is consistent with the principle that assets with higher risk provide a greater return over the long-term. The expected long-term rate of return on plan assets is 5.8% in fiscal 2022.

We provide unfunded health care and life insurance benefits to our retired employees in the U.S., for which we paid $2 million in fiscal 2021 and $3 million in fiscal 2020. The assumed health care cost trend used for measurement purposes is 6.8% for fiscal 2022, decreasing gradually to 4.5% in 2028 and remaining at that level thereafter.

Investment Policy and Asset Allocation

The Company's overall investment strategy is to achieve a mix of investments for long-term growth (equities, real estate) and for near-term benefit payments (debt securities, other) with a wide diversification of asset categories, investment styles, fund strategies and fund managers. Since most of the defined benefit plans are closed to new entrants, we expect this strategy to gradually shift more investments toward near-term benefit payments.

Each of our funded pension plan is governed by an Investment Fiduciary, who establishes an investment policy appropriate for the pension plan. The Investment Fiduciary is responsible for selecting the asset allocation for the plan, monitoring investment managers, monitoring returns versus benchmarks and monitoring compliance with the investment policy. The targeted allocation ranges by asset class, and the actual allocation percentages for each class are listed in the table below.

	Target Allocation Ranges	Allocation in Aggregate as of March 31,	
		2021	2020
Equity	32% - 49%	40%	43%
Debt Securities	38% - 58%	49%	50%
Other	10% - 13%	11%	—%

Fair Value of Plan Assets

As of March 31, 2021, $578 million of the pension plan assets are reported at net asset value.

14. CURRENCY (GAINS) LOSSES

The following currency (gains) losses are included in “Other income, net” in the accompanying statements of operations (in millions).

	Year Ended March 31,	
	2021	2020
Loss (gain) on remeasurement of monetary assets and liabilities, net	$ 10	$ —
Currency losses, net	$ 10	$ —

The following currency losses are included in "Accumulated other comprehensive income (loss)," in the accompanying balance sheets (in millions).

	Year Ended March 31,	
	2021	2020
Cumulative currency translation adjustment — beginning of period	$ (10)	$ 1
Effect of changes in exchange rates	37	(11)
Cumulative currency translation adjustment — end of period	$ 27	$ (10)

15. FINANCIAL INSTRUMENTS AND COMMODITY CONTRACTS

The following tables summarize the gross fair values of our financial instruments and commodity contracts as of March 31, 2021 and 2020 (in millions):

	March 31, 2021				
	Assets		Liabilities		Net Fair Value
	Current	Noncurrent	Current	Noncurrent	Assets/ (Liabilities)
Metal contracts	$ 86	$ 3	$ (135)	$ (3)	$ (49)
Currency exchange contracts	6	—	(6)	—	—
Energy contracts	1	1	(3)	—	(1)
Total derivative fair value	$ 93	$ 4	$ (144)	$ (3)	$ (50)

	March 31, 2020				
	Assets		Liabilities		Net Fair Value
	Current	Noncurrent	Current	Noncurrent	Assets/ (Liabilities)
Metal contracts	$ 80	$ —	$ (34)	$ —	$ 46
Currency exchange contracts	2	—	(1)	—	1
Energy contracts	—	—	(12)	(4)	(16)
Total derivative fair value	$ 82	$ —	$ (47)	$ (4)	$ 31

Metal

We use derivative instruments to preserve our conversion margins and manage the timing differences associated with metal price lag. We sell short-term LME aluminum forward contracts to reduce our exposure to fluctuating metal prices associated with the period of time between the pricing of our purchases of inventory and the pricing of the sale of that inventory to our customers. We also purchase forward LME aluminum contracts simultaneous with our sales contracts with customers that contain fixed metal prices. These LME aluminum forward contracts directly hedge the economic risk of future metal price fluctuations to better match the selling price of the metal with the purchase price of the metal.

As of March 31, 2021 and March 31, 2020, we have 330 kt and 184 kt, respectively, of outstanding aluminum sales/purchase contracts. The maximum and average duration of metal forward contracts is 52 months and 9 months, respectively.

Foreign Currency

We use foreign exchange forward contracts, cross-currency swaps and options to manage our exposure to changes in exchange rates. These exposures arise from recorded assets and liabilities, firm commitments and forecasted cash flows denominated in currencies other than the functional currency of certain operations.

As of March 31, 2021 and 2020, we had outstanding foreign currency exchange contracts with a total notional amount of $182 million and $2 million, respectively. Contracts that represent the majority of notional amounts hedge expected future foreign currency transactions, which include forecasted cash flows. These contracts cover the same periods as known or expected exposures and have a maximum and average duration of months 18 and 10 months, respectively.

Energy

We own an interest in an electricity swap contract to hedge our exposure to fluctuating electricity prices. As of March 31, 2021 and 2020, less than 1 million of notional megawatt hours was outstanding and the fair value of this swap was a liability of $2 million and $6 million, respectively.

We use natural gas forward purchase contracts to manage our exposure to fluctuating energy prices in North America. We had a notional of 13 million MMBTU as of March 31, 2021, and the fair value was an liability of less than $1 million. There was a notional of 15 million MMBTUs of natural gas forward purchase contracts as of March 31, 2020 and the fair value was a liability of $6 million. The average duration of these forward contracts is less than 4 years in length. One MMBTU is the equivalent of one decatherm, or one million British Thermal Units.

We use diesel fuel forward purchase contracts to manage our exposure to fluctuating fuel prices in North America. As of March 31, 2021 and 2020, we had an outstanding notional of 5 million gallons and 7 million gallons, respectively. The fair value as of March 31, 2021 was an asset of less than $1 million, and as of March 31, 2020 was a liability of less than $4 million. The average duration of these forward contracts is 9 months.

Gain (Loss) Recognition

The following table summarizes the gains (losses) associated with the change in fair value of derivative instruments recognized in "Loss (gain) on change in fair value of derivative instruments, net" (in millions).

	Year Ended March 31,	
	2021	2020
Derivative Instruments		
Metal contracts	$ (140)	$ 96
Currency exchange contracts	13	1
Energy contracts	10	(14)
(Loss) gain on change in fair value of derivative instruments, net	$ (117)	$ 83

16. ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSSES)

The following table summarizes the change in the components of accumulated other comprehensive income (loss) net of tax, for the periods presented (in millions).

	Currency Translation	Postretirement Benefit Plans[1]	Total
Balance as of March 31, 2019	$ 1	$ (54)	$ (53)
Other comprehensive income before reclassifications	(11)	(36)	(47)
Amounts reclassified from AOCI	—	—	—
Net change in other comprehensive income (loss)	(11)	(36)	(47)
Balance as of March 31, 2020	(10)	(90)	(100)
Other comprehensive income (loss) before reclassifications	37	108	145
Amounts reclassified from AOCI	—	—	—
Net change in other comprehensive (loss) income	37	108	145
Balance as of March 31, 2021	$ 27	$ 18	$ 45

(1) For additional information on our Postretirement benefit plans see Note 13 — Postretirement Benefit Plans.

17. FAIR VALUE MEASUREMENTS

We record certain assets and liabilities, primarily derivative instruments, on our balance sheets at fair value. We also disclose the fair values of certain financial instruments, including debt and loans receivable, which are not recorded at fair value. Our objective in measuring fair value is to estimate an exit price in an orderly transaction between market participants on the measurement date. We consider factors such as liquidity, bid/offer spreads and nonperformance risk, including our own nonperformance risk, in measuring fair value. We use observable market inputs wherever possible. To the extent that observable market inputs are not available, our fair value measurements will reflect the assumptions we used. We grade the level of the inputs and assumptions used according to a three-tier hierarchy:

Level 1 — Unadjusted quoted prices in active markets for identical, unrestricted assets or liabilities we have the ability to access at the measurement date.

Level 2 — Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.

Level 3 — Unobservable inputs for which there is little or no market data, which require us to develop our own assumptions based on the best information available as what market participants would use in pricing the asset or liability.

The following section describes the valuation methodologies we used to measure our various financial instruments at fair value, including an indication of the level in the fair value hierarchy in which each instrument is generally classified.

Derivative Contracts

For certain derivative contracts that have fair values based upon trades in liquid markets, such as aluminum, foreign exchange validation, natural gas and diesel fuel forward contracts and options, valuation model inputs can generally be verified and valuation techniques do not involve significant judgment. The fair values of such financial instruments are generally classified within Level 2 of the fair value hierarchy.

The majority of our derivative contracts are valued using industry-standard models that use observable market inputs as their basis, such as time value, forward interest rates, volatility factors, and current (spot) and forward market prices. We generally classify these instruments within Level 2 of the valuation hierarchy. Such derivatives include cross-currency swaps, foreign currency contracts, aluminum derivative contracts, natural gas and diesel fuel forward contracts.

We classify derivative contracts that are valued based on models with significant unobservable market inputs as Level 3 of the valuation hierarchy. Our electricity swap, which is our only Level 3 derivative contracts, represents an agreement to buy electricity at a fixed price at our Oswego, New York facility. Forward prices are not observable for this market, so we must make certain assumptions based on available information we believe to be relevant to market participants. We use observable forward prices for a geographically nearby market and adjust for 1) historical spreads between the cash prices of the two markets, and 2) historical spreads between retail and wholesale prices.

For the electricity swap, the average forward price at March 31, 2021, estimated using the method described above, was $38 per megawatt hour, which represented $4 premium over forward prices in the nearby observable market. The actual rate from the most recent swap settlement was approximately $28 per megawatt hour. Each $1 per megawatt hour decline in price decreases the valuation of the electricity swap by less than $1 million.

For Level 2 and 3 of the fair value hierarchy, where appropriate, valuations are adjusted for various factors such as liquidity, bid/offer spreads and credit considerations (nonperformance risk). We regularly monitor these factors along with significant market inputs and assumptions used in our fair value measurements and evaluate the level of the valuation input according to the fair value hierarchy. This may result in a transfer between levels in the hierarchy from period to period. As of March 31, 2021 and March 31, 2020, we did not have any Level 1 derivative contracts. No amounts were transferred between levels in the fair value hierarchy.

All of the Company's derivative instruments are carried at fair value in the statements of financial position prior to considering master netting agreements.

The following table presents our derivative assets and liabilities which were measured and recognized at fair value on a recurring basis classified under the appropriate level of the fair value hierarchy as of March 31, 2021 and March 31, 2020 (in millions). The table below also discloses the net fair value of the derivative instruments after considering the impact of master netting agreements.

	March 31,			
	2021		2020	
	Assets	Liabilities	Assets	Liabilities
Level 2 Instruments				
Metal contracts	$ 89	$ (138)	$ 80	$ (34)
Currency exchange contracts	6	(6)	2	(1)
Energy contracts	2	(1)	—	(10)
Total Level 2 Instruments	97	(145)	82	(45)
Level 3 Instruments				
Energy contracts	—	(2)	—	(6)
Total Level 3 Instruments	—	(2)	—	(6)
Total gross	$ 97	$ (147)	$ 82	$ (51)
Netting adjustment[1]	(67)	67	(26)	26
Total net	$ 30	$ (80)	$ 56	$ (25)

(1) Amounts represent the impact of legally enforceable master netting agreements that allow the Company to settle positive and negative positions with the same counterparties.

We recognized $4 million unrealized gains (losses) in "Other expense (income), net" for the fiscal year ended March 31, 2021 related to Level 3 financial instrument.

The following table presents a reconciliation of fair value activity for Level 3 derivative contracts (in millions).

	Level 3 - Derivative Instruments(1)
Balance as of March 31, 2019	$ (3)
Unrealized/realized gain included in earnings[2]	(3)
Settlements	—
Balance as of March 31, 2020	$ (6)
Unrealized/realized gain included in earnings[2]	6
Settlements	(2)
Balance as of March 31, 2021	$ (2)

(1) Represents net derivative liabilities.
(2) Included in “Gain on change in fair value of derivative instruments, net.”

Financial Instruments Not Recorded at Fair Value

The table below presents the estimated fair value of certain financial instruments that are not recorded at fair value on a recurring basis (in millions). The table excludes short-term financial assets and liabilities for which we believe carrying value approximates fair value. The fair value of long-term receivables is based on anticipated cash flows, which approximates carrying value and is classified as Level 2. We value long-term debt using Level 2 inputs. Valuations are based on either market and/or broker ask prices when available or on a standard credit adjusted discounted cash flow model.

	March 31,			
	2021		2020	
	Carrying Value	Fair Value	Carrying Value	Fair Value
Liabilities				
Total debt — third parties (excluding short term borrowings)	$ 3,059	$ 3,267	$ 3,052	$ 2,973
Total debt — related parties (excluding short term borrowings)	$ 380	$ 380	$ 472	$ 472

18. OTHER INCOME

"Other income, net" is comprised of the following (in millions).

	Year Ended March 31,	
	2021	2020
Interest income - third parties	$ (1)	$ (5)
Foreign currency remeasurement losses, net	10	—
Other, net - third parties	42	(4)
Other, net - related parties[1]	(71)	(60)
Non-operating net periodic benefit cost[2]	5	5
Other income, net	$ (15)	$ (64)

(1) Represents charge-outs to our participating subsidiaries through the Joint Technology Agreement for Global Research & Development expenses based on the type of work performed.

(2) Represents net periodic benefit cost, exclusive of service cost for the Company's pension and other post-retirement plans. For further details, refer toNote 1 — Business and Summary of Significant Accounting Policies.

19. INCOME TAXES

We used the benefits-for-loss method of tax allocation so that net operating losses are characterized as realized (or realizable).

We are subject to United States federal and state income taxes. The domestic components of our "Income before income taxes" (and after removing our "Equity in net loss of non-consolidated affiliates") are as follows (in millions).

	Year Ended March 31,	
	2021	2020
Domestic (US)	$ 65	$ 161
Pre-tax income	$ 66	$ 161

The components of the "Income tax provision" are as follows (in millions).

	Year Ended March 31,	
	2021	2020
Current provision (benefit):		
Federal	$ 47	$ 13
State	12	5
Total current	59	18
Deferred provision (benefit):		
Federal	(39)	19
State	(1)	(1)
Total deferred	(40)	18
Income tax provision	$ 19	$ 36

On March 27, 2020, the Coronavirus Aid, Relief and Economic Security (“CARES”) Act was enacted and signed into law in the United States. Certain provisions of the CARES Act impact the 2020 income tax provision computations of the Company and are reflected in the fourth quarter of 2020, or the period of enactment. The CARES Act contains modifications on the limitation of business interest for tax years beginning in 2019 (fiscal 2020) and 2020 (fiscal 2021). The modifications to Section 163(j) increase the allowable business interest deduction from 30% of adjusted taxable income to 50% of adjusted taxable income. This modification significantly increased the allowable interest expense deduction of the Company and resulted in significantly less taxable income for the fiscal year ended March 31, 2020.

President Biden and Senate Finance Committee Chairman Ron Wyden have set forth several tax proposals that would, if enacted into law, make significant changes to U.S. tax laws. We will continue to evaluate the overall impact of these tax proposals on our effective tax rate and balance sheet.

Deferred Income Taxes

Deferred income taxes recognize the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the carrying amounts used for income tax purposes, and the impact of available net operating loss (NOL) and tax credit carryforwards. These items are stated at the enacted tax rates that are expected to be in effect when taxes are actually paid or recovered.

At March 31, 2021 the Company had total deferred tax assets of approximately $110 million primarily arising from book reserves not deductible for tax and tax credit carryforwards. Also, the Company had total deferred tax liabilities of approximately $252 million primarily related to differences in the tax and net book values of assets.

At March 31, 2020 the Company had total deferred tax assets of approximately $165 million primarily arising from book reserves not deductible for tax and net operating loss carryforwards. Also, the Company had total deferred tax liabilities of approximately $172 million primarily related to differences in the tax and net book values of assets.

ASC 740 requires that we reduce our deferred income tax assets by a valuation allowance if, based on the weight of the available evidence, it is more likely than not that all or a portion of a deferred tax asset will not be realized. After consideration of all evidence, both positive and negative, management concluded that it is more likely than not that we will be unable to realize a portion of our deferred tax assets and that valuation allowances of $75 million and $73 million were necessary as of March 31, 2021 and 2020, respectively.

As of March 31, 2021, we have no net operating loss carryforwards and tax credit carryforwards of $90 million, which will be available to offset future taxable income and tax liabilities, respectively. The carryforwards begin expiring in fiscal year 2029 with some amounts being carried forward indefinitely. As of March 31, 2021, a valuation allowance of $75 million had been recorded against the tax credit carryforwards, where it appeared more likely than not that such benefits will not be realized.

Although realization is not assured, management believes it is more likely than not that all the remaining net deferred tax assets will be realized. In the near term, the amount of deferred tax assets considered realizable could be reduced if we do not generate sufficient taxable income in certain jurisdictions.

Tax Uncertainties

As of March 31, 2021 and 2020, the total amount of unrecognized benefits that, if recognized, would affect the effective income tax rate in future periods based on anticipated settlement dates is $3 million and $2 million, respectively.

Tax authorities continue to examine certain other of our tax filings for fiscal years 2015 through 2018. As a result of further settlement of audits, judicial decisions, the filing of amended tax returns or the expiration of statutes of limitations, our reserves for unrecognized tax benefits, as well as reserves for interest and penalties, may change over the next 12 months. With few exceptions, tax returns for all jurisdictions for all tax years before 2011 are no longer subject to examination by taxing authorities.

Our policy is to record interest and penalties related to unrecognized tax benefits in the income tax provision (benefit). As of March 31, 2021 and 2020, we had less than one million accrued, respectively, for interest and penalties.

Income Taxes Payable

Novelis Corporation has income taxes payable of $55 million for fiscal 2021. However, Novelis Corporation is part of a U.S. consolidated group for tax filing purposes. As such, the income taxes payable recognized in the Company's standalone financial statements may be absorbed by net operating losses from other entities in the Company's consolidated tax return group.

20. COMMITMENTS AND CONTINGENCIES

We are party to, and may in the future be involved in, or subject to, disputes, claims and proceedings arising in the ordinary course of our business, including some we assert against others, such as environmental, health and safety, product liability, employee, tax, personal injury and other matters. For certain matters in which the Company is involved for which a loss is reasonably possible, we are unable to estimate a loss. For certain other matters for which a loss is reasonably possible and the loss is estimable, we have estimated the aggregated range of loss as $0 to $60 million. This estimated aggregate range of reasonably possible losses is based upon currently available information. The Company's estimates involve significant judgment, and therefore, the estimate will change from time to time and actual losses may differ from the current estimate. We review the status of, and estimated liability related to, pending claims and civil actions on a quarterly basis. The evaluation model includes all asserted and unasserted claims that can be reasonably identified, including claims relating to our responsibility for compliance with environmental, health and safety laws and regulations in the jurisdictions in which we operate or formerly operated. The estimated costs in respect of such reported liabilities are not offset by amounts related to insurance or indemnification arrangements unless otherwise noted.

Environmental Matters

We own and operate numerous manufacturing and other facilities in various countries around the world. Our operations are subject to environmental laws and regulations from various jurisdictions, which govern, among other things, air emissions, wastewater discharges, the handling, storage and disposal of hazardous substances and wastes, the remediation of contaminated sites, post-mining reclamation and restoration of natural resources, and employee health and safety. Future environmental regulations may impose stricter compliance requirements on the industries in which we operate. Additional equipment or process changes at some of our facilities may be needed to meet future requirements. The cost of meeting these requirements may be significant. Failure to comply with such laws and regulations could subject us to administrative, civil or criminal penalties, obligations to pay damages or other costs, and injunctions and other orders, including orders to cease operations.

We are involved in proceedings under the U.S. Comprehensive Environmental Response, Compensation, and Liability Act, also known as CERCLA or Superfund, or analogous state provisions regarding liability arising from the usage, storage, treatment or disposal of hazardous substances and wastes at a number of sites in the United States, as well as similar proceedings under the laws and regulations of the other jurisdictions in which we have operations, including Brazil and certain countries in the European Union. Many of these jurisdictions have laws that impose joint and several liability, without regard to fault or the legality of the original conduct, for the costs of environmental remediation, natural resource damages, third party claims, and other expenses. In addition, we are, from time to time, subject to environmental reviews and investigations by relevant governmental authorities. We are also involved in claims and litigation filed on behalf of persons alleging exposure to substances and other hazards at our current and former facilities.

We have established liabilities based on our estimates for the currently anticipated costs associated with these environmental matters. We estimated that the remaining undiscounted clean-up costs related to our environmental liabilities as of March 31, 2021 were approximately $1 million, of which less than $1 million was associated with restructuring actions and the remaining undiscounted clean-up costs were approximately less than $1 million. Additionally, less than $1 million of the environmental liability was included in "Other long-term liabilities," with the remaining less than $1 million included in "Accrued expenses and other current liabilities" in our balance sheet as of March 31, 2021. As of March 31, 2020, less than $1 million of the environmental liability was included in "Other long-term liabilities," with the remaining approximately $1 million included in "Accrued expenses and other current liabilities" in our balance sheet. Management has reviewed the environmental matters, including those for which we assumed liability as a result of our spin-off from Alcan Inc. As a result of management's review of these items, management has determined that the currently anticipated costs associated with these environmental matters will not, individually or in the aggregate, materially impact our operations or materially adversely affect our financial condition, results of operations or liquidity.