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

FORM 10-Q

(Mark One)

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

For the Quarterly Period Ended June 30, 2022

OR

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

For the transition period from ____ to _____

Commission File Number 1-37816

ALCOA CORPORATION

(Exact name of registrant as specified in its charter)

Delaware	**81-1789115**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
201 Isabella Street, Suite 500, Pittsburgh, Pennsylvania	**15212-5858**
(Address of principal executive offices)	**(Zip Code)**

412-315-2900
(Registrant's telephone number, including area code)
Not applicable
(Former name, former address and former fiscal year, if changed since last report)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.01 per share	AA	New York Stock Exchange

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

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

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

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

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

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

As of July 20, 2022, 179,925,180 shares of common stock, par value $0.01 per share, of the registrant were outstanding.

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Forward-Looking Statements

This report contains statements that relate to future events and expectations and as such constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements include those containing such words as "aims," "ambition," "anticipates," "believes," "could," "develop," "endeavors," "estimates," "expects," "forecasts," "goal," "intends," "may," "outlook," "potential," "plans," "projects," "reach," "seeks," "sees," "should," "strive," "targets," "will," "working," "would," or other words of similar meaning. All statements by Alcoa Corporation that reflect expectations, assumptions or projections about the future, other than statements of historical fact, are forward-looking statements, including, without limitation, forecasts concerning global demand growth for bauxite, alumina, and aluminum, and supply/demand balances; statements, projections or forecasts of future or targeted financial results, or operating or sustainability performance (including our ability to execute on strategies related to environmental, social and governance matters); statements about strategies, outlook, and business and financial prospects; and statements about capital allocation and return of capital. These statements reflect beliefs and assumptions that are based on Alcoa Corporation's perception of historical trends, current conditions, and expected future developments, as well as other factors that management believes are appropriate in the circumstances. Forward-looking statements are not guarantees of future performance and are subject to known and unknown risks, uncertainties, and changes in circumstances that are difficult to predict. Although Alcoa Corporation believes that the expectations reflected in any forward-looking statements are based on reasonable assumptions, it can give no assurance that these expectations will be attained and it is possible that actual results may differ materially from those indicated by these forward-looking statements due to a variety of risks and uncertainties. Such risks and uncertainties include, but are not limited to: (a) current and potential future impacts to the global economy and our industry, business and financial condition caused by various worldwide or macroeconomic events, such as the COVID-19 pandemic and the ongoing conflict between Russia and Ukraine, and related regulatory developments; (b) material adverse changes in aluminum industry conditions, including global supply and demand conditions and fluctuations in London Metal Exchange-based prices and premiums, as applicable, for primary aluminum and other products, and fluctuations in indexed-based and spot prices for alumina; (c) changes in global economic and financial market conditions generally, such as inflation and interest rate increases, and which may also affect Alcoa Corporation's ability to obtain credit or financing upon acceptable terms or at all; (d) unfavorable changes in the markets served by Alcoa Corporation; (e) the impact of changes in foreign currency exchange and tax rates on costs and results; (f) increases in energy or raw material costs, or uncertainty of or disruption to energy or raw materials supply, and to the supply chain including logistics; (g) the inability to execute on strategies related to or achieve improvement in profitability and margins, cost savings, cash generation, revenue growth, fiscal discipline, environmental- and social-related goals and targets (including due to delays in scientific and technological developments), or strengthening of competitiveness and operations anticipated from portfolio actions, operational and productivity improvements, technology advancements, and other initiatives; (h) the inability to realize expected benefits, in each case as planned and by targeted completion dates, from acquisitions, divestitures, restructuring activities, facility closures, curtailments, restarts, expansions, or joint ventures; (i) political, economic, trade, legal, public health and safety, and regulatory risks in the countries in which Alcoa Corporation operates or sells products; (j) labor disputes and/or work stoppages and strikes; (k) the outcome of contingencies, including legal and tax proceedings, government or regulatory investigations, and environmental remediation; (l) the impact of cyberattacks and potential information technology or data security breaches; (m) risks associated with long-term debt obligations; (n) the timing and amount of future cash dividends and share repurchases; (o) declines in the discount rates used to measure pension and other postretirement benefit liabilities or lower-than-expected investment returns on pension assets, or unfavorable changes in laws or regulations that govern pension plan funding; and (p) the other risk factors discussed in Part I Item 1A of Alcoa Corporation's Annual Report on Form 10-K for the fiscal year ended December 31, 2021, Quarterly Report on Form 10-Q for the quarter ended March 31, 2022, and other reports filed by Alcoa Corporation with the U.S. Securities and Exchange Commission. Alcoa Corporation disclaims any obligation to update publicly any forward-looking statements, whether in response to new information, future events or otherwise, except as required by applicable law. Market projections are subject to the risks described above and other risks in the market.

PART I – FINANCIAL INFORMATION

Item 1. Financial Statements.

Alcoa Corporation and Subsidiaries
Statement of Consolidated Operations (unaudited)
(in millions, except per-share amounts)

	Second quarter ended June 30,		Six months ended June 30,	
	2022	2021	2022	2021
Sales (E)	$ 3,644	$ 2,833	$ 6,937	$ 5,703
Cost of goods sold (exclusive of expenses below)	2,767	2,156	4,948	4,448
Selling, general administrative, and other expenses	52	54	96	106
Research and development expenses	7	6	16	13
Provision for depreciation, depletion, and amortization	161	161	321	343
Restructuring and other charges, net (D)	(75)	33	50	40
Interest expense	30	67	55	109
Other income, net (Q)	(206)	(105)	(220)	(129)
Total costs and expenses	2,736	2,372	5,266	4,930
Income before income taxes	908	461	1,671	773
Provision for income taxes	234	111	444	204
Net income	674	350	1,227	569
Less: Net income attributable to noncontrolling interest	125	41	209	85
NET INCOME ATTRIBUTABLE TO ALCOA CORPORATION	$ 549	$ 309	$ 1,018	$ 484
EARNINGS PER SHARE ATTRIBUTABLE TO ALCOA CORPORATION COMMON SHAREHOLDERS (F):				
Basic	$ 3.01	$ 1.66	$ 5.55	$ 2.60
Diluted	$ 2.95	$ 1.63	$ 5.44	$ 2.56

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

Alcoa Corporation and Subsidiaries
Statement of Consolidated Comprehensive Income (unaudited)
(in millions)

	Alcoa Corporation		Noncontrolling interest		Total	
	Second quarter ended June 30,		Second quarter ended June 30,		Second quarter ended June 30,	
	2022	2021	2022	2021	2022	2021
Net income	$ 549	$ 309	$ 125	$ 41	$ 674	$ 350
Other comprehensive income (loss), net of tax (G):						
Change in unrecognized net actuarial loss and prior service cost/benefit related to pension and other postretirement benefits	52	253	—	3	52	256
Foreign currency translation adjustments	(370)	204	(132)	51	(502)	255
Net change in unrecognized gains/losses on cash flow hedges	1,137	(266)	1	5	1,138	(261)
Total Other comprehensive income (loss), net of tax	819	191	(131)	59	688	250
Comprehensive income (loss)	$ 1,368	$ 500	$ (6)	$ 100	$ 1,362	$ 600

	Alcoa Corporation		Noncontrolling interest		Total	
	Six months ended June 30,		Six months ended June 30,		Six months ended June 30,	
	2022	2021	2022	2021	2022	2021
Net income	$ 1,018	$ 484	$ 209	$ 85	$ 1,227	$ 569
Other comprehensive income (loss), net of tax (G):						
Change in unrecognized net actuarial loss and prior service cost/benefit related to pension and other postretirement benefits	74	384	1	4	75	388
Foreign currency translation adjustments	(44)	28	(34)	(9)	(78)	19
Net change in unrecognized gains/losses on cash flow hedges	307	(470)	2	2	309	(468)
Total Other comprehensive income (loss), net of tax	337	(58)	(31)	(3)	306	(61)
Comprehensive income	$ 1,355	$ 426	$ 178	$ 82	$ 1,533	$ 508

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

Alcoa Corporation and Subsidiaries
Consolidated Balance Sheet (unaudited)
(in millions)

	June 30, 2022	December 31, 2021
ASSETS		
Current assets:		
Cash and cash equivalents (L)	$ 1,638	$ 1,814
Receivables from customers	898	757
Other receivables	124	127
Inventories (I)	2,556	1,956
Fair value of derivative instruments (L)	224	14
Prepaid expenses and other current assets	423	358
Total current assets	5,863	5,026
Properties, plants, and equipment	19,647	19,753
Less: accumulated depreciation, depletion, and amortization	13,190	13,130
Properties, plants, and equipment, net	6,457	6,623
Investments (H)	1,238	1,199
Deferred income taxes	445	506
Fair value of derivative instruments (L)	15	7
Other noncurrent assets	1,691	1,664
Total assets	$ 15,709	$ 15,025
LIABILITIES		
Current liabilities:		
Accounts payable, trade	$ 1,752	$ 1,674
Accrued compensation and retirement costs	341	383
Taxes, including income taxes	343	374
Fair value of derivative instruments (L)	232	274
Other current liabilities	567	517
Long-term debt due within one year (J & L)	1	1
Total current liabilities	3,236	3,223
Long-term debt, less amount due within one year (J & L)	1,725	1,726
Accrued pension benefits (K)	369	417
Accrued other postretirement benefits (K)	626	650
Asset retirement obligations (O)	634	622
Environmental remediation (P)	254	265
Fair value of derivative instruments (L)	867	1,048
Noncurrent income taxes	204	191
Other noncurrent liabilities and deferred credits	502	599
Total liabilities	8,417	8,741
CONTINGENCIES AND COMMITMENTS (P)		
EQUITY		
Alcoa Corporation shareholders' equity:		
Common stock	2	2
Additional capital	9,313	9,577
Retained earnings (deficit)	606	(315)
Accumulated other comprehensive loss (G)	(4,255)	(4,592)
Total Alcoa Corporation shareholders' equity	5,666	4,672
Noncontrolling interest	1,626	1,612
Total equity	7,292	6,284
Total liabilities and equity	$ 15,709	$ 15,025

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

Alcoa Corporation and Subsidiaries
Statement of Consolidated Cash Flows (unaudited)
(in millions)

	Six months ended June 30,	
	2022	**2021**
CASH FROM OPERATIONS		
Net income	$ 1,227	$ 569
Adjustments to reconcile net income to cash from operations:		
Depreciation, depletion, and amortization	321	343
Deferred income taxes	93	48
Equity earnings, net of dividends	(61)	(46)
Restructuring and other charges, net (D)	50	40
Net loss (gain) from investing activities – asset sales (Q)	5	(124)
Net periodic pension benefit cost (K)	28	24
Stock-based compensation	20	18
Provision for bad debt expense	—	1
Premium paid on early redemption of debt	—	25
Gain on mark-to-market derivative financial contracts	(123)	(5)
Other	28	33
Changes in assets and liabilities, excluding effects of divestitures and foreign currency translation adjustments:		
Increase in receivables	(153)	(270)
Increase in inventories	(657)	(184)
Decrease in prepaid expenses and other current assets	15	58
Increase in accounts payable, trade	98	32
Decrease in accrued expenses	(103)	(20)
(Decrease) Increase in taxes, including income taxes	(79)	40
Pension contributions (K)	(9)	(570)
Increase in noncurrent assets	(71)	(34)
Decrease in noncurrent liabilities	(59)	(58)
CASH PROVIDED FROM (USED FOR) OPERATIONS	570	(80)
FINANCING ACTIVITIES		
Additions to debt (original maturities greater than three months)	—	495
Payments on debt (original maturities greater than three months)	—	(776)
Proceeds from the exercise of employee stock options	22	14
Repurchase of common stock	(350)	—
Dividends paid on Alcoa common stock	(37)	—
Payments related to tax withholding on stock-based compensation awards	(19)	(1)
Financial contributions for the divestiture of businesses (D)	(9)	(13)
Contributions from noncontrolling interest	83	—
Distributions to noncontrolling interest	(245)	(137)
Other	(3)	(3)
CASH USED FOR FINANCING ACTIVITIES	(558)	(421)
INVESTING ACTIVITIES		
Capital expenditures	(181)	(154)
Proceeds from the sale of assets	4	705
Additions to investments	(21)	(3)
Sale of investments	10	—
Other	2	—
CASH (USED FOR) PROVIDED FROM INVESTING ACTIVITIES	(186)	548
EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS AND RESTRICTED CASH	(2)	(2)
Net change in cash and cash equivalents and restricted cash	(176)	45
Cash and cash equivalents and restricted cash at beginning of year	1,924	1,610
CASH AND CASH EQUIVALENTS AND RESTRICTED CASH (Q) AT END OF PERIOD	$ 1,748	$ 1,655

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

Alcoa Corporation and Subsidiaries
Statement of Changes in Consolidated Equity (unaudited)
(in millions)

	Alcoa Corporation shareholders					
	Common stock	Additional capital	Retained earnings (deficit)	Accumulated other comprehensive (loss) income	Non-controlling interest	Total equity
Balance at January 1, 2021	$ 2	$ 9,663	$ (725)	$ (5,629)	$ 1,705	$ 5,016
Net income	—	—	175	—	44	219
Other comprehensive loss (G)	—	—	—	(249)	(62)	(311)
Stock-based compensation	—	8	—	—	—	8
Common stock issued: compensation plans	—	4	—	—	—	4
Distributions	—	—	—	—	(62)	(62)
Other	—	(1)	—	—	—	(1)
Balance at March 31, 2021	$ 2	$ 9,674	$ (550)	$ (5,878)	$ 1,625	$ 4,873
Net income	—	—	309	—	41	350
Other comprehensive income (G)	—	—	—	191	59	250
Stock-based compensation	—	10	—	—	—	10
Common stock issued: compensation plans	—	10	—	—	—	10
Distributions	—	—	—	—	(75)	(75)
Other	—	1	—	—	(1)	—
Balance at June 30, 2021	$ 2	$ 9,695	$ (241)	$ (5,687)	$ 1,649	$ 5,418
Balance at January 1, 2022	$ 2	$ 9,577	$ (315)	$ (4,592)	$ 1,612	$ 6,284
Net income	—	—	469	—	84	553
Other comprehensive (loss) income (G)	—	—	—	(482)	100	(382)
Stock-based compensation	—	9	—	—	—	9
Common stock issued: compensation plans	—	2	—	—	—	2
Repurchase of common stock	—	(54)	(21)	—	—	(75)
Dividends paid on Alcoa common stock ($0.10 per share)	—	—	(19)	—	—	(19)
Contributions	—	—	—	—	46	46
Distributions	—	—	—	—	(162)	(162)
Other	—	3	—	—	(2)	1
Balance at March 31, 2022	$ 2	$ 9,537	$ 114	$ (5,074)	$ 1,678	$ 6,257
Net income	—	—	549	—	125	674
Other comprehensive income (loss) (G)	—	—	—	819	(131)	688
Stock-based compensation	—	11	—	—	—	11
Common stock issued: compensation plans	—	1	—	—	—	1
Repurchase of common stock	—	(236)	(39)	—	—	(275)
Dividends paid on Alcoa common stock ($0.10 per share)	—	—	(18)	—	—	(18)
Contributions	—	—	—	—	37	37
Distributions	—	—	—	—	(83)	(83)
Balance at June 30, 2022	$ 2	$ 9,313	$ 606	$ (4,255)	$ 1,626	$ 7,292

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

A. Basis of Presentation – The interim Consolidated Financial Statements of Alcoa Corporation and its subsidiaries (Alcoa Corporation, Alcoa, or the Company) are unaudited. These Consolidated Financial Statements include all adjustments, consisting only of normal recurring adjustments, considered necessary by management to fairly state the Company's results of operations, financial position, and cash flows. The results reported in these Consolidated Financial Statements are not necessarily indicative of the results that may be expected for the entire year. The 2021 year-end balance sheet data was derived from audited financial statements but does not include all disclosures required by accounting principles generally accepted in the United States of America (GAAP). This Quarterly Report on Form 10-Q should be read in conjunction with the Company's Annual Report on Form 10-K for the year ended December 31, 2021, which includes disclosures required by GAAP.

In accordance with GAAP, certain situations require management to make estimates based on judgments and assumptions, which may affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements. They also may affect the reported amounts of revenues and expenses during the reporting periods. Management uses historical experience and all available information to make these estimates. Management regularly evaluates the judgments and assumptions used in its estimates, and results could differ from those estimates upon future events and their effects or new information.

Principles of Consolidation. The Consolidated Financial Statements of Alcoa Corporation include the accounts of Alcoa Corporation and companies in which Alcoa Corporation has a controlling interest, including those that comprise the Alcoa World Alumina & Chemicals (AWAC) joint venture (see below). Intercompany transactions have been eliminated. The equity method of accounting is used for investments in affiliates and other joint ventures over which Alcoa Corporation has significant influence but does not have effective control. Investments in affiliates in which Alcoa Corporation cannot exercise significant influence are accounted for using the measurement alternative in accordance with GAAP. These investments are measured at cost less any impairment.

AWAC is an unincorporated global joint venture between Alcoa Corporation and Alumina Limited and consists of several affiliated operating entities, which own, or have an interest in, or operate the bauxite mines and alumina refineries within Alcoa Corporation's Bauxite and Alumina segments (except for the Poços de Caldas mine and refinery, portions of the São Luís refinery, and investment in Mineração Rio do Norte S.A (MRN) until its sale in April 2022, all in Brazil) and the Portland smelter in Australia within Alcoa Corporation's Aluminum segment. Alcoa Corporation and Alumina Limited ultimately own 60% and 40%, respectively, of the AWAC individual entities, which are consolidated by the Company for financial reporting purposes and include Alcoa of Australia Limited (AofA), Alcoa World Alumina LLC (AWA), and Alcoa World Alumina Brasil Ltda. (AWAB). Alumina Limited's interest in the equity of such entities is reflected as Noncontrolling interest on the accompanying Consolidated Balance Sheet.

B. Recently Adopted and Recently Issued Accounting Guidance

Adopted

Management considers the applicability and impact of all Accounting Standards Updates (ASUs). Management assessed ASUs not disclosed and determined that they were either not applicable or are not expected to have a material impact on the Company's Consolidated Financial Statements.

Issued

In March 2020 and January 2021, the Financial Accounting Standards Board issued ASU No. 2020-04 and ASU No. 2021-01, respectively. Together, the ASUs provide temporary optional expedients and exceptions to the GAAP guidance on contract modifications and hedge accounting to ease the financial reporting burdens related to the expected market transition from the London Interbank Offered Rate (LIBOR) and other interbank offered rates to alternative reference rates. The Company is working to transition from LIBOR to alternative reference rates. Management has identified a total company inventory of affected financial instruments and contracts, has taken action to transition certain legacy contracts linked to LIBOR to alternative reference rates, and intends to utilize alternative reference rates for new contracts in 2022. The transition from LIBOR is not expected to have a material impact on Alcoa.
The adoption of the applicable provisions will coincide with the modifications of the affected contracts.

C. Divestitures

Eastalco Land Sale

In June 2021, the Company completed the sale of the previously closed Eastalco Aluminum smelter site in the state of Maryland in a transaction valued at $100. Upon closing of the transaction, the Company received $94 in cash and recorded a gain of $90 in Other income, net ($90 pre- and $89 after-tax; see Note Q) on the Statement of Consolidated Operations.

Warrick Rolling Mill

On March 31, 2021, Alcoa completed the sale of its rolling mill located at Warrick Operations (Warrick Rolling Mill), an integrated aluminum manufacturing site near Evansville, Indiana (Warrick Operations), to Kaiser Aluminum Corporation (Kaiser) for total consideration of approximately $670, which included the assumption of $69 in other postretirement benefit liabilities. The Company recorded a net gain of $30 in Other income, net (pre- and after-tax, see Note Q) on the Statement of Consolidated Operations, $27 of which was recorded in the first quarter of 2021. Upon the closing of the transaction, the Company recorded estimated liabilities for future site separation commitments and remaining transaction costs associated with the sales agreement. The Company recorded a charge of $5 in the second quarter and six-month period ended June 30, 2022 in Other income, net related to additional costs of existing site separation commitments. In the second quarter and six-month period of 2022, the Company spent $7 and $9, respectively, against the reserve. Approximately half of the remaining balance of $70 at June 30, 2022 is expected to be paid in 2022, with the remainder to be spent through 2023.

In connection with the transaction, Alcoa and Kaiser entered into a market-based metal supply agreement and a ground lease agreement for the Warrick Rolling Mill property, which Alcoa continues to own. Approximately 1,150 employees at Warrick Rolling Mill, which includes the casthouse, hot mill, cold mills, and coating and slitting lines, became employees of Kaiser as a result of the transaction. Alcoa continues to own and operate the site's aluminum smelter and the power plant. The remaining Warrick Operations site results are included within the Aluminum segment.

D. Restructuring and Other Charges, Net – Alcoa Corporation recorded a net benefit of $75 in the second quarter of 2022 and a net charge of $50 in the six-month period of 2022 in Restructuring and other charges, net, which were comprised of:

- A reversal of $83 (both periods) for the reversal of a valuation allowance on Brazil value added taxes (VAT) (see Note Q);
- A net charge of $3 and net reversal of $6, respectively, for changes in estimated take-or-pay contract costs at the closed Wenatchee (Washington) smelter and the curtailed Intalco (Washington) smelter;
- A net charge of $3 (see Note P) and $2, respectively, for site remediation at previously closed sites;
- A charge of $2 and $79, respectively, for the offer made to the workers of the divested Avilés and La Coruña facilities to settle various legal disputes related to the 2019 divestiture (see Note P);
- A charge of $58 (six-month period only) for an asset impairment related to the sale of the Company's interest in MRN (see Note H).

In the second quarter and six-month period of 2021, Alcoa Corporation recorded Restructuring and other charges, net, of $33 and $40, respectively, which were comprised of:

- A net charge of $39 (both periods) related to the settlement of certain pension benefits (see Note K);
- A reversal of $5 (both periods) due to lower costs for waste treatment at a previously closed Suriname site;
- A reversal of $5 (both periods) due to lower costs for site remediation related to a previously closed site in Brazil;
- A charge of $3 and $9, respectively, for additional take or pay contract costs related to the curtailed Wenatchee (Washington) and Intalco (Washington) smelters;
- A net charge of $9 (six-month period only) related to the settlement and curtailment of certain other postretirement benefits resulting from the sale of the Warrick Rolling Mill (see Note K);
- A $12 reversal (six-month period only) of remaining environmental and asset retirement obligation reserves at a previously closed Tennessee site due to the completion of demolition and the determination that remaining site remediation is no longer required (see Note P). The reserves were originally established through a restructuring charge upon closure of the site; and,

- A net charge of $1 and $5, respectively, for several other insignificant items.

Alcoa Corporation does not include Restructuring and other charges, net in the results of its reportable segments. The impact of allocating such charges to segment results would have been as follows:

	Second quarter ended June 30,		Six months ended June 30,	
	2022	2021	2022	2021
Bauxite	$ —	$ —	$ 58	$ —
Alumina	(83)	—	(83)	—
Aluminum	5	3	73	18
Segment total	(78)	3	48	18
Corporate	3	30	2	22
Total Restructuring and other charges, net	$ (75)	$ 33	$ 50	$ 40

In December 2021, the Company announced the two-year curtailment of 228 kmt of smelting capacity at the San Ciprián (Spain) aluminum smelter as a result of an agreement reached with the workers at the site to suspend production due to exorbitant energy prices in Spain. As a result of the curtailment, a restructuring reserve of $62 was established at December 31, 2021 related to certain financial employee and contractual obligations during the curtailment period. In the second quarter and six-month period of 2022, cash payments of $6 and $8, respectively, were made against the reserve.

Activity and reserve balances for restructuring charges were as follows:

	Severance and employee termination costs	Other costs	Total
Balance at December 31, 2020	$ 6	$ 57	$ 63
Restructuring and other charges, net	1	80	81
Cash payments	(4)	(25)	(29)
Reversals and other	—	(22)	(22)
Balance at December 31, 2021	3	90	93
Restructuring and other charges, net	—	75	75
Cash payments	(1)	(16)	(17)
Reversals and other	—	(8)	(8)
Balance at June 30, 2022	$ 2	$ 141	$ 143

The activity and reserve balances include only Restructuring and other charges, net that impact the reserves for Severance and employee termination costs and Other costs. Restructuring and other charges, net that affected other accounts such as Other noncurrent assets (see Note Q), environmental obligations (see Note P), and Investments (see Note H) are excluded from the above activity and balances. Reversals and other includes reversals of previously recorded liabilities and foreign currency translation impacts.

The noncurrent portion of the reserve was $33 and $43 at June 30, 2022 and December 31, 2021, respectively.

E. Segment Information – Alcoa Corporation is a producer of bauxite, alumina, and aluminum products. The Company has three operating and reportable segments, which are organized by product on a global basis: Bauxite, Alumina, and Aluminum. Segment performance under Alcoa Corporation's management reporting system is evaluated based on a number of factors; however, the primary measure of performance is the adjusted earnings before interest, taxes, depreciation, and amortization (Adjusted EBITDA) of each segment. The Company calculates Segment Adjusted EBITDA as Total sales (third-party and intersegment) minus the following items: Cost of goods sold; Selling, general administrative, and other expenses; and Research and development expenses. Alcoa Corporation's Adjusted EBITDA may not be comparable to similarly titled measures of other companies. The chief operating decision maker function regularly reviews the financial information, including Sales and Adjusted EBITDA, of these three operating segments to assess performance and allocate resources.

The operating results of Alcoa Corporation's reportable segments were as follows (differences between segment totals and consolidated amounts are in Corporate):

	Bauxite	Alumina	Aluminum	Total
Second quarter ended June 30, 2022				
Sales:				
Third-party sales	$ 34	$ 1,077	$ 2,539	$ 3,650
Intersegment sales	165	489	8	662
Total sales	$ 199	$ 1,566	$ 2,547	$ 4,312
Segment Adjusted EBITDA	$ 5	$ 343	$ 596	$ 944
Supplemental information:				
Depreciation, depletion, and amortization	$ 35	$ 49	$ 71	$ 155
Equity (loss) income	$ —	$ (5)	$ 40	$ 35
Second quarter ended June 30, 2021				
Sales:				
Third-party sales	$ 39	$ 688	$ 2,102	$ 2,829
Intersegment sales	179	343	3	525
Total sales	$ 218	$ 1,031	$ 2,105	$ 3,354
Segment Adjusted EBITDA	$ 41	$ 124	$ 460	$ 625
Supplemental information:				
Depreciation, depletion, and amortization	$ 32	$ 50	$ 73	$ 155
Equity (loss) income	$ —	$ (1)	$ 28	$ 27

	Bauxite	Alumina	Aluminum	Total
Six months ended June 30, 2022				
Sales:				
Third-party sales	$ 77	$ 1,932	$ 4,927	$ 6,936
Intersegment sales	335	907	15	1,257
Total sales	$ 412	$ 2,839	$ 4,942	$ 8,193
Segment Adjusted EBITDA	$ 43	$ 605	$ 1,309	$ 1,957
Supplemental information:				
Depreciation, depletion, and amortization	$ 70	$ 99	$ 140	$ 309
Equity (loss) income	$ —	$ (4)	$ 79	$ 75
Six months ended June 30, 2021				
Sales:				
Third-party sales	$ 97	$ 1,448	$ 4,149	$ 5,694
Intersegment sales	364	707	5	1,076
Total sales	$ 461	$ 2,155	$ 4,154	$ 6,770
Segment Adjusted EBITDA	$ 100	$ 351	$ 743	$ 1,194
Supplemental information:				
Depreciation, depletion, and amortization	$ 89	$ 96	$ 146	$ 331
Equity (loss) income	$ —	$ (6)	$ 41	$ 35

The following table reconciles total Segment Adjusted EBITDA to Consolidated net income attributable to Alcoa Corporation:

	Second quarter ended June 30,		Six months ended June 30,	
	2022	2021	2022	2021
Total Segment Adjusted EBITDA	$ 944	$ 625	$ 1,957	$ 1,194
Unallocated amounts:				
Transformation[1]	(11)	(13)	(25)	(24)
Intersegment eliminations	20	35	122	28
Corporate expenses[2]	(35)	(28)	(64)	(54)
Provision for depreciation, depletion, and amortization	(161)	(161)	(321)	(343)
Restructuring and other charges, net (D)	75	(33)	(50)	(40)
Interest expense	(30)	(67)	(55)	(109)
Other income, net (Q)	206	105	220	129
Other[3]	(100)	(2)	(113)	(8)
Consolidated income before income taxes	908	461	1,671	773
Provision for income taxes	(234)	(111)	(444)	(204)
Net income attributable to noncontrolling interest	(125)	(41)	(209)	(85)
Consolidated net income attributable to Alcoa Corporation	$ 549	$ 309	$ 1,018	$ 484

(1) Transformation includes, among other items, the Adjusted EBITDA of previously closed operations.
(2) Corporate expenses are composed of general administrative and other expenses of operating the corporate headquarters and other global administrative facilities, as well as research and development expenses of the corporate technical center.
(3) Other includes certain items that are not included in the Adjusted EBITDA of the reportable segments.

The following table details Alcoa Corporation's Sales by product division:

	Second quarter ended June 30,		Six months ended June 30,	
	2022	2021	2022	2021
Primary aluminum	$ 2,624	$ 2,112	$ 5,071	$ 3,839
Alumina	1,064	684	1,914	1,444
Energy	40	49	81	88
Bauxite	27	34	55	86
Flat-rolled aluminum[1]	—	—	—	320
Other[2]	(111)	(46)	(184)	(74)
	$ 3,644	$ 2,833	$ 6,937	$ 5,703

(1) Flat-rolled aluminum represented sales of the Warrick Rolling Mill through the sale of the facility on March 31, 2021 (see Note C).
(2) Other includes realized gains and losses related to embedded derivative instruments designated as cash flow hedges of forward sales of aluminum.

F. Earnings Per Share – Basic earnings per share (EPS) amounts are computed by dividing earnings by the average number of common shares outstanding. Diluted EPS amounts assume the issuance of common stock for all potentially dilutive share equivalents outstanding.

The information used to compute basic and diluted EPS attributable to Alcoa Corporation common shareholders was as follows (shares in millions):

	Second quarter ended June 30,		Six months ended June 30,	
	2022	2021	2022	2021
Net income attributable to Alcoa Corporation	$ 549	$ 309	$ 1,018	$ 484
Average shares outstanding – basic	182	187	183	186
Effect of dilutive securities:				
Stock options	—	—	—	—
Stock units	4	3	4	3
Average shares outstanding – diluted	186	190	187	189

All options to purchase shares of common stock outstanding as of June 30, 2022 were included in the computation of diluted EPS. No options had an exercise price greater than the average market price of Alcoa Corporation's common stock.

Options to purchase less than one million shares of common stock outstanding at June 30, 2021 were excluded because they had a weighted average exercise price of $44.11 per share which was greater than the average market price of Alcoa Corporation's common stock.

G. Accumulated Other Comprehensive Loss

The following table details the activity of the three components that comprise Accumulated other comprehensive loss for both Alcoa Corporation's shareholders and Noncontrolling interest:

	Alcoa Corporation		Noncontrolling interest	
	Second quarter ended June 30,		Second quarter ended June 30,	
	2022	2021	2022	2021
Pension and other postretirement benefits (K)				
Balance at beginning of period	$ (860)	$ (2,405)	$ (12)	$ (66)
Other comprehensive income (loss):				
Unrecognized net actuarial loss and prior service cost/benefit	30	164	1	2
Tax expense(2)	(6)	—	—	—
Total Other comprehensive income before reclassifications, net of tax	24	164	1	2
Amortization of net actuarial loss and prior service cost/benefit(1)	29	89	(1)	1
Tax expense(2)	(1)	—	—	—
Total amount reclassified from Accumulated other comprehensive loss, net of tax(6)	28	89	(1)	1
Total Other comprehensive income	52	253	—	3
Balance at end of period	$ (808)	$ (2,152)	$ (12)	$ (63)
Foreign currency translation				
Balance at beginning of period	$ (2,288)	$ (2,561)	$ (839)	$ (904)
Other comprehensive (loss) income	(370)	204	(132)	51
Balance at end of period	$ (2,658)	$ (2,357)	$ (971)	$ (853)
Cash flow hedges (L)				
Balance at beginning of period	$ (1,926)	$ (912)	$ —	$ (4)
Other comprehensive income (loss):				
Net change from periodic revaluations	1,184	(397)	1	9
Tax (expense) benefit(2)	(164)	75	—	(3)
Total Other comprehensive income (loss) before reclassifications, net of tax	1,020	(322)	1	6
Net amount reclassified to earnings:				
Aluminum contracts(3)	132	72	—	—
Financial contracts(4)	—	(4)	—	(2)
Interest rate contracts(5)	—	1	—	—
Foreign exchange contracts(3)	(3)	(2)	—	—
Sub-total	129	67	—	(2)
Tax (expense) benefit(2)	(12)	(11)	—	1
Total amount reclassified from Accumulated other comprehensive loss, net of tax(6)	117	56	—	(1)
Total Other comprehensive income (loss)	1,137	(266)	1	5
Balance at end of period	$ (789)	$ (1,178)	$ 1	$ 1
Total Accumulated other comprehensive loss	$ (4,255)	$ (5,687)	$ (982)	$ (915)

	Alcoa Corporation		Noncontrolling interest	
	Six months ended June 30,		Six months ended June 30,	
	2022	2021	2022	2021
Pension and other postretirement benefits (K)				
Balance at beginning of period	$ (882)	$ (2,536)	$ (13)	$ (67)
Other comprehensive income (loss):				
Unrecognized net actuarial loss and prior service cost/benefit	23	233	1	2
Tax (expense) benefit(2)	(5)	2	—	—
Total Other comprehensive income before reclassifications, net of tax	18	235	1	2
Amortization of net actuarial loss and prior service cost/benefit(1)	57	150	—	2
Tax expense(2)	(1)	(1)	—	—
Total amount reclassified from Accumulated other comprehensive loss, net of tax(6)	56	149	—	2
Total Other comprehensive income	74	384	1	4
Balance at end of period	$ (808)	$ (2,152)	$ (12)	$ (63)
Foreign currency translation				
Balance at beginning of period	$ (2,614)	$ (2,385)	$ (937)	$ (844)
Other comprehensive (loss) income	(44)	28	(34)	(9)
Balance at end of period	$ (2,658)	$ (2,357)	$ (971)	$ (853)
Cash flow hedges (L)				
Balance at beginning of period	$ (1,096)	$ (708)	$ (1)	$ (1)
Other comprehensive (loss) income:				
Net change from periodic revaluations	121	(700)	2	(1)
Tax (expense) benefit(2)	(11)	131	—	—
Total Other comprehensive income (loss) before reclassifications, net of tax	110	(569)	2	(1)
Net amount reclassified to earnings:				
Aluminum contracts(3)	242	113	—	—
Financial contracts(4)	—	5	—	4
Interest rate contracts(5)	4	4	—	—
Foreign exchange contracts(3)	(3)	(3)	—	—
Sub-total	243	119	—	4
Tax expense(2)	(46)	(20)	—	(1)
Total amount reclassified from Accumulated other comprehensive loss, net of tax(6)	197	99	—	3
Total Other comprehensive income (loss)	307	(470)	2	2
Balance at end of period	$ (789)	$ (1,178)	$ 1	$ 1
Total Accumulated other comprehensive loss	$ (4,255)	$ (5,687)	$ (982)	$ (915)

(1) These amounts were included in the computation of net periodic benefit cost for pension and other postretirement benefits (see Note K).
(2) These amounts were reported in Provision for income taxes on the accompanying Statement of Consolidated Operations.
(3) These amounts were primarily reported in Sales on the accompanying Statement of Consolidated Operations.
(4) These amounts were reported in Cost of goods sold on the accompanying Statement of Consolidated Operations.
(5) These amounts were reported in Other income, net of the accompanying Statement of Consolidated Operations.
(6) A positive amount indicates a corresponding charge to earnings and a negative amount indicates a corresponding benefit to earnings.

H. Investments – A summary of unaudited financial information for Alcoa Corporation's equity investments is as follows (amounts represent 100% of investee financial information):

Second quarter ended June 30, 2022	Saudi Arabia Joint Venture	Mining	Energy	Other
Sales	$ 1,016	$ 191	$ 65	$ 125
Cost of goods sold	712	123	23	115
Net income (loss)	156	32	29	(30)
Equity in net income (loss) of affiliated companies, before reconciling adjustments	39	12	12	(15)
Other	(4)	(2)	(2)	19
Alcoa Corporation's equity in net income of affiliated companies	35	10	10	4

Second quarter ended June 30, 2021				
Sales	$ 741	$ 197	$ 60	$ 96
Cost of goods sold	508	146	32	78
Net income (loss)	102	25	27	(4)
Equity in net income (loss) of affiliated companies, before reconciling adjustments	26	9	11	(2)
Other	—	(1)	—	8
Alcoa Corporation's equity in net income of affiliated companies	26	8	11	6

Six months ended June 30, 2022				
Sales	$ 1,913	$ 422	$ 127	$ 242
Cost of goods sold	1,328	269	53	222
Net income (loss)	311	81	52	(58)
Equity in net income (loss) of affiliated companies, before reconciling adjustments	78	26	21	(28)
Other	(4)	(2)	(1)	15
Alcoa Corporation's equity in net income (loss) of affiliated companies	74	24	20	(13)

Six months ended June 30, 2021				
Sales	$ 1,423	$ 370	$ 115	$ 191
Cost of goods sold	1,011	269	57	171
Net income (loss)	147	20	52	(6)
Equity in net income (loss) of affiliated companies, before reconciling adjustments	37	10	21	(3)
Other	(4)	(1)	—	11
Alcoa Corporation's equity in net income of affiliated companies	33	9	21	8

The Saudi Arabia joint venture consisting of the bauxite mine and alumina refinery (MBAC) and the smelter (MAC) is owned 74.9% by the Saudi Arabian Mining Company (Ma'aden) and 25.1% by Alcoa. In accordance with the June 2019 amended joint venture agreement, Ma'aden's put option and Alcoa Corporation's call option, relating to additional interests in the joint venture, were exercisable for a period of six months after October 1, 2021. On March 31, 2022, Ma'aden's and Alcoa's put and call options, respectively, expired with neither party exercising their options.

The Company's basis in the ELYSIS™ Limited Partnership as of June 30, 2022 and 2021, included in Other in the table above, has been reduced to zero for its share of losses incurred to date. As a result, the Company has $69 in unrecognized losses as of June 30, 2022 that will be recognized upon additional contributions into the partnership.

On February 15, 2022, the Company signed an agreement to sell its share of its investment in MRN in Brazil for $10 to South32 Minerals S.A. Related to this transaction, the Company recorded an asset impairment of $58 in the first quarter of 2022 in Restructuring and other charges, net on the Statement of Consolidated Operations. On April 30, 2022, Alcoa completed the sale of its investment in MRN. An additional $30 in cash could be paid to the Company in the future if certain post-closing conditions related to future MRN mine development are satisfied.

I. Inventories

	June 30, 2022	December 31, 2021
Finished goods	$ 583	$ 538
Work-in-process	258	85
Bauxite and alumina	628	539
Purchased raw materials	912	619
Operating supplies	175	175
	$ 2,556	$ 1,956

J. Debt

Credit Facilities

Revolving Credit Facility

On June 27, 2022, Alcoa Corporation and Alcoa Nederland Holding B.V. (ANHBV), a wholly owned subsidiary of Alcoa Corporation and the borrower, entered into an amendment and restatement agreement (the Third Amendment and Restatement) (as amended and restated, the Revolving Credit Facility) that provides additional flexibility to the Company and ANHBV by (i) extending the maturity date of the Revolving Credit Facility from November 2023 to June 2027, (ii) reducing the aggregate commitments under the facility from $1,500 to $1,250, (iii) providing a release by the lenders of the collateral package that had previously secured the Revolving Credit Facility, which will continue so long as certain credit ratings are maintained, (iv) increasing the maximum leverage ratio from 2.75 to 1.00 to 3.25 to 1.00, which increases following material acquisitions for four consecutive fiscal quarters following an acquisition, (v) providing a debt to capitalization ratio not to exceed .60 to 1.00 to replace the maximum leverage ratio upon a ratings upgrade to investment grade by Moody's Investor Service (Moody's) or Standard and Poor's Global Ratings (S&P), and (vi) providing flexibility for dividends and other restricted payments, to make investments, and to incur additional indebtedness. The Revolving Credit Facility implements a sustainability adjustment to the applicable margin and commitment fee that may result in a positive or negative adjustment based on two of the Company's existing sustainability metrics.

If Alcoa Corporation or ANHBV, as applicable, fails to have a rating of at least Ba1 from Moody's and BB+ from S&P, then the Company would be required to execute all security documents to re-secure collateral under the Revolving Credit Facility.

As of June 30, 2022, the Company was in compliance with all covenants. The Company may access the entire amount of commitments under the Revolving Credit Facility. There were no borrowings outstanding at June 30, 2022 and December 31, 2021, and no amounts were borrowed during the second quarter and six-months ended 2022 and 2021 related to this facility.

K. Pension and Other Postretirement Benefits

The components of net periodic benefit cost were as follows:

	Second quarter ended June 30,		Six months ended June 30,	
Pension benefits	**2022**	**2021**	**2022**	**2021**
Service cost	$ 4	$ 5	$ 7	$ 10
Interest cost(1)	27	29	54	58
Expected return on plan assets(1)	(44)	(73)	(88)	(146)
Recognized net actuarial loss(1)	27	50	55	101
Settlements(2)	—	39	—	39
Net periodic benefit cost	$ 14	$ 50	$ 28	$ 62

	Second quarter ended June 30,		Six months ended June 30,	
Other postretirement benefits	**2022**	**2021**	**2022**	**2021**
Service cost	$ 1	$ 1	$ 2	$ 3
Interest cost(1)	4	4	8	8
Recognized net actuarial loss(1)	5	5	9	11
Amortization of prior service benefit(1)	(4)	(4)	(7)	(8)
Settlements(2)	—	—	—	26
Curtailments(2)	—	—	—	(17)
Net periodic benefit cost	$ 6	$ 6	$ 12	$ 23

(1) These amounts were reported in Other income, net on the accompanying Statement of Consolidated Operations (see Note Q).
(2) These amounts were reported in Restructuring and other charges, net on the accompanying Statements of Consolidated Operations (see Note D) and Cash Flows.

Funding and Cash Flows. It is Alcoa's policy to fund amounts for defined benefit pension plans sufficient to meet the minimum requirements set forth in each applicable country's benefits laws and tax laws, including the Employee Retirement Income Security Act of 1974 (ERISA) for U.S. plans. From time to time, the Company contributes additional amounts as deemed appropriate.

Under ERISA regulations, a plan sponsor that establishes a pre-funding balance by making discretionary contributions to a U.S. defined benefit pension plan may elect to apply all or a portion of this balance toward its minimum required contribution obligations to the related plan in future years.

In the second quarter of 2022, management made such elections related to the Company's U.S. plans and intends to do so for the remainder of 2022. As a result, Alcoa's minimum required contribution to defined benefit pension plans in 2022 is estimated to be approximately $15, of which approximately $5 was contributed to non-U.S. plans during the second quarter of 2022. In the six-month period of 2022, $9 was contributed to non-U.S. plans.

In the second quarter of 2021, $6 was contributed to non-U.S. plans. In the six-month period of 2021, $49 and $20 were contributed to U.S. and non-U.S. plans, respectively.

L. Derivatives and Other Financial Instruments

Fair Value

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value hierarchy distinguishes between (i) market participant assumptions developed based on market data obtained from independent sources (observable inputs) and (ii) an entity's own assumptions about market participant assumptions developed based on the best information available in the circumstances (unobservable inputs). The fair value hierarchy consists of three broad levels, which gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). The three levels of the fair value hierarchy are described below:

- Level 1 - Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities.
- Level 2 - Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly, including quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities in markets that are not active; inputs other than quoted prices that are observable for the asset or liability (e.g., interest rates); and inputs that are derived principally from or corroborated by observable market data by correlation or other means.
- Level 3 - Inputs that are both significant to the fair value measurement and unobservable.

Derivatives

Alcoa Corporation is exposed to certain risks relating to its ongoing business operations, including the risks of changing commodity prices, foreign currency exchange rates and interest rates. Alcoa Corporation's commodity and derivative activities include aluminum, energy, foreign exchange, and interest rate contracts which are held for purposes other than trading. They are used primarily to mitigate uncertainty and volatility, and to cover underlying exposures. While Alcoa does not generally enter into derivative contracts to mitigate the risk associated with changes in aluminum price, the Company may do so in isolated cases to address discrete commercial or operational conditions. Alcoa is not involved in trading activities for energy, weather derivatives, or other nonexchange commodity trading activities.

Alcoa Corporation's aluminum, energy, and foreign exchange contracts are predominantly classified as Level 1 under the fair value hierarchy. All of the Level 1 contracts are designated as either fair value or cash flow hedging instruments. Alcoa Corporation also has several derivative instruments classified as Level 3 under the fair value hierarchy, which are either designated as cash flow hedges or undesignated. Alcoa includes the changes in its equity method investee's Level 2 derivatives in Accumulated other comprehensive loss in the accompanying Consolidated Balance Sheet.

The following tables present the detail for Level 1 and 3 derivatives (see additional Level 3 information in further tables below):

	June 30, 2022		December 31, 2021	
	Assets	Liabilities	Assets	Liabilities
Level 1 derivative instruments	$ 121	$ 40	$ 19	$ 29
Level 3 derivative instruments	118	1,059	2	1,293
Total	$ 239	$ 1,099	$ 21	$ 1,322
Less: Current	224	232	14	274
Noncurrent	$ 15	$ 867	$ 7	$ 1,048

	2022		2021	
Second quarter ended June 30,	Unrealized gain recognized in Other comprehensive loss	Realized loss reclassed from Other comprehensive loss to earnings	Unrealized (loss) gain recognized in Other comprehensive loss	Realized loss reclassed from Other comprehensive loss to earnings
Level 1 derivative instruments	$ 332	$ (14)	$ 6	$ (3)
Level 3 derivative instruments	850	(115)	(394)	(60)
Noncontrolling and equity interest (Level 2)	2	—	(9)	(4)
Total	$ 1,184	$ (129)	$ (397)	$ (67)

For the quarter ended June 30, 2022, the realized loss of $14 on Level 1 cash flow hedges was comprised of a $13 loss recognized in Sales and a $1 loss recognized in Cost of goods sold. For the quarter ended June 30, 2021, the realized loss of $3 on Level 1 cash flow hedges was comprised of a $2 loss recognized in Sales and a $1 loss recognized in Cost of goods sold.

	2022		2021	
Six months ended June 30,	Unrealized gain recognized in Other comprehensive loss	Realized loss reclassed from Other comprehensive loss to earnings	Unrealized (loss) gain recognized in Other comprehensive loss	Realized loss reclassed from Other comprehensive loss to earnings
Level 1 derivative instruments	$ 99	$ (20)	$ (8)	$ (3)
Level 3 derivative instruments	13	(219)	(694)	(115)
Noncontrolling and equity interest (Level 2)	9	(4)	2	(1)
Total	$ 121	$ (243)	$ (700)	$ (119)

For the six months ended June 30, 2022, the realized loss of $20 on Level 1 cash flow hedges was comprised of a $18 loss recognized in Sales and a $2 loss recognized in Cost of goods sold. For the six months ended June 30, 2021, the realized loss of $3 on Level 1 cash flow hedges was comprised of a $2 loss recognized in Sales and a $1 loss recognized in Cost of goods sold.

The following table presents the outstanding quantities of derivative instruments classified as Level 1:

	Classification	June 30, 2022	June 30, 2021
Aluminum (in kmt)	Commodity forwards	438	22
Foreign currency (in millions of euro)	Foreign exchange forwards	75	114
Foreign currency (in millions of Norwegian krone)	Foreign exchange forwards	388	—
Foreign currency (in millions of Brazilian real)	Foreign exchange forwards	1,399	341

Alcoa routinely uses Level 1 aluminum derivative instruments to manage exposures to changes in the fair value of firm customer commitments for the purchases or sales of aluminum. Additionally, Alcoa uses Level 1 aluminum derivative instruments to manage exposures to changes in the LME associated with the Alumar (Brazil) restart (April 2022 through December 2023) and the San Ciprián (Spain) strike (expires December 2022).

Alcoa Corporation uses Level 1 foreign exchange forward contracts to mitigate the risk of foreign exchange exposure related to euro power purchases in Norway (expires December 2026), krone capital expenditures in Norway (expires June 2025), U.S. dollar aluminum sales in Australia (expired June 2021), and U.S. dollar alumina sales in Brazil (expires December 2024).

In March 2021, Alcoa entered into four financial contracts (Financial contracts (undesignated), below) with three counterparties to hedge the anticipated power requirements at one of its smelters for the period from August 1, 2021 through June 30, 2026. A fifth financial contract (undesignated) was entered into in November 2021 with an effective date of September 30, 2022 through June 30, 2026. Two of these financial contracts include LME-linked pricing components and do not qualify for hedge accounting treatment.

Management elected not to apply hedge accounting treatment for the other three financial contracts as the value of these contracts is not significant. Unrealized and realized gains and losses on these financial contracts are included in Other income, net on the accompanying Statement of Consolidated Operations.

Additional Level 3 Disclosures

The following table presents quantitative information related to the significant unobservable inputs described above for Level 3 derivative instruments (megawatt hours in MWh):

	June 30, 2022	Unobservable Input	Unobservable Input Range	
Asset Derivatives				
Financial contract (undesignated)	118	Interrelationship of forward energy price, LME forward price and the Consumer Price Index	Electricity (per MWh)	2022: $185.58 2022: $95.22
			LME (per mt)	2022: $2,433 2022: $2,444
Total Asset Derivatives	$ 118			
Liability Derivatives				
Power contract	$ 246	MWh of energy needed to produce the forecasted mt of aluminum	LME (per mt)	2022: $2,433 2027: $2,544
			Electricity	Rate of 4 million MWh per year
Power contracts	812	MWh of energy needed to produce the forecasted mt of aluminum	LME (per mt)	2022: $2,433 2029: $2,617 2036: $2,912
			Midwest premium (per pound)	2022: $0.3120 2029: $0.2820 2036: $0.2820
			Electricity	Rate of 18 million MWh per year
Power contract (undesignated)	1	Estimated spread between the 30-year debt yield of Alcoa and the counterparty	Credit spread	1.49%: 30-year debt yield spread 6.32%: Alcoa (estimated) 4.83%: counterparty
Total Liability Derivatives	$ 1,059			

The fair values of Level 3 derivative instruments recorded in the accompanying Consolidated Balance Sheet were as follows:

Asset Derivatives	**June 30, 2022**	**December 31, 2021**
Derivatives not designated as hedging instruments:		
Current—financial contract	$ 118	$ 2
Total derivatives not designated as hedging instruments	$ 118	$ 2
Total Asset Derivatives	$ 118	$ 2
Liability Derivatives		
Derivatives designated as hedging instruments:		
Current—power contracts	$ 202	$ 262
Noncurrent—power contracts	856	1,028
Total derivatives designated as hedging instruments	$ 1,058	$ 1,290
Derivatives not designated as hedging instruments:		
Current—embedded credit derivative	$ 1	$ 1
Noncurrent—embedded credit derivative	—	2
Total derivatives not designated as hedging instruments	$ 1	$ 3
Total Liability Derivatives	$ 1,059	$ 1,293

Assuming market rates remain constant with the rates at June 30, 2022, a realized loss of $202 related to power contracts is expected to be recognized in Sales over the next 12 months.

At June 30, 2022 and December 31, 2021, the power contracts with embedded derivatives designated as cash flow hedges hedge forecasted aluminum sales of 1,797 kmt and 1,905 kmt, respectively.

The following tables present the reconciliation of activity for Level 3 derivative instruments:

	Assets	Liabilities	
Second quarter ended June 30, 2022	**Financial contract**	**Power contracts**	**Embedded credit derivative**
April 1, 2022	$ 14	$ 2,023	$ 1
Total gains or losses included in:			
Sales (realized)	—	(115)	—
Other income, net (unrealized/realized)	176	—	—
Other comprehensive loss (unrealized)	—	(850)	—
Other	(9)	—	—
June 30, 2022	$ 181	$ 1,058	$ 1
Change in unrealized gains or losses included in earnings for derivative instruments held at June 30, 2022:			
Other income, net	$ 106	$ —	$ —

	Assets	Liabilities	
Six months ended June 30, 2022	**Financial contract**	**Power contracts**	**Embedded credit derivative**
January 1, 2022	$ 2	$ 1,290	$ 3
Total gains or losses included in:			
Sales (realized)	—	(219)	—
Other income, net (unrealized/realized)	189	—	(2)
Other comprehensive loss (unrealized)	—	(13)	—
Other	(10)	—	—
June 30, 2022	$ 181	$ 1,058	$ 1
Change in unrealized gains or losses included in earnings for derivative instruments held at June 30, 2022:			
Other income, net	$ 119	$ —	$ (2)

There were no purchases, sales, or settlements of Level 3 derivative instruments in the periods presented.

Other Financial Instruments

The carrying values and fair values of Alcoa Corporation's other financial instruments were as follows:

	June 30, 2022		December 31, 2021	
	Carrying value	**Fair value**	**Carrying value**	**Fair value**
Cash and cash equivalents	$ 1,638	$ 1,638	$ 1,814	$ 1,814
Restricted cash	110	110	110	110
Short-term borrowings	75	75	75	75
Long-term debt due within one year	1	1	1	1
Long-term debt, less amount due within one year	1,725	1,650	1,726	1,865

The following methods were used to estimate the fair values of other financial instruments:

Cash and cash equivalents and Restricted cash. The carrying amounts approximate fair value because of the short maturity of the instruments. The fair value amounts for Cash and cash equivalents and Restricted cash were classified in Level 1 of the fair value hierarchy.

Short-term borrowings and Long-term debt, including amounts due within one year. The fair value was based on quoted market prices for public debt and on interest rates that are currently available to Alcoa Corporation for issuance of debt with similar terms and maturities for non-public debt. The fair value amounts for all Long-term debt were classified in Level 2 of the fair value hierarchy.

M. Income Taxes – Alcoa Corporation's estimated annualized effective tax rate (AETR) for 2022 as of June 30, 2022 differs from the U.S. federal statutory rate of 21% primarily due to foreign jurisdictions with higher statutory tax rates partially offset by income in certain jurisdictions with full valuation allowances resulting in no additional tax expense as loss carryforwards are utilized.

	Six months ended June 30,	
	2022	2021
Income before income taxes	$ 1,671	$ 773
Estimated annualized effective tax rate	26.4 %	28.0 %
Income tax expense	$ 440	$ 217
Unfavorable (favorable) tax impact related to losses in jurisdictions with no tax benefit	2	(12)
Discrete tax expense (benefit)	2	(1)
Provision for income taxes	$ 444	$ 204

The Company's subsidiaries in Iceland have a full valuation allowance recorded against deferred tax assets, which was established in 2015 and 2017, as the Company believed it is more likely than not that these tax benefits would not be realized. If current market conditions were to continue or improve, management may conclude that Iceland's deferred tax assets may be realized, resulting in a future reversal of the valuation allowance, generating a non-cash benefit in the period recorded. Iceland's net deferred tax assets, excluding the valuation allowance, were $115 as of June 30, 2022.

N. Leasing

Management records a right-of-use asset and lease liability for several types of operating leases, including land and buildings, plant equipment, vehicles, and computer equipment. The leases have remaining terms of less than one to 35 years. The discount rate applied to these leases is the Company's incremental borrowing rate based on the information available at the commencement date in determining the present value of lease payments, unless there is a rate implicit in the lease agreement. The Company does not have material financing leases.

Lease expense and operating cash flows include:

	Second quarter ended June 30,		Six months ended June 30,	
	2022	2021	2022	2021
Costs from operating leases	$ 11	$ 17	$ 23	$ 38
Variable lease payments	7	4	10	5
Short-term rental expense	1	1	1	1

The weighted average lease term and weighted average discount rate as of June 30, 2022 and December 31, 2021 were as follows:

	June 30, 2022	December 31, 2021
Weighted average lease term for operating leases (years)	4.8	4.9
Weighted average discount rate for operating leases	5.3%	5.2%

The following represents the aggregate right-of use assets and related lease obligations recognized in the Consolidated Balance Sheet at:

	June 30, 2022	December 31, 2021
Properties, plants and equipment, net	$ 86	$ 97
Other current liabilities	$ 32	$ 35
Other noncurrent liabilities and deferred credits	55	64
Total operating lease liabilities	$ 87	$ 99

New leases of $6 and $9 were added during the second quarter and six-month period of 2022, respectively.

The future cash flows related to the operating lease obligations as of June 30, 2022 were as follows:

2022 (excluding the six months ended June 30)	$	20
2023		29
2024		17
2025		12
2026		9
Thereafter		17
Total lease payments (undiscounted)		104
Less: discount to net present value		(17)
Total	$	87

O. Asset Retirement Obligations

Alcoa records asset retirement obligations (AROs) related to legal obligations associated with the standard operation of bauxite mines, alumina refineries, and aluminum smelters. These AROs consist primarily of costs associated with mine reclamation, closure of bauxite residue areas, spent pot lining disposal, and landfill closures. The Company also recognizes AROs for the disposal of regulated waste materials related to the demolition of facilities and for any significant lease restoration obligations, if required by a lease agreement.

The Company recorded a liability of $47 in the second quarter of 2022 when an initial estimate became available for improvements required on both operating and closed bauxite residue areas at the Poços de Caldas (Brazil) refinery to comply with updated impoundment regulations in the region. The additional accruals were recorded with a charge to Cost of goods sold of $39 and a corresponding capitalized asset retirement cost of $8.

P. Contingencies

Environmental Remediation Matters

Alcoa Corporation participates in environmental assessments and cleanups at several locations. These include currently or previously owned or operated facilities and adjoining properties, and waste sites, including Superfund (Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)) sites.

A liability is recorded for environmental remediation when a cleanup program becomes probable and the costs can be reasonably estimated. As assessments and cleanups proceed, the liability is adjusted based on progress made in determining the extent of remedial actions and related costs. The liability can change substantially due to factors such as, among others, the nature and extent of contamination, changes in remedial requirements, and technology advancements.

Alcoa Corporation's environmental remediation reserve balance reflects the most probable costs to remediate identified environmental conditions for which costs can be reasonably estimated. The following table details the changes in the carrying value of recorded environmental remediation reserves:

Balance at December 31, 2020	$	322
Liabilities incurred		21
Cash payments		(23)
Reversals of previously recorded liabilities		(17)
Foreign currency translation and other		6
Balance at December 31, 2021		309
Liabilities incurred		5
Cash payments		(10)
Reversals of previously recorded liabilities		(2)
Foreign currency translation and other		—
Balance at June 30, 2022	$	302

At June 30, 2022 and December 31, 2021, the current portion of Alcoa Corporation's environmental remediation reserve balance was $48 and $44, respectively.

During the six-month period of 2022, the Company incurred liabilities of $5 primarily related to a new phase of work at the former East St. Louis site, which was recorded in Cost of goods sold on the accompanying Statement of Consolidated Operations. Payments related to remediation expenses applied against the reserve were $6 and $10 in the second quarter and six-month period of 2022,

respectively. These amounts include mandated expenditures as well as those not required by any regulatory authority or third party. Further, the Company recorded a reversal of a reserve of $2 during the six-month period of 2022, due to the determination that certain remaining site remediation is no longer required.

During the six-month period of 2021, the Company incurred liabilities of $4 primarily related to wetlands mitigation at the Longview site in Washington and increases for ongoing monitoring and maintenance at various sites. These charges are primarily recorded in Restructuring and other charges, net and Cost of goods sold on the accompanying Statement of Consolidated Operations. Payments related to remediation expenses applied against the reserve were $6 and $11 in the second quarter and six-month period of 2021, respectively. These amounts include mandated expenditures as well as those not required by any regulatory authority or third party. Further, the Company recorded reversals of reserves of $10 and $17 during the second quarter and six-month period of 2021, respectively, related to:

- $5 (both periods) due to lower costs for waste treatment at a previously closed Suriname site;
- $5 (both periods) due to lower costs for site remediation related to a previously closed site in Brazil; and,
- $7 (six-month period only) due to the determination that remaining site remediation is no longer required related to the previously closed Tennessee site.

The estimated timing of cash outflows on the environmental remediation reserve at June 30, 2022 is as follows:

2022 (excluding the six months ended June 30, 2022)	$	29
2023 – 2027		199
Thereafter		74
Total	$	302

Reserve balances at June 30, 2022 and December 31, 2021, associated with significant sites with active remediation underway or for future remediation, were $243 and $247, respectively. In management's judgment, the Company's reserves are sufficient to satisfy the provisions of the respective action plans. Upon changes in facts or circumstances, a change to the reserve may be required. The Company's significant sites include:

Poços de Caldas, Brazil—The reserve associated with the 2015 closure of the Alcoa Alumínio S.A. smelter in Poços de Caldas, Brazil, is for remediation of historic spent potlining storage and disposal areas. The final remediation plan is currently under review; such review could require the reserve balance to be adjusted.

Fusina and Portovesme, Italy—Alcoa Corporation's subsidiary Alcoa Trasformazioni S.r.l. has remediation projects underway for its closed smelter sites at Fusina and Portovesme which have been approved by the Italian Ministry for Ecologic Transition (MET). Work is ongoing for soil remediation at the Fusina site with expected completion in 2024. Soil remediation at the Portovesme site was completed in the first half of 2022. The final remedial design for the groundwater remediation project at Portovesme was completed in 2020 and is awaiting approval from the MET.

Suriname—The reserve associated with the 2017 closure of the Suralco refinery and bauxite mine is for treatment and disposal of refinery waste and soil remediation. The work began in 2017 and is expected to be completed at the end of 2025.

Hurricane Creek, Arkansas—The reserve associated with the 1990 closure of two mining areas and refineries near Hurricane Creek, Arkansas is for ongoing monitoring and maintenance for water quality surrounding the mine areas and residue disposal areas.

Massena, New York—The reserve associated with the 2015 closure of the Massena East smelter by the Company's subsidiary, Reynolds Metals Company, is for subsurface soil remediation to be performed after demolition of the structures. Remediation work commenced in 2021 and will take four to eight years to complete.

Point Comfort, Texas—The reserve associated with the 2019 closure of the Point Comfort alumina refinery is for disposal of industrial wastes contained at the site, subsurface remediation, and post-closure monitoring and maintenance. The final remediation plan is currently under review, which may result in a change to the existing reserve.

Sherwin, Texas—In connection with the 2018 settlement of a dispute related to the previously-owned Sherwin alumina refinery, the Company's subsidiary, Copano Enterprises LLC, accepted responsibility for the final closure of four bauxite residue waste disposal areas (known as the Copano facility). Work commenced on the first residue disposal area in 2018 and will take up to four additional years to complete, depending on the nature of its potential re-use. Other than ongoing maintenance and repair activities, work on the next three areas has not commenced but is expected to be completed by 2048, depending on its potential re-use.

Longview, Washington—In connection with a 2018 Consent Decree and Cleanup Action Plan with the State of Washington Department of Ecology, the Company's subsidiary, Northwest Alloys as landowner, accepted certain responsibilities for future

remediation of contaminated soil and sediments at the site located near Longview, Washington. In December 2020, the lessee of the land, who was a partner in the remediation of the site, filed for bankruptcy and exited the site in January 2021. Remediation design changes for consolidation and remediation of the onsite industrial waste landfills, groundwater remediation, and post-closure monitoring and maintenance at the site was completed in 2021.

Other Sites—The Company is in the process of decommissioning various other plants and remediating sites in several countries for potential redevelopment or to return the land to a natural state. In aggregate, there are approximately 35 remediation projects at these other sites that are planned or underway. These activities will be completed at various times in the future with the latest expected to be in 2026, after which ongoing monitoring and other activities may be required. At June 30, 2022 and December 31, 2021, the reserve balance associated with these activities was $59 and $62, respectively.

Tax

Brazil (AWAB)—In March 2013, AWAB was notified by the Brazilian Federal Revenue Office (RFB) that approximately $110 (R$220) of value added tax credits previously claimed are being disallowed and a penalty of 50% was assessed. Of this amount, AWAB received $41 (R$82) in cash in May 2012. The value added tax credits were claimed by AWAB for both fixed assets and export sales related to the Juruti bauxite mine and São Luís refinery expansion for tax years 2009 through 2011. The RFB has disallowed credits they allege belong to the consortium in which AWAB owns an interest and should not have been claimed by AWAB. Credits have also been disallowed as a result of challenges to apportionment methods used, questions about the use of the credits, and an alleged lack of documented proof. AWAB presented defense of its claim to the RFB on April 8, 2013. In February 2022, the RFB notified AWAB that it had inspected the value added tax credits claimed for 2012 and disallowed $4 (R$19). In its decision, the RFB allowed credits of $14 (R$65) that were similar to those previously disallowed for 2009 through 2011. In July 2022, the RFB notified AWAB that it had inspected the value added tax credits claimed for 2013 and disallowed $13 (R$70). In its decision, the RFB allowed credits of $16 (R$84) that were similar to those previously disallowed for 2009 through 2011. The decisions on the 2012 and 2013 credits provide positive evidence to support management's opinion that there is no basis for these credits to be disallowed. AWAB received the 2012 allowed credits in cash, with interest of $9 (R$44), in March 2022. AWAB will continue to dispute the credits that were disallowed for 2012 and 2013. If AWAB is successful in this administrative process, the RFB would have no further recourse. If unsuccessful in this process, AWAB has the option to litigate at a judicial level. Separately from AWAB's administrative appeal, in June 2015, a new tax law was enacted repealing the provisions in the tax code that were the basis for the RFB assessing a 50% penalty in this matter. As such, the estimated range of reasonably possible loss for these matters is $0 to $46 (R$239). It is management's opinion that the allegations have no basis; however, at this time, the Company is unable to reasonably predict an outcome for this matter.

Australia (AofA)—In December 2019, AofA received a statement of audit position (SOAP) from the Australian Taxation Office (ATO) related to the pricing of certain historic third-party alumina sales. The SOAP proposed adjustments that would result in additional income tax payable by AofA. During 2020, the SOAP was the subject of an independent review process within the ATO. At the conclusion of this process, the ATO determined to continue with the proposed adjustments and issued Notices of Assessment (the Notices) that were received by AofA on July 7, 2020. The Notices asserted claims for income tax payable by AofA of approximately $147 (A$214). The Notices also included claims for compounded interest on the tax amount totaling approximately $488 (A$707).

On September 17, 2020, the ATO issued a position paper with its preliminary view on the imposition of administrative penalties related to the tax assessment issued to AofA. This paper proposed penalties of approximately $88 (A$128).

AofA disagreed with the Notices and with the ATO's proposed position on penalties. In September 2020, AofA lodged formal objections to the Notices. In the fourth quarter of 2020, AofA provided a submission on the ATO's imposition of interest and also submitted a response to the ATO's position paper on penalties. After the ATO completes its review of AofA's response to the penalties position paper, the ATO could issue a penalty assessment.

To date, AofA has not received a response to its submission on the ATO's imposition of interest or its response to the ATO's position paper on penalties.

Through February 1, 2022, AofA did not receive a response from the ATO on AofA's formal objections to the Notices and, on that date, AofA submitted statutory notices to the ATO requiring the ATO to make decisions on AofA's objections within a 60-day period. On April 1, 2022, the ATO issued its decision disallowing the Company's objections related to the income tax assessment, while the position on penalties and interest remains outstanding.

On April 29, 2022, AofA filed proceedings in the Australian Administrative Appeals Tribunal against the ATO to contest the Notices, a process which could last several years. The Company maintains that the sales subject to the ATO's review, which were ultimately sold to Aluminium Bahrain B.S.C., were the result of arm's length transactions by AofA over two decades and were made at arm's length prices consistent with the prices paid by other third-party alumina customers.

In accordance with the ATO's dispute resolution practices, AofA paid 50% of the assessed income tax amount exclusive of interest and any penalties, or approximately $74 (A$107), during the third quarter 2020, and the ATO is not expected to seek further payment

prior to final resolution of the matter. If AofA is ultimately successful, any amounts paid to the ATO as part of the 50% payment would be refunded. AofA funded the payment with cash on hand and recorded the payment within Other noncurrent assets as a noncurrent prepaid tax asset; the related June 30, 2022 balance is $74 (A$107).

Further interest on the unpaid tax and interest amounts will continue to accrue during the dispute. The initial interest assessment and the additional interest accrued are deductible against taxable income by AofA but would be taxable as income in the year the dispute is resolved if AofA is ultimately successful. AofA applied this deduction beginning in the third quarter of 2020 which reduced cash tax payments by approximately $169 (A$219) in 2020, $14 (A$19) in 2021, and $7 (A$10) in the six-month period of 2022. This amount has been reflected within Other noncurrent liabilities and deferred credits as a noncurrent accrued tax liability; the related June 30, 2022 balance is $171 (A$248).

The Company continues to believe it is more likely than not that AofA's tax position will be sustained and therefore is not recognizing any tax expense in relation to this matter. However, because the ultimate resolution of this matter is uncertain at this time, the Company cannot predict the potential loss or range of loss associated with the outcome, which may materially affect its results of operations and financial condition. References to any assessed U.S. dollar amounts presented in connection with this matter have been converted into U.S. dollars from Australian dollars based on the exchange rate in the respective period.

AofA is part of the Company's joint venture with Alumina Limited, an Australian public company listed on the Australian Securities Exchange. The Company and Alumina Limited own 60% and 40%, respectively, of the joint venture entities, including AofA.

Other

Spain—In July 2019, the Company completed the divestiture of the Avilés and La Coruña (Spain) aluminum facilities to PARTER Capital Group AG (PARTER) in a sale process endorsed by the Spanish government and supported by the workers' representatives following a collective dismissal process.

In early 2020, PARTER sold a majority stake in the facilities to an unrelated party. Alcoa had no knowledge of the subsequent transaction prior to its announcement and on August 28, 2020, Alcoa filed a lawsuit with the Court of First Instance in Madrid, Spain asserting that the sale was in breach of the sale agreement between Alcoa and PARTER.

Related to this subsequent sale transaction, certain proceedings and investigations have been initiated by or at the request of the employees of the facilities against their current employers, the new owners of the current employers, and Alcoa, alleging that certain agreements from the 2019 collective dismissal process remain in force and that, under such agreements, Alcoa remains liable for certain related employment benefits. One such proceeding is a collective case before the Spanish National Court, filed on November 10, 2020, wherein the workers' representatives and employees are seeking to have the terms of a Collective Dismissal Agreement signed between Alcoa and the workers in January 2019 be fulfilled. Other proceedings include: a second collective claim filed in National Court on behalf employees that were not affected by the 2019 collective dismissal process, numerous individual labor claims filed in the labor courts of Avilés and La Coruña and the initiation of a separate criminal investigation by the National Court.

On June 15, 2021, the Spanish National Court ruled that the collective dismissal agreement for the divested Avilés and La Coruña aluminum facilities should be applied to the situation of the claimant workers, and that Alcoa should be liable for the severance of those employees to the extent they were affected by the 2019 collective dismissal process. Alcoa has appealed this ruling to the Supreme Court of Spain.

In July 2021, the Spanish National Court appointed a judicial director to oversee the facilities and later declared the facilities insolvent. In early 2022, the insolvency administrators appointed by the courts (one for each facility) announced their intention to collectively dismiss all employees at the two facilities.

In the first quarter of 2022, the Company recorded a charge of $77 in Restructuring and other charges, net to reflect its estimate for the offer made to the workers of the divested Avilés and La Coruña facilities (Spain) to settle various legal disputes related to the 2019 divestiture.

In April 2022, the Company received unanimous acceptance of the offer from all active workers of the divested Avilés and La Coruña facilities and a Global Settlement Agreement (GSA) was fully executed. The Company recorded a charge of $2 in Restructuring and other charges, net in the quarter ended June 30, 2022 to reflect an update to its estimated liability for the GSA. The Company expects to make cash payments in the third quarter of 2022 upon completion of certain administrative and judicial approvals.

General

In addition to the matters discussed above, various other lawsuits, claims, and proceedings have been or may be instituted or asserted against Alcoa Corporation, including those pertaining to environmental, safety and health, commercial, tax, product liability, intellectual property infringement, employment, and employee and retiree benefit matters, and other actions and claims arising out of the normal course of business. While the amounts claimed in these other matters may be substantial, the ultimate liability is not readily determinable because of the considerable uncertainties that exist. Accordingly, it is possible that the Company's liquidity or results of operations in a particular period could be materially affected by one or more of these other matters. However, based on facts currently available, management believes that the disposition of these other matters that are pending or asserted will not have a material adverse effect, individually or in the aggregate, on the financial position of the Company.

Q. Other Financial Information

Other Income, Net

	Second quarter ended June 30,		Six months ended June 30,	
	2022	2021	2022	2021
Equity income	$ (35)	$ (26)	$ (53)	$ (31)
Foreign currency (gains) losses, net	(4)	10	8	6
Net loss (gain) from asset sales	4	(98)	5	(124)
Net gain on mark-to-market derivative instruments	(176)	(2)	(191)	(7)
Non-service costs – Pension & OPEB	15	11	31	24
Other	(10)	—	(20)	3
	$ (206)	$ (105)	$ (220)	$ (129)

Net loss (gain) from asset sales for the second quarter and six months ended June 30, 2021 included a net gain of $93 and $120, respectively, related to the sales of the former Eastalco site and the Warrick Rolling Mill (see Note C).

Other Noncurrent Assets

	June 30, 2022	December 31, 2021
Gas supply prepayment	$ 339	$ 377
Prepaid gas transmission contract	290	304
Value added tax credits	332	215
Deferred mining costs, net	149	149
Prepaid pension benefit	172	164
Goodwill	145	144
Noncurrent restricted cash	68	106
Noncurrent prepaid tax asset	74	78
Intangibles, net	31	35
Other	91	92
	$ 1,691	$ 1,664

Value added tax credits— In the fourth quarter of 2018, after an assessment of the future realizability of Brazil state VAT credits recorded, the Company established an allowance on the accumulated state VAT credit balances and stopped recording any future credit benefits. With the restart of the Alumar smelter in São Luís, Brazil and its first metal sales in June 2022, the Company now has the ability to monetize these credits. In June 2022, the Company reversed the allowance with a credit of $83 to Restructuring and other charges, net and reversed the subsequent additions to the valuation allowance with a credit to Cost of goods sold of $46 (same accounts as when incurred).

Cash and Cash Equivalents and Restricted Cash

	June 30, 2022	December 31, 2021
Cash and cash equivalents	$ 1,638	$ 1,814
Current restricted cash	42	4
Noncurrent restricted cash	68	106
	$ 1,748	$ 1,924

Current restricted cash amounts are reported in Prepaid expenses and other current assets on the accompanying Consolidated Balance Sheet. Noncurrent restricted cash amounts are reported in Other noncurrent assets on the accompanying Consolidated Balance Sheet.

R. Subsequent Events

On July 1, 2022, Alcoa curtailed one of the three operating smelting potlines (54 kmt) at its Warrick Operations site due to operational challenges stemming from labor shortages in the region.

Beginning in July 2022, the Company reduced production by approximately 15% at the San Ciprián (Spain) refinery to mitigate the impact of high natural gas costs.

On July 20, 2022, Alcoa Corporation's Board of Directors approved an additional common stock repurchase program under which the Company may purchase shares of its outstanding common stock up to an aggregate transactional value of $500, depending on the Company's continuing analysis of market, financial, and other factors. The prior authorization had $150 remaining for share repurchases at the end of the second quarter of 2022. The share repurchase programs may be suspended or discontinued at any time and do not have predetermined expiration dates.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

(dollars in millions, except per-share amounts, average realized prices, and average cost amounts; dry metric tons in millions (mdmt); metric tons in thousands (kmt))

Business Update

The Company has maintained all operations throughout the coronavirus (COVID-19) pandemic with only minimal employee-and contractor-related disruptions by following comprehensive health measures and crisis response plans. The duration of the COVID-19 pandemic continues to be unknown. The pandemic could have adverse future impacts on the Company's business, financial condition, operating results, and cash flows which could negatively impact our financial condition and result in asset impairment charges, including long-lived assets or goodwill, or affect the realizability of deferred tax assets.

The Company has experienced isolated interruptions from its supply sources but has identified alternate solutions to avoid significant production impacts. Additionally, in the first quarter of 2022, the Company intermittently faced challenges, primarily in North America, with securing railcars or vessels for outbound product sales due to global disruptions in the supply chain. While logistics challenges persist, the Company saw some improvement in the second quarter of 2022, which facilitated higher shipments as discussed in the Results of Operations below. Additionally, the Company experienced labor shortages at one of its smelters in North America (see Segment Information, Aluminum below).

In addition to inflation and supply disruptions in the global economy during the COVID-19 pandemic, the global economy has been impacted by the conflict between Russia and Ukraine. Such adverse and uncertain economic conditions have exacerbated supply chain disruptions and increased our costs for energy, particularly in Spain, and altered our sources for certain raw materials.

In March 2022, in response to the conflict between Russia and Ukraine, the Company announced that it ceased the purchase of raw materials from and the sale of our products to Russian businesses. The Company identified alternate sources for securing the limited number of materials that would have been purchased from Russian suppliers without any supply interruption or material financial impact. Due to the cessation of bauxite sales to Russian-owned alumina refineries, beginning in the second quarter of 2022, the Company slowed production in its Juruti mine in Brazil with associated cost inefficiencies. Additionally, Atlantic bauxite market demand has decreased which impacted shipments in the second quarter of 2022 (see Segment Information, Bauxite below).

Key Actions

The Company paid a quarterly cash dividend of $0.10 per share of the Company's common stock in June 2022, totaling $19. Also in the second quarter of 2022, the Company repurchased 4.5 million shares for $275 under its common stock repurchase program; these shares were immediately retired. As the average repurchase price of $60.69 exceeded the share price implicit in additional paid in capital, $39 million of the equity impact was allocated to retained earnings. Refer to Liquidity and Capital, below, for more information.

On June 27, 2022, the Company successfully amended and restated its Revolving Credit Facility from $1,500 to $1,250 and extended the maturity date from November 2023 to June 2027. The Revolving Credit Facility, which has not been drawn, includes terms that provide improved flexibility to execute on Alcoa's long-term strategies. Among other improvements, the Revolving Credit Facility removes prior restrictions on both share repurchases and the payment of dividends. It released the prior collateral package, based on the Company maintaining specific credit ratings. The Revolving Credit Facility now includes metrics on greenhouse gas intensity in the Alumina and Aluminum segments and the percentage of renewable energy consumption for smelters in the Aluminum segment which may result in a positive or negative adjustment to margin and commitment fees based on performance against the metrics.

In the first quarter of 2022, the Company recorded a restructuring charge of $77 to reflect its estimate for the offer made to the workers of the divested Avilés and La Coruña facilities (Spain) to settle various legal disputes related to the 2019 divestiture. The offer was made to avoid prolonged legal proceedings over the following years; it does not represent an acknowledgement of wrongdoing or a belief that the Company would not succeed in the legal process. In April 2022, the Company received unanimous acceptance of the offer from all active workers of the divested Avilés and La Coruña facilities and a GSA was fully executed. The Company recorded a charge of $2 in Restructuring and other charges, net in the quarter ended June 30, 2022 to reflect an update to its estimated liability for the GSA. The Company expects to make cash payments in the third quarter of 2022 upon completion of certain administrative and judicial approvals.

On December 29, 2021, the Company and workers' representatives of the San Ciprián (Spain) aluminum and alumina facilities reached an agreement to temporarily curtail the smelter's 228,000 metric tons of annual capacity due to exorbitant energy prices in Spain, and to resume normal operations at the refinery. The smelter curtailment was safely completed in January 2022, while the casthouse continues to operate.

During the second quarter of 2022, the Company repaid carbon dioxide credits related to the San Ciprián smelter. Spain has a compensatory mechanism for the indirect cost of carbon dioxide and provides associated credits. Upon receipt of the credits in each of the applicable years, the Company recorded the cash received as deferred income (liability) due to a three-year clawback provision based on continued operations and employment. In June 2021, the Spanish Ministry of Industry, Trade and Tourism (the Ministry) initiated the process to request repayment of 2018 and 2019 credits due to Alcoa's decision to implement the collective dismissal process and its potential impact on operations and employment at San Ciprián. Alcoa disagreed with the Ministry's position as the collective dismissal process was not concluded and qualifying operations and employment at San Ciprián were maintained during the relevant three-year period. The Company requested to suspend the payment of the claimed credits (and interest) in exchange for a bank guarantee. On April 26, 2022, the Spanish National Court rejected the Company's request and the Company made a payment of approximately $41 (€37) for the 2018 and 2019 compensation credits and interest.

On April 30, 2022, Alcoa completed the sale of its investment in MRN for proceeds of $10. An additional $30 in cash could be paid to the Company in the future if certain post-closing conditions related to future MRN mine development are satisfied. Related to this transaction, the Company recorded an asset impairment of $58 in the first quarter of 2022 in Restructuring and other charges, net on the Statement of Consolidated Operations. In addition, the Company entered into several bauxite offtake agreements with South 32 Minerals S.A. to provide bauxite supply for existing long-term supply contracts.

On March 31, 2022, Ma'aden's put option and the Company's call option, relating to additional interests in the joint venture, expired with neither party exercising their options. In accordance with the joint venture agreement, the call and put options were exercisable for a period of six months after October 1, 2021.

See the below sections for additional details on the above-described actions.

Results of Operations

The discussion that follows includes a comparison of our results of operations and liquidity and capital resources for the quarterly and year-to-date periods outlined in the table below.

Selected Financial Data:

	Quarter ended		Six months ended	
	Sequential		*Year-to-date*	
Statement of Operations	**June 30, 2022**	**March 31, 2022**	**June 30, 2022**	**June 30, 2021**
Sales	$ 3,644	$ 3,293	$ 6,937	$ 5,703
Cost of goods sold (exclusive of expenses below)	2,767	2,181	4,948	4,448
Selling, general administrative, and other expenses	52	44	96	106
Research and development expenses	7	9	16	13
Provision for depreciation, depletion, and amortization	161	160	321	343
Restructuring and other charges, net	(75)	125	50	40
Interest expense	30	25	55	109
Other income, net	(206)	(14)	(220)	(129)
Total costs and expenses	2,736	2,530	5,266	4,930
Income before income taxes	908	763	1,671	773
Provision for income taxes	234	210	444	204
Net income	674	553	1,227	569
Less: Net income attributable to noncontrolling interest	125	84	209	85
Net income attributable to Alcoa Corporation	$ 549	$ 469	$ 1,018	$ 484

	Quarter ended		Six months ended	
Selected Financial Metrics	**June 30, 2022**	**March 31, 2022**	**June 30, 2022**	**June 30, 2021**
Diluted income per share attributable to Alcoa Corporation common shareholders	$ 2.95	$ 2.49	$ 5.44	$ 2.56
Third-party shipments of alumina (kmt)	2,438	2,277	4,715	4,909
Third-party shipments of aluminum products (kmt)	674	634	1,308	1,598
Average realized price per metric ton of alumina	$ 442	$ 375	$ 410	$ 295
Average realized price per metric ton of primary aluminum	$ 3,864	$ 3,861	$ 3,863	$ 2,533
Average Alumina Price Index (API)(1)	$ 418	$ 373	$ 395	$ 290
Average London Metal Exchange (LME) 15-day lag(2)	$ 3,062	$ 3,147	$ 3,104	$ 2,210

(1) API (Alumina Price Index) is a pricing mechanism that is calculated by the Company based on the weighted average of a prior month's daily spot prices published by the following three indices: CRU Metallurgical Grade Alumina Price; Platts Metals Daily Alumina PAX Price; and FastMarkets Metal Bulletin Non-Ferrous Metals Alumina Index.

(2) LME (London Metal Exchange) is a globally recognized exchange for commodity trading, including aluminum. The LME pricing component represents the underlying base metal component, based on quoted prices for aluminum on the exchange.

	Sequential Period Comparison	*Year-to-date Comparison*
Overview	Net income attributable to Alcoa Corporation increased $80 primarily as a result of: •Lower restructuring charges •Favorable mark-to-market results on derivative instruments •Higher shipments primarily due to improved availability of railcars or vessels for outbound product from North American smelters, increased production at certain of the Australian refineries and absence of weather delays at the Alumar refinery in Brazil which occurred in the first quarter of 2022 •Reversal of a valuation allowance on Brazil state value added taxes (VAT) Partially offset by: •Higher costs primarily associated with maintenance, direct material usage, transportation, and inefficiencies at the mines at lower production rates •Higher raw material costs due to inflation pressures •Charge related to impoundments at the Poços de Caldas refinery •Higher energy costs, primarily in Europe •Higher taxes on improved earnings	Net income attributable to Alcoa Corporation increased $534 primarily as a result of: •Higher average realized prices of aluminum and alumina •Favorable mark-to-market results on derivative instruments •Increase in value add product sales Partially offset by: •Higher raw material costs due to inflation pressures •Higher taxes on improved earnings •Higher energy costs, primarily in Europe •Higher costs primarily associated with maintenance, transportation, labor, and higher mining production costs due to inefficiencies at lower production rates •Absence of gains on the sale of the former Eastalco site and the divestiture of the Warrick Rolling Mill
Sales	Sales increased $351 primarily as a result of: •Higher shipments mainly related to improved availability of railcars or vessels for outbound product sales from North American smelters and increased shipments from refineries •Higher average realized price of alumina •Higher trading activities •Favorable currency impacts	Sales increased $1,234 primarily as a result of: •Higher average realized prices of aluminum and alumina •Increase in value add product sales •Higher trading activities Partially offset by: •Absence of sales from the divested Warrick Rolling Mill, partially offset by new third-party revenue from the Warrick smelter •Decreased sales from the San Ciprián smelter due to the smelter curtailment and timing of sales of accumulated inventory from the strike, partially offset by increased price •Lower shipments across all three segments •Lower pricing at the Brazil hydro-electric facilities as first half 2021 drought conditions elevated prices in the prior year period
Cost of goods sold	Cost of goods sold as a percentage of sales increased 10% primarily as a result of: •Higher costs primarily associated with maintenance, direct material usage, transportation, and inefficiencies at the mines at lower production rates •Higher raw material costs due to inflation pressures •Higher energy costs, primarily in Europe •Higher costs associated with impoundments Partially offset by: •Higher average realized price for alumina •Reversal of a valuation allowance on Brazil state VAT	Cost of goods sold as a percentage of sales decreased 7% primarily as a result of: •Higher average realized prices for aluminum and alumina •Higher value add product sales •Reversal of a valuation allowance on Brazil VAT Partially offset by: •Higher raw material costs due to inflation pressures •Higher energy costs, primarily in Europe •Higher costs primarily associated with maintenance, transportation, labor, higher mining production costs due to inefficiencies at lower production rates and direct material usage •Higher costs associated with impoundments

	Sequential Period Comparison	*Year-to-date Comparison*
Selling, general administrative, and other expenses	Selling, general administrative, and other selling expenses increased $8 primarily as a result of: •Higher contract services, information technology services, and travel •Higher accruals for stock-based compensation	Selling, general administrative, and other selling expenses decreased $10 primarily as a result of: •Lower variable compensation, external legal fees, insurance, and information technology services •Favorable currency impacts
Provision for depreciation, depletion, and amortization	Depreciation increased $1 primarily as a result of: •Currency translation impacts	Depreciation decreased $22 primarily as a result of: •Lower depreciation at the Australian mines due to completion of mine moves in the prior year •Currency translation impacts
Interest expense	Interest expense increased $5 primarily as a result of: •Interest expense related to the repayment of the San Ciprián 2018 and 2019 CO2 compensation credits •Amortization of deferred financing fees related to the Revolving Credit Facility •One more day in the period	Interest expense decreased $54 primarily as a result of: •Absence of interest on $750 6.75% Senior Notes redeemed early in April 2021 and early redemption costs •Absence of interest on $500 7.00% Senior Notes redeemed early in September 2021 Partially offset by: •Interest on $500 4.125% Senior Notes issued in March 2021 •Interest expense related to the repayment of the San Ciprián 2018 and 2019 CO2 compensation credits •Amortization of deferred financing fees related to the Revolving Credit Facility
Other income, net	Other income, net increased $192 primarily as a result of: •Favorable mark-to-market results on derivative instruments primarily due to higher power prices in the current quarter •Absence of loss recognition triggered by ELYSIS™ capital contributions •Favorable currency impacts due to gains recognized in the second quarter due to the U.S. dollar strengthening against most currencies and the absence of first quarter losses due to a weakening U.S. dollar against the same currencies Partially offset by: •An increase in the Warrick site separation reserve •Decrease in equity earnings from the Ma'aden bauxite and alumina joint venture primarily due to lower alumina prices	Other income, net increased $91 primarily as a result of: •Favorable mark-to-market results on derivative instruments primarily due to higher power prices in the current year •Higher equity earnings from the Ma'aden joint ventures primarily on higher aluminum and alumina prices •Interest income received on Brazil VAT credits Partially offset by: •Absence of gains on the sale of the former Eastalco site and divestiture of the Warrick Rolling Mill •Higher ELYSIS™ capital contributions, which triggered loss recognition •Higher non-service costs related to pension and OPEB •An increase in the Warrick site separation reserve

	Sequential Period Comparison	*Year-to-date Comparison*
Restructuring and other charges, net	In the second quarter of 2022, Restructuring and other charges, net of $(75) primarily related to: •$83 for the reversal of state VAT valuation allowance associated with the restart of the Alumar smelter •$1 for changes in estimated take-or-pay contract costs at the closed Wenatchee (Washington) smelter Partially offset by: •$4 for additional take-or-pay contract costs at the closed Intalco (Washington) smelter •$3 to adjust an asset retirement obligation reserve at a previously closed location •$2 to increase the accrual related to the GSA for the workers of the divested Avilés and La Coruña facilities In the first quarter of 2022, Restructuring and other charges, net of $125 primarily related to: •$77 for the accrual related to the GSA for the workers of the divested Avilés and La Coruña facilities •$58 for an asset impairment related to the sale of the Company's interest in the MRN mine •$2 for additional take-or-pay contract costs at the closed Intalco (Washington) smelter Partially offset by: •$11 for changes in estimated take-or-pay contract costs at the closed Wenatchee (Washington) smelter	In the six-month period of 2022, Restructuring and other charges, net of $50 primarily related to: •$83 for the reversal of state VAT valuation allowance associated with the restart of the Alumar smelter •$12 for changes in estimated take-or-pay contract costs at the closed Wenatchee smelter Partially offset by: •$79 for the accrual related to the GSA for the workers of the divested Avilés and La Coruña facilities •$58 for an asset impairment related to the sale of the Company's interest in the MRN mine •$6 for additional take-or-pay contract costs at the closed Intalco smelter •$2 to adjust asset retirement obligation reserves at previously closed locations In the six-month period of 2021, Restructuring and other charges, net of $40 primarily related to: •$39 for the settlement of certain pension benefits •$9 in settlements and curtailments of certain other postretirement benefits related to the sale of the Warrick Rolling Mill •$9 related to additional take or pay energy contract costs at the curtailed Intalco and Wenatchee smelters Partially offset by: •$22 of reversals for environmental and asset retirement obligation reserves at closed locations
Provision for income taxes	The Provision for income taxes in the second quarter of 2022 was $234 on income before taxes of $908 or 25.8%. In comparison, the first quarter of 2022 Provision for income taxes was $210 on income before taxes of $763 or 27.5%. The increase in tax expense of $24 is primarily attributable to the overall higher income before taxes noted above. Specifically, higher tax expense, primarily in Australia and Brazil related to additional profits on higher alumina prices and favorable mark-to-market results on derivative instruments in Australia. This was partially offset by less tax expense related to lower aluminum prices.	The Provision for income taxes in the six-month period of 2022 was $444 on income before taxes of $1,671 or 26.6%. In comparison, the six-month period of 2021 Provision for income taxes was $204 on income before taxes of $773 or 26.4%. The increase in tax expense is attributable to the overall higher income before taxes noted above.
Noncontrolling interest	Net income attributable to noncontrolling interest was $125 in the second quarter of 2022 compared with $84 in the first quarter of 2022. These amounts are entirely related to Alumina Limited's 40% ownership interest in several affiliated operating entities. The increase is primarily a result of higher alumina prices, higher other income primarily related to favorable mark-to-market results on derivative instruments, and lower restructuring charges primarily due to the Brazil state VAT valuation allowance reversal and the absence of the asset impairment related to the sale of the Company's interest in MRN, partially offset by a higher elimination of intercompany profit in inventory, and higher taxes due to higher profits before taxes.	Net income attributable to noncontrolling interest was $209 in the six-month period of 2022 compared with $85 in the six-month period of 2021. These amounts are entirely related to Alumina Limited's 40% ownership interest in several affiliated operating entities. The increase is primarily a result of higher alumina prices, higher other income primarily related to favorable mark-to-market results on derivative instruments, lower elimination of intercompany profit in inventory, lower restructuring charges primarily due to the Brazil state VAT valuation allowance reversal partially offset by the asset impairment related to the sale of the Company's interest in MRN, and lower depreciation, partially offset by higher taxes on higher profits before taxes.

Segment Information

Alcoa Corporation is a producer of bauxite, alumina, and aluminum products. The Company's operations consist of three worldwide reportable segments: Bauxite, Alumina, and Aluminum. Segment performance under Alcoa Corporation's management reporting system is evaluated based on a number of factors; however, the primary measure of performance is the adjusted earnings before interest, taxes, depreciation, and amortization (Adjusted EBITDA) of each segment. The Company calculates Segment Adjusted EBITDA as Total sales (third-party and intersegment) minus the following items: Cost of goods sold; Selling, general administrative, and other expenses; and Research and development expenses. Alcoa Corporation's Adjusted EBITDA may not be comparable to similarly titled measures of other companies. See Reconciliations of Certain Segment Information below.

Bauxite

Business Update. Third-party shipments decreased 0.2 million dry metric tons compared to the first quarter of 2022 due to decreased demand in the Atlantic bauxite market partially offset by higher volumes from offtake agreements.

On April 30, 2022, Alcoa completed the sale of its investment in MRN for proceeds of $10. An additional $30 in cash could be paid to the Company in the future if certain post-closing conditions related to future MRN mine development are satisfied. Related to this transaction, the Company recorded an asset impairment of $58 in the first quarter of 2022 in Restructuring and other charges, net on the Statement of Consolidated Operations. In addition, the Company entered into several bauxite offtake agreements with South 32 Minerals S.A. to provide bauxite supply for existing long-term supply contracts.

Mining operations are relocated periodically in support of optimizing the value extracted from bauxite reserves. In the second quarter of 2022, the Company continued the process of moving the Juruti mining operations, which is scheduled to complete by the end of 2022. During the second quarter and six-month period of 2022, the Company incurred $6 and $9, respectively, in capital expenditures related to Juruti mining operation relocation.

Production in the below table can vary from Total shipments due primarily to differences between the equity allocation of production, offtake agreements with the respective equity investment, and other supply agreements. Additionally, Total shipments include dry metric tons that were not produced by the Bauxite segment. Such bauxite was purchased to satisfy certain customer commitments. The Bauxite segment bears the risk of loss of the purchased bauxite until control of the product has been transferred to this segment's customers.

Operating costs in the table below includes all production-related costs: conversion costs, such as labor, materials, and utilities; depreciation, depletion, and amortization; and plant administrative expenses.

	Quarter ended		Six months ended	
	June 30, 2022	March 31, 2022	June 30, 2022	June 30, 2021
Production (mdmt)	10.2	11.0	21.2	24.1
Third-party shipments (mdmt)	0.6	0.8	1.4	2.6
Intersegment shipments (mdmt)	10.0	10.1	20.1	21.3
Total shipments (mdmt)	10.6	10.9	21.5	23.9
Third-party sales	$ 34	$ 43	$ 77	$ 97
Intersegment sales	165	170	335	364
Total sales	$ 199	$ 213	$ 412	$ 461
Segment Adjusted EBITDA	$ 5	$ 38	$ 43	$ 100
Operating costs	$ 225	$ 207	$ 432	$ 443
Average cost per dry metric ton of bauxite	$ 21	$ 19	$ 20	$ 19

	Sequential Period Comparison	*Year-to-date Comparison*
Production	Production decreased 7% primarily as a result of: •Sale of the Company's interest in the MRN mine •Cessation of bauxite sales to Russian aluminum businesses	Production decreased 12% primarily as a result of: •Lower demand from certain Alumina segment refineries •Cessation of bauxite sales to Russian aluminum businesses •Lower demand due to the expiration of the Company's license to export bauxite from Australia •Sale of the Company's interest in the MRN mine
Third-party sales	Third-party sales decreased $9 primarily as a result of: •Lower mining royalties •Lower shipments due to decreased demand in the Atlantic bauxite market Partially offset by: •Higher volumes from offtake and supply agreements	Third-party sales decreased $20 primarily as a result of: •Lower shipments due to the expiration of the Company's license to export bauxite from Australia, Juruti lower customer demand and the cessation of bauxite sales to Russian aluminum businesses, and decreased demand in the Atlantic bauxite market Partially offset by: •Higher volumes from offtake and supply agreements •Higher mining royalties
Intersegment sales	Intersegment sales decreased $5 primarily as a result of: •Lower average internal prices on sales with the Alumina segment •Lower intersegment shipments primarily due to lower demand from certain of the Alumina segment refineries	Intersegment sales decreased $29 primarily as a result of: •Lower intersegment shipments primarily due to lower demand from certain Alumina segment refineries •Lower average internal prices on sales with the Alumina segment
Segment Adjusted EBITDA	Segment adjusted EBITDA decreased $33 primarily as a result of: •Higher production costs in Western Australia and Brazil due to inefficiencies at lower production rates and maintenance •Lower mining royalties •Lower average margins on sales with the Alumina segment •Lower equity earnings due to the sale of the Company's interest in the MRN mine	Segment adjusted EBITDA decreased $57 primarily as a result of: •Lower shipments as discussed above •Lower average margins on sales with the Alumina segment •Higher production costs primarily due to inefficiencies at lower production rates Partially offset by: •Higher earnings from equity investments •Higher mining royalties

Forward Look. For the third quarter of 2022 in comparison to the second quarter, the segment expects higher volume as refinery demand improves on a sequential basis. Increased production costs are expected to be offset with higher intersegment prices in the Atlantic region.

The Company has decreased its annual projection for bauxite shipments in 2022 by 2 million dry metric tons to range between 44.0 and 45.0 million dry metric tons due to continuing disruptions in the Atlantic bauxite market and lower demand from refineries recorded in the first half of 2022.

Alumina

Business Update. During the second quarter of 2022, the average API of $418 per metric ton trended favorably compared to the prior quarter reflecting a 12% sequential increase. Compared to the six-month period of 2021, the average API trended favorably, reflecting a 36% increase year-over-year.

Alumina production increased 1% in the second quarter of 2022 compared to the first quarter of 2022 due to increased production at certain of the Australian refineries, partially offset by decreased production at the Alumar refinery due to unplanned maintenance in

the second quarter of 2022 and decreased demand from the San Ciprián smelter. The alumina segment also experienced higher energy costs, predominantly related to the San Ciprián refinery, and higher raw materials costs.

During the second quarter of 2022, the Company recorded the reversal of a valuation allowance on Brazil state VAT of $46 in Cost of goods sold. (See Restructuring and other charges, net above for additional reversal). In the fourth quarter of 2018, after an assessment of the future realizability of the state VAT credits, Alcoa established an allowance on the accumulated state VAT credit balances and stopped recording any future credit benefits. With the restart of the Alumar smelter in Brazil and the first metal sales in June 2022, the Company now has the ability to monetize these credits and reversed the valuation allowance.

During the second quarter of 2022, the Company recorded a charge of $39 to Cost of goods sold and an increase to the capitalized asset retirement cost of $8 to increase the Asset retirement obligation at the Poços de Caldas refinery when an initial estimate became available for improvements required on both operating and closed bauxite residue areas to comply with updated impoundment regulations in the region. Alcoa is in the process of obtaining regulatory approval for its estimated work, and additional charges may be recognized when the final scope of work is approved. As of June 30, 2022, the Alumina segment had a base capacity of 13,843 mtpy with 214 mtpy of curtailed refining capacity. There was no change in curtailed capacity.

Total shipments include metric tons that were not produced by the Alumina segment. Such alumina was purchased to satisfy certain customer commitments. The Alumina segment bears the risk of loss of the purchased alumina until control of the product has been transferred to this segment's customers. Additionally, operating costs in the table below includes all production-related costs: raw materials consumed; conversion costs, such as labor, materials, and utilities; depreciation and amortization; and plant administrative expenses.

	Quarter ended		Six months ended	
	June 30, 2022	March 31, 2022	June 30, 2022	June 30, 2021
Production (kmt)	3,226	3,209	6,435	6,715
Third-party shipments (kmt)	2,438	2,277	4,715	4,909
Intersegment shipments (kmt)	984	940	1,924	2,155
Total shipments (kmt)	3,422	3,217	6,639	7,064
Third-party sales	$ 1,077	$ 855	$ 1,932	$ 1,448
Intersegment sales	489	418	907	707
Total sales	$ 1,566	$ 1,273	$ 2,839	$ 2,155
Segment Adjusted EBITDA	$ 343	$ 262	$ 605	$ 351
Average realized third-party price per metric ton of alumina	$ 442	$ 375	$ 410	$ 295
Operating costs	$ 1,190	$ 988	$ 2,178	$ 1,794
Average cost per metric ton of alumina	$ 348	$ 307	$ 328	$ 254

	Sequential Period Comparison	*Year-to-date Comparison*
Production	Production increased 1% primarily as a result of: •Increased production at certain of the Australian refineries due to less unplanned equipment maintenance Partially offset by: •Decreased production at the Alumar refinery due to unplanned equipment maintenance •Decreased production at the San Ciprián refinery due to lower demand from the San Ciprián smelter	Production decreased 4% primarily as a result of: •Reduced alumina production at the Australian refineries due to unplanned equipment maintenance Partially offset by: •Increased production at the San Ciprián refinery following the resumption of normal operations
Third-party sales	Third-party sales increased $222 primarily as a result of: •Higher average realized price of $67/ton principally driven by a higher average API •Favorable currency impacts •Higher shipments due to non-recurrence of unplanned equipment maintenance at the Australian refineries and weather delays in Brazil in the first quarter of 2022	Third-party sales increased $484 primarily as a result of: •Higher average realized price of $115/ton principally driven by a higher average API •Favorable changes to customer mix Partially offset by: •Lower shipments due to lower production at the Australian refineries, partially offset by increased production and shipments at the San Ciprián refinery, including a shift to third-party sales with the San Ciprián smelter curtailment in January 2022

	Sequential Period Comparison	*Year-to-date Comparison*
Intersegment sales	Intersegment sales increased $71 primarily as a result of: •Higher average realized prices on sales with the Aluminum segment •Higher shipments primarily due to increased production at certain of the Australian refineries and absence of weather delays in Brazil in the first quarter of 2022	Intersegment sales increased $200 primarily as a result of: •Higher average realized prices on sales with the Aluminum segment Partially offset by: •Lower shipments primarily at the Australian refineries
Segment Adjusted EBITDA	Segment adjusted EBITDA increased $81 primarily as a result of: •Higher average realized price of $67/ton principally driven by a higher average API •Reversal of a valuation allowance on Brazil VAT associated with the restart of the Alumar smelter •Favorable currency impacts •Higher shipments primarily due to unplanned equipment maintenance at the Australian refineries and absence of weather delays in Brazil in the first quarter of 2022 Partially offset by: •Higher energy prices, primarily in Spain •Charge related to AROs at the Poços de Caldas refinery •Higher raw material costs primarily due to higher market prices for caustic and lime •Higher costs primarily associated with maintenance and transportation costs •Unfavorable changes to customer contract mix	Segment adjusted EBITDA increased $254 primarily as a result of: •Higher average realized price of $115/ton principally driven by a higher average API •Favorable changes to customer mix •Reversal of a valuation allowance on Brazil VAT •Favorable currency impacts Partially offset by: •Higher energy prices across all regions •Higher raw material costs primarily due to higher market prices for caustic and lime •Higher costs primarily associated with maintenance and higher transportation costs •Charge related to AROs at the Poços de Caldas refinery •Lower shipments primarily due to unplanned maintenance at the Australian refineries

Forward Look. Beginning in July 2022, the Company reduced production by approximately 15% at the San Ciprián refinery to mitigate the impact of high natural gas costs.

For the third quarter of 2022 in comparison to the second quarter, the segment expects higher energy and raw materials costs to be partially offset with higher shipments.

Revisions to the initial asset retirement obligation established for the Poços de Caldas impoundment work are also anticipated in the second half of 2022.

The Company has decreased its annual projection for alumina shipments in 2022 by 0.6 million metric tons to range between 13.6 and 13.8 million metric tons primarily due to the lower shipments recorded in the first half of 2022.

Aluminum

Business Update. During the second quarter of 2022, third-party sales increased 6% sequentially on higher shipments and higher regional premiums, despite lower LME. Metal prices decreased with LME prices on a 15-day lag averaging $3,062 per metric ton. The Aluminum segment also experienced higher raw material and production costs during the quarter.

On December 29, 2021, the Company and workers' representatives at the San Ciprián, Spain aluminum facility reached an agreement that calls for the two-year curtailment of the smelter's 228,000 metric tons of annual capacity due to exorbitant energy prices in Spain. The curtailment was completed in January 2022 while the casthouse continues to operate. During the second quarter and six-month period of 2022, $6 and $8, respectively, of payments were made to reduce the employee leave compensation and take or pay contractual obligations of $62 recorded in the fourth quarter of 2021. The Company has not made any expenditures against the commitments for capital investments of $68 and restart costs of $35. During the quarter, the Company signed an agreement with a renewable energy provider for approximately 45% of the smelter's power needs upon restart, and continues to negotiate with other generators to secure the remaining power supply needs for the smelter.

In conjunction with the previously announced restart of the Alumar smelter in São Luís, Brazil, Alcoa incurred restart expenses of $22 and $34 during the second quarter and six-month period of 2022, respectively. The first metal sales occurred in the second quarter of 2022 and full capacity is expected to be operational in the first quarter of 2023.

In conjunction with the previously announced restart of 19,000 metric tons (Alcoa share) of previously curtailed capacity at the Portland smelter, Alcoa incurred restart expenses of $3 during the second quarter and six-month period of 2022. Metal production is expected to start in the third quarter of 2022.

Total aluminum third-party shipments and total primary aluminum shipments include metric tons that were not produced by the Aluminum segment. Such aluminum was purchased by this segment to satisfy certain customer commitments. The Aluminum segment bears the risk of loss of the purchased aluminum until control of the product has been transferred to this segment's customer. Until the sale of the Warrick Rolling Mill on March 31, 2021, total aluminum information includes flat-rolled aluminum while primary aluminum information does not. Primary aluminum third-party sales exclude realized gains and losses related to embedded derivative instruments designated as cash flow hedges of forward sales of aluminum.

The average realized third-party price per metric ton of primary aluminum includes three elements: a) the underlying base metal component, based on quoted prices from the LME; b) the regional premium, which represents the incremental price over the base LME component that is associated with the physical delivery of metal to a particular region (e.g., the Midwest premium for metal sold in the United States); and c) the product premium, which represents the incremental price for receiving physical metal in a particular shape (e.g., billet, slab, rod, etc.) or alloy.

Operating costs includes all production-related costs: raw materials consumed; conversion costs, such as labor, materials, and utilities; depreciation and amortization; and plant administrative expenses.

	Quarter ended		Six months ended	
Total Aluminum information	**June 30, 2022**	**March 31, 2022**	**June 30, 2022**	**June 30, 2021**
Third-party aluminum shipments (kmt)	674	634	1,308	1,598
Third-party sales	$ 2,539	$ 2,388	$ 4,927	$ 4,149
Intersegment sales	8	7	15	5
Total sales	$ 2,547	$ 2,395	$ 4,942	$ 4,154
Segment Adjusted EBITDA	$ 596	$ 713	$ 1,309	$ 743

	Quarter ended		Six months ended	
Primary Aluminum information	**June 30, 2022**	**March 31, 2022**	**June 30, 2022**	**June 30, 2021**
Production (kmt)	499	498	997	1,094
Third-party shipments (kmt)	674	634	1,308	1,515
Third-party sales	$ 2,624	$ 2,447	$ 5,071	$ 3,839
Average realized third-party price per metric ton	$ 3,864	$ 3,861	$ 3,863	$ 2,533
Total shipments (kmt)	674	634	1,308	1,540
Operating costs	$ 1,936	$ 1,677	$ 3,613	$ 3,166
Average cost per metric ton	$ 2,872	$ 2,647	$ 2,763	$ 2,056

	Sequential Period Comparison	*Year-to-date Comparison*
Production	Production was flat between periods.	Production decreased 9% primarily as a result of: •Curtailment of the San Ciprián smelter, completed in January 2022

	Sequential Period Comparison	*Year-to-date Comparison*
Third-party sales	Third-party sales increased $151 primarily as a result of: •Higher trading revenue •Higher shipments mainly due to improved availability of railcars or vessels for outbound product from North American smelters •Favorable currency impacts Partially offset by: •Lower average LME (on a 15-day lag) partially offset by higher regional premiums •Lower pricing at the Brazil hydro-electric facilities	Third-party sales increased $778 primarily as a result of: •Higher average realized price of $1,330/ton driven by a higher average LME (on a 15-day lag) and regional premiums •Increase in value add product sales on higher price •Higher trading activities Partially offset by: •Absence of sales from the divested Warrick Rolling Mill, partially offset by new third-party revenue from the Warrick smelter •Decreased sales from the San Ciprián smelter due to the smelter curtailment and timing of sales of accumulated inventory from the strike, partially offset by increased price •Lower shipments mainly due to the timing of maintenance at the European smelters •Lower pricing at the Brazil hydro-electric facilities as first half 2021 drought conditions elevated prices in the prior year period
Segment Adjusted EBITDA	Segment adjusted EBITDA decreased $117 primarily as a result of: •Lower average LME (on a 15-day lag) partially offset by higher regional premiums •Unfavorable raw material costs, primarily on higher average alumina input costs and higher prices for carbon •Higher costs primarily associated with increased maintenance costs, higher transportation costs, and direct material usage •Decrease in trading margins •Lower pricing at the Brazil hydro-electric facilities Partially offset by: •Higher shipments mainly related to improved availability of railcars or vessels for outbound product from North American smelters •Favorable currency impacts	Segment adjusted EBITDA increased $566 primarily as a result of: •Higher average realized price driven by higher average LME (on a 15-day lag) and regional premiums Increase in value add product sales Partially offset by: •Unfavorable raw material costs, primarily on higher average alumina input costs and higher market prices for carbon •Higher costs primarily associated with increased maintenance costs, higher transportation costs, and higher labor expenses •Curtailment of the San Ciprián smelter •Lower pricing at the Brazil hydro-electric facilities •Divestiture of the Warrick Rolling Mill

The following table provides consolidated capacity and curtailed capacity (each in kmt) for each smelter owned by Alcoa Corporation:

		June 30, 2022		**March 31, 2022**		**June 30, 2021**	
Facility	**Country**	**Capacity [1]**	**Curtailed**	**Capacity [1]**	**Curtailed**	**Capacity [1]**	**Curtailed**
Portland[2]	Australia	197	30	197	30	197	30
São Luís (Alumar)[3]	Brazil	268	239	268	268	268	268
Baie Comeau	Canada	312	—	312	—	280	—
Bécancour	Canada	347	—	347	—	310	—
Deschambault	Canada	287	—	287	—	260	—
Fjarðaál	Iceland	351	—	351	—	344	—
Lista	Norway	94	—	94	—	94	—
Mosjøen	Norway	200	—	200	—	188	—
San Ciprián[4]	Spain	228	228	228	228	228	—
Intalco	U.S.	279	279	279	279	279	279
Massena West	U.S.	130	—	130	—	130	—
Warrick[5]	U.S.	269	108	269	108	269	108
Wenatchee[6]	U.S.	—	—	—	—	146	146
		2,962	**884**	**2,962**	**913**	**2,993**	**831**

(1) These figures represent Alcoa Corporation's share of the facility Nameplate Capacity based on its ownership interest in the respective smelter.
(2) In 2021, the Company announced that the Portland Aluminium joint venture will restart 35,000 mtpy of idle smelting capacity at the Portland smelter in Australia (19,000 mtpy Alcoa share), and metal production is expected to start in the third quarter of 2022.
(3) In 2021, the Company announced the restart of its 268,000 mtpy of idle smelting capacity at the Alumar smelter in Brazil; full capacity is expected to be operational in the first quarter of 2023.
(4) On December 29, 2021, the Company and the workers' representatives at the San Ciprián, Spain aluminum plant reached an agreement that called for the two-year curtailment of the smelter's 228,000 mtpy annual smelting capacity; the curtailment was completed in January of 2022.
(5) On July 1, 2022, the Company announced curtailment of approximately 54,000 mtpy at the Warrick smelter in the state of Indiana.
(6) In December 2021, the Company permanently closed 146,000 mtpy of idled smelting capacity at the Wenatchee smelter in the state of Washington.

Forward Look. On July 1, 2022, the Company announced curtailment of one of three operating potlines, approximately 54,000 mtpy, at its Warrick Operations facility in Indiana due to operational challenges stemming from labor shortages in the region. The Company anticipates approximately $20 million in negative impact on net income in the third quarter as a result of the curtailment.

Additionally, for the third quarter of 2022 in comparison to the second quarter, the segment expects higher energy and raw material costs which cannot be fully offset with production cost savings.

Reconciliations of Certain Segment Information

Reconciliation of Total Segment Third-Party Sales to Consolidated Sales

	Quarter ended		Six months ended	
	June 30, 2022	March 31, 2022	June 30, 2022	June 30, 2021
Bauxite	$ 34	$ 43	$ 77	$ 97
Alumina	1,077	855	1,932	1,448
Aluminum:				
Primary aluminum	2,624	2,447	5,071	3,839
Other(1)	(85)	(59)	(144)	310
Total segment third-party sales	3,650	3,286	6,936	5,694
Other	(6)	7	1	9
Consolidated sales	$ 3,644	$ 3,293	$ 6,937	$ 5,703

(1) Other includes third-party sales of flat-rolled aluminum and energy, as well as realized gains and losses related to embedded derivative instruments designated as cash flow hedges of forward sales of aluminum. Following the sale of the Warrick Rolling Mill on March 31, 2021, Other no longer includes the sales of flat-rolled aluminum.

Reconciliation of Total Segment Operating Costs to Consolidated Cost of Goods Sold

	Quarter ended		Six months ended	
	June 30, 2022	March 31, 2022	June 30, 2022	June 30, 2021
Bauxite	$ 225	$ 207	$ 432	$ 443
Alumina	1,190	988	2,178	1,794
Primary aluminum	1,936	1,677	3,613	3,166
Other(1)	149	127	276	442
Total segment operating costs	3,500	2,999	6,499	5,845
Eliminations(2)	(682)	(697)	(1,379)	(1,104)
Provision for depreciation, depletion, amortization(3)	(156)	(153)	(309)	(330)
Other(4)	105	32	137	37
Consolidated cost of goods sold	$ 2,767	$ 2,181	$ 4,948	$ 4,448

(1) Prior to the sale of the Warrick Rolling Mill on March 31, 2021, Other largely relates to the Aluminum segment's flat-rolled aluminum product division.
(2) Represents the elimination of Cost of goods sold related to intersegment sales between Bauxite and Alumina and between Alumina and Aluminum.
(3) Provision for depreciation, depletion, and amortization is included in the operating costs used to calculate average cost for each of the bauxite, alumina, and primary aluminum product divisions (see Bauxite, Alumina, and Aluminum above). However, for financial reporting purposes, Provision for depreciation, depletion, and amortization is presented as a separate line item on Alcoa Corporation's Statement of Consolidated Operations.
(4) Other includes costs related to Transformation, and certain other items that are not included in the operating costs of segments (see footnotes 1 and 3 in the Reconciliation of Total Segment Adjusted EBITDA to Consolidated Net Income Attributable to Alcoa Corporation below).

Reconciliation of Total Segment Adjusted EBITDA to Consolidated Net Income Attributable to Alcoa Corporation

	Quarter ended		Six months ended	
	June 30, 2022	March 31, 2022	June 30, 2022	June 30, 2021
Total Segment Adjusted EBITDA	$ 944	$ 1,013	$ 1,957	$ 1,194
Unallocated amounts:				
Transformation[1]	(11)	(14)	(25)	(24)
Intersegment eliminations	20	102	122	28
Corporate expenses[2]	(35)	(29)	(64)	(54)
Provision for depreciation, depletion, and amortization	(161)	(160)	(321)	(343)
Restructuring and other charges, net	75	(125)	(50)	(40)
Interest expense	(30)	(25)	(55)	(109)
Other income, net	206	14	220	129
Other[3]	(100)	(13)	(113)	(8)
Consolidated income before income taxes	908	763	1,671	773
Provision for income taxes	(234)	(210)	(444)	(204)
Net income attributable to noncontrolling interest	(125)	(84)	(209)	(85)
Consolidated net income attributable to Alcoa Corporation	$ 549	$ 469	$ 1,018	$ 484

(1) Transformation includes, among other items, the Adjusted EBITDA of previously closed operations.
(2) Corporate expenses are composed of general administrative and other expenses of operating the corporate headquarters and other global administrative facilities, as well as research and development expenses of the corporate technical center.
(3) Other includes certain items that are not included in the Adjusted EBITDA of the reportable segments.

Environmental Matters

See the Environmental Matters section of Note P to the Consolidated Financial Statements in Part I Item 1 of this Form 10-Q.

Liquidity and Capital Resources

Management believes that the Company's cash on hand, future operating cash flows, and liquidity options, combined with its strategic actions, are adequate to fund its short term and long term operating and investing needs. Further, the Company has no significant debt maturities until 2027 and no significant cash contribution requirements related to its U.S. pension plan obligations for the foreseeable future. However, the Company's access to, and the availability of, financing on acceptable terms in the future will be affected by many factors, including: (i) Alcoa Corporation's credit rating; (ii) the liquidity of the overall capital markets; and (iii) the current state of the economy and commodity markets. There can be no assurances that the Company will continue to have access to capital markets on terms acceptable to Alcoa Corporation.

Changes in market conditions caused by global or macroeconomic events, such as the COVID-19 pandemic and the conflict between Russia and Ukraine, could have adverse effects on Alcoa's ability to obtain additional financing and cost of borrowing. Inability to generate sufficient earnings could impact the Company's ability to meet the financial covenants in our outstanding debt and revolving credit facility agreements and limit our ability to access these sources of liquidity or refinance or renegotiate our outstanding debt or credit agreements on terms acceptable to the Company. Additionally, the impact on market conditions from such events could adversely affect the liquidity of Alcoa's customers, suppliers, and joint venture partners and equity method investments, which could negatively impact the collectability of outstanding receivables and our cash flows.

In March 2022, in response to the conflict between Russia and Ukraine, the Company announced that it ceased the purchase of raw materials from and the sale of our products to Russian businesses and identified alternate source for securing the limited number of materials purchased from Russian suppliers. To date, these actions have not had a material impact on the Company's liquidity options or profile, and the Company continues to monitor the situation to address any impacts going forward.

Cash from Operations

Cash provided from operations was $570 in the six-month period of 2022 compared to cash used for operations of $80 in the same period of 2021. Notable changes to sources and (uses) of cash include:

- $658 higher net income generation primarily on higher aluminum and alumina prices;
- $(290) in certain working capital accounts (receivables from customers, inventories, and accounts payable, trade); primarily an increase in inventories on higher raw material prices, as well as higher volumes on hand due to increases in raw materials due to timing of inventory receipts, and additional metal purchases to serve annual contracts related to Alumar (Brazil) smelter restart, partially offset by improved availability of railcar or vessels for outbound product from North American smelters;
- $(298) in income taxes paid on prior year earnings, as well as on higher current year pre-tax income, and;
- $561 in lower contributions to the Company's defined benefit pension plans

During 2022, AofA will continue to record its tax provision and tax liability without effect of the ATO assessment, since it expects to prevail. The tax payable will remain on AofA's balance sheet as a noncurrent liability, increased by the tax effect of subsequent periods' interest deductions, until dispute resolution, which is expected to take several years. At June 30, 2022, the noncurrent liability resulting from the cumulative interest deductions was approximately $171 (A$248). See description of the tax dispute in Note P to the Consolidated Financial Statements in Part I Item I of this Form 10-Q.

Financing Activities

Cash used for financing activities was $558 in the 2022 six-month period compared with $421 in the 2021 six-month period.

The use of cash in the six-month period of 2022 was primarily $162 of net cash paid to Alumina Limited, $350 for the repurchase of common stock, and $37 of dividends paid.

The use of cash in the 2021 six-month period was primarily $775 for the full, early repayment of $750 aggregate principal amount outstanding of its 2024 Notes (including $25 redemption premium), $137 in net cash paid to Alumina Limited and $13 in financial contributions related to the divested Spanish facilities. The uses of cash were partially offset by the issuance of $500 aggregate principal amount 2029 Notes by ANHBV in March 2021 with net proceeds of approximately $493. The Company may determine in the future to repurchase portions of its outstanding notes from time to time in accordance with applicable SEC and other legal requirements and in consideration of market and other conditions.

Credit Facilities

On June 27, 2022, Alcoa Corporation and ANHBV, a wholly owned subsidiary of Alcoa Corporation and the borrower, entered into an amendment and restatement agreement (the Third Amendment and Restatement) (as amended and restated, the Revolving Credit Facility) that provides additional flexibility to the Company and ANHBV by (i) extending the maturity date of the Revolving Credit Facility from November 2023 to June 2027, (ii) reducing the aggregate commitments under the facility from $1,500 to $1,250, (iii) providing a release by the lenders of the collateral package that had previously secured the Revolving Credit Facility, which will continue so long as certain credit ratings are maintained, (iv) increasing the maximum leverage ratio from 2.75 to 1.00 to 3.25 to 1.00, which increases following material acquisitions for four consecutive fiscal quarters following an acquisition, (v) providing a debt to capitalization ratio not to exceed .60 to 1.00 to replace the maximum leverage ratio upon a ratings upgrade to investment grade by Moody's or S&P, and (vi) providing flexibility for dividends and other restricted payments, to make investments, and to incur additional indebtedness. The Revolving Credit Facility implements a sustainability adjustment to the applicable margin and commitment fee that may result in a positive or negative adjustment based on two of the Company's existing sustainability metrics.

If Alcoa Corporation or ANHBV, as applicable, fails to have a rating of at least Ba1 from Moody's and BB+ from S&P, then the Company would be required to execute all security documents to re-secure collateral under the Revolving Credit Facility.

As of June 30, 2022, the Company was in compliance with all covenants. The Company may access the entire amount of commitments under the Revolving Credit Facility. There were no borrowings outstanding at June 30, 2022 and December 31, 2021, and no amounts were borrowed during the second quarter and six-months ended 2022 and 2021 related to this facility.

Dividend

On May 4, 2022, the Board of Directors declared a cash dividend of $0.10 per share of the Company's common stock to stockholders of record as of the close of business on May 17, 2022. On June 3, 2022, the Company paid cash dividends of $19.

Common Stock Repurchase Program

In the second quarter of 2022, the Company repurchased 4,532,000 shares of its common stock for $275; the shares were immediately retired. In July 2022, the Company announced an additional $500 share repurchase program; $150 remained available for share repurchases at the end of the second quarter of 2022 from a prior authorization.

Investing Activities

Cash used for investing activities was $186 in the six-month period of 2022 compared to cash provided from investing activities of $548 for the same period of 2021.

In the six-month period of 2022, the use of cash was primarily attributable to $181 related to capital expenditures and $21 of cash contributions to the ELYSIS™ joint venture, partially offset by the sale of the Company's interest in the MRN mine of $10.

In the 2021 six-month period, the source of cash was primarily attributable to proceeds from the sale of assets of $705, primarily the Warrick Rolling Mill and Eastalco site sales, partially offset by $154 in capital expenditures.

Recently Adopted and Recently Issued Accounting Guidance

See Note B to the Consolidated Financial Statements in Part I Item 1 of this Form 10-Q.

Dissemination of Company Information

Alcoa Corporation intends to make future announcements regarding company developments and financial performance through its website, http://www.alcoa.com, as well as through press releases, filings with the Securities and Exchange Commission, conference calls, and webcasts.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

See the Derivatives and Other Financial Instruments section of Note L to the Consolidated Financial Statements in Part I Item 1 of this Form 10-Q.

Item 4. Controls and Procedures.

(a) Evaluation of Disclosure Controls and Procedures

Alcoa Corporation's Chief Executive Officer and Chief Financial Officer have evaluated the Company's disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) of the U.S. Securities Exchange Act of 1934, as amended, as of the end of the period covered by this report, and they have concluded that these controls and procedures were effective as of June 30, 2022.

(b) Changes in Internal Control over Financial Reporting

There have been no changes in internal control over financial reporting during the second quarter of 2022, that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

PART II – OTHER INFORMATION

Item 1. Legal Proceedings.

In the ordinary course of its business, Alcoa is involved in a number of lawsuits and claims, both actual and potential. In addition to the matters discussed below, various other lawsuits, claims, and proceedings have been or may be instituted or asserted against Alcoa Corporation, including those pertaining to environmental, safety and health, commercial, tax, product liability, intellectual property infringement, employment, employee and retiree benefit matters, and other actions and claims arising out of the normal course of business. While the amounts claimed in these other matters may be substantial, the ultimate liability is not readily determinable because of the considerable uncertainties that exist. Accordingly, it is possible that the Company's liquidity or results of operations in a particular period could be materially affected by one or more of these other matters. However, based on facts currently available, management believes that the disposition of these other matters that are pending or asserted will not have a material adverse effect, individually or in the aggregate, on the financial position of the Company. See Part I Item 1 of this Form 10-Q in Note P to the Consolidated Financial Statements for additional information regarding legal proceedings.

Environmental Matters

Canadian Class Action—In August 2005, Dany Lavoie, a resident of Baie-Comeau in the Canadian Province of Québec, filed a Motion for Authorization to Institute a Class Action and for Designation of a Class Representative against Alcoa Canada Ltd., Alcoa Limitée, Société Canadienne de Metaux Reynolds Limitée, and Canadian British Aluminum in the Superior Court of Québec in the District of Baie-Comeau, alleging that defendants, as the present and past owners and operators of an aluminum smelter in Baie-Comeau, had negligently allowed the emission of certain contaminants from the smelter on the lands and houses of the St. Georges neighborhood and its environs causing property damage and personal injury. In May 2007, the court authorized a class action suit on behalf of all people who suffered property or personal injury damages caused by the emission of polycyclic aromatic hydrocarbons from the Company's aluminum smelter in Baie-Comeau. In September 2007, plaintiffs filed the claim against the original defendants. The Soderberg smelting operations that plaintiffs allege to be the source of emissions of concern ceased operations in 2013 and have been dismantled. A court appointed expert, engaged to perform analysis of the potential impacts from the emissions in accordance with a sampling protocol agreed to by the parties, submitted its report to the court in May 2019. In 2021, plaintiffs filed their amended claim and expert reports, and defendants filed their amended defense and expert reports. In October 2021, the parties participated in mediation. In March 2022, the parties reached a settlement for damages that is subject to court approval. On May 31, 2022, the court entered a judgement approving the settlement and formally concluding the litigation. The settlement does not have a material impact on the Company's financial results.

Intalco (Washington) Notice of Violation—In May 2022, the Company received a Notice of Violation (NOV) from the U.S. Environmental Protection Agency (the EPA). The NOV alleges violations under the Clean Air Act at the Company's curtailed Intalco (Washington) smelter from when the smelter was operational. The EPA has referred the matter to the U.S. Department of Justice, Environment and Natural Resources Division (the DOJ). The DOJ and the Company are engaged in discussions with respect to a resolution of this matter.

Item 1A. Risk Factors.

We face a number of risks that could materially and adversely affect our business, results of operations, cash flow, liquidity, or financial condition. A full discussion of our risk factors can be found in Part I Item 1A. Risk Factors of Alcoa Corporation's Annual Report on Form 10-K for the fiscal year ended December 31, 2021 and in Part II Item 1A Risk Factors of Alcoa Corporation's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2022. Furthermore, impacts from the continuing coronavirus (COVID-19) pandemic and the conflict between Russia and Ukraine could exacerbate other risks discussed in our prior reports, any of which could have a material adverse effect on us. This situation is continuously evolving, and additional impacts may arise of which we are not currently aware.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

Issuer Purchases of Equity Securities

The table below sets forth information regarding the repurchase of shares of our common stock during the periods indicated.

Period	Total Number of Shares Purchased	Weighted Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Program	Approximate Dollar Value of Shares that May Yet be Purchased Under the Program (1)
April 1 to April 30	—	$ —	—	$ 425,000,000
May 1 to May 31	3,904,700	60.19	3,904,700	190,000,000
June 1 to June 30	627,300	63.78	627,300	150,000,000
Total	4,532,000	60.69	4,532,000	

(1) On October 14, 2021, Alcoa Corporation announced that its Board of Directors approved a common stock repurchase program under which the Company may purchase shares of its outstanding common stock up to an aggregate transactional value of $500, depending on cash availability, market conditions, and other factors.

In the second quarter of 2022, the Company repurchased 4,532,000 shares of its common stock for $275 (weighted average share price of $60.69 (includes $0.02 broker commission)).

On July 20, 2022, Alcoa Corporation's Board of Directors approved an additional common stock repurchase program under which the Company may purchase shares of its outstanding common stock up to an aggregate transactional value of $500, depending on the Company's continuing analysis of market, financial, and other factors.

The Company is currently authorized to repurchase up to a total of $650, in the aggregate, of its outstanding shares of common stock under this authorization, which includes $500 under the newly authorized share repurchase program and a remaining $150 under the Company's previously authorized share repurchase program. Repurchases under these programs may be made using a variety of methods, which may include open market purchases, privately negotiated transactions, or pursuant to a Rule 10b5-1 plan. These programs may be suspended or discontinued at any time and do not have predetermined expiration dates. Alcoa Corporation intends to retire repurchased shares of common stock.

Item 6. Exhibits.

10.1	Third Amendment and Restatement Agreement, dated as of June 27, 2022, which includes, as Exhibit A thereto, the Revolving Credit Agreement, dated as of September 16, 2016, as amended as of October 26, 2016, as amended and restated as of November 14, 2017, as amended and restated as of November 21, 2018, as amended as of August 16, 2019, as amended as of April 21, 2020, as amended as of June 24, 2020, as amended as of March 4, 2021 and as amended and restated as of June 27, 2022, among Alcoa Corporation, Alcoa Nederland Holding B.V., the lenders and issuers from time to time party thereto, and JPMorgan Chase Bank N.A., as administrative agent for the lenders and issuers (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed June 27, 2022 (File No. 1-37816))
10.2	First Amendment to the Amended and Restated Alcoa Corporation to Arconic Inc. Trademark License Agreement, dated as of April 1, 2022, by and between Alcoa USA Corp and Howmet Aerospace Inc. (f/k/a Arconic Inc.) (filed herewith)
10.3	Terms and Conditions for Deferred Fee Restricted Share Units Director Awards, effective May 4, 2022 (filed herewith)
10.4	Terms and Conditions for Restricted Share Units Annual Director Awards, effective May 4, 2022 (filed herewith)
31.1	Certification of Principal Executive Officer required by Rule 13a-14(a) or 15d-14(a)
31.2	Certification of Principal Financial Officer required by Rule 13a-14(a) or 15d-14(a)
32.1	Certification of Principal Executive Officer required by Rule 13a-14(b) or Rule 15d-14(b) and Section 1350 of Chapter 63 of Title 18 of the United States Code
32.2	Certification of Principal Financial Officer required by Rule 13a-14(b) or Rule 15d-14(b) and Section 1350 of Chapter 63 of Title 18 of the United States Code
101.INS	Inline XBRL Instance Document – the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document
101.SCH	Inline XBRL Taxonomy Extension Schema Document
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

SIGNATURES

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

Alcoa Corporation

July 25, 2022
Date

/s/ William F. Oplinger
William F. Oplinger
Executive Vice President and
Chief Financial Officer
(Principal Financial Officer)

July 25, 2022
Date

/s/ Molly S. Beerman
Molly S. Beerman
Senior Vice President and Controller
(Principal Accounting Officer)

EXHIBIT 10.2

FIRST AMENDMENT
TO AMENDED AND RESTATED
TRADEMARK LICENSE AGREEMENT

THIS FIRST AMENDMENT TO THE AMENDED AND RESTATED TRADEMARK LICNESE AGREEMENT (the "**First Amendment**") is made and entered into effective as of April 1, 2022 (the "**First Amendment Effective Date**"), by and between Alcoa USA Corp. ("**Alcoa**") and Howmet Aerospace Inc. ("**Howmet**"). Individually, Alcoa and Howmet are referred to in this First Amendment as a "Party" and collectively as the "Parties."

RECITALS

WHEREAS, Alcoa and Alcoa Inc. were and are parties to that certain Amended and Restated Trademark License Agreement, having an effective date of October 31, 2016 under which Alcoa was identified as the "Licensor" and Alcoa Inc. was identified as the "Licensee" (the "**Agreement**");

WHEREAS, effective as of November 1, 2016, Alcoa Inc. changed its name to Arconic Inc.;

WHEREAS, effective as of March 30, 2020, Arconic Inc. changed its name to Howmet;

WHEREAS, Howmet now desires that (i) Alcoa file and prosecute additional trademark applications for certain of the Licensed Marks in selected countries in the trademark class applicable to commercial wheels, (ii) any eventual trademark registrations granted by such countries resulting from such additional trademark applications be licensed to Howmet for Wheel Products pursuant to the terms of the Agreement, and (iii) Alcoa consent to Howmet's registration and maintenance of certain internet domain names which incorporate certain of the Licensed Marks, and the addition of such internet domain names, once registered, to the "List of Domain Names" contained at Schedule 4 of the Agreement; and

WHEREAS, the Parties now desire to amend the Agreement pursuant to the terms of this First Amendment.

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein, and good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties hereto, intending to be legally bound, agree as follows:

1. Definitions. All capitalized terms used in this First Amendment but not defined in this First Amendment shall have the meanings ascribed to them in the Agreement. To the extent there is a conflict in meaning or interpretation as between the Agreement and this First Amendment, this First Amendment shall govern.

2. Amendments to the Agreement. The Agreement is hereby amended as of the First Amendment Effective Date as follows:

a) Alcoa shall file and prosecute trademark applications for the following Licensed Marks:  and  in the following countries in the trademark class applicable to commercial wheels (typically trademark class 12) (collectively, the "New TM Applications"):

Israel
Lichtenstein
Monaco
South Africa
Turkey

Alcoa and Howmet agree that any eventual trademark registrations granted by the above-mentioned countries for the Licensed Marks resulting from the New TM Applications shall be owned by Alcoa.

Alcoa and Howmet agree that any eventual trademark registrations granted by the above-mentioned countries for the Licensed Marks resulting from the New TM Applications shall be licensed to Howmet for Wheel Products pursuant to the terms of the Agreement.

b) Howmet shall reimburse Alcoa for any and all:

(i) costs (including government filing fees, outside counsel fees, translation fees, etc.) associated with preparation, filing, prosecution, and issuance of the New TM Applications; and

(ii) ongoing trademark annuities assessed by the trademark offices in the above-mentioned countries to maintain in force any trademark application and/or registration that issues off of the New TM Applications.

All payments made by Howmet to Alcoa hereunder shall and will be payable in United States Dollars in immediately available funds to an account designated by Alcoa via Electronic Funds Transfer (EFT) or such other electronic payment form as agreed to in writing by Alcoa.

c) Subject to the terms of the Agreement, Alcoa consents to Howmet's registration and maintenance, in Howmet's name and at Howmet's sole cost, of the following internet domain names which incorporate certain of the License Marks:

alcoawheels.bg
alcoawheels.com.hr
alcoawheels.hr
alcoawheels.cz
alcoawheels.co.cz
alcoawheels.com.ee
alcoawheels.ee
alcoawheels.com.gr
alcoawheels.gr

alcoawheels.co.hu
alcoawheels.hu
alcoawheels.ie
alcoawheels.co.il
alcoawheels.lu
alcoawheels.com.pt
alcoawheels.pt
alcoawheels.co.pt
alcoawheels.sk
alcoawheels.si
alcoawheels.com.tr
alcoawheels.co.za

d) Alcoa and Howmet agree that, once registered by Howmet, (i) the above internet domain names shall be deemed added to the "List of Domain Names" contained at Schedule 4 of the Agreement and (ii) the use of such internet domain names by Howmet shall be governed by the terms of the Agreement.

3. No Other Amendments; Confirmation. Except as expressly amended hereby, the provisions of the Agreement are and shall remain in full force and effect. Nothing herein shall be deemed to entitle either Party to a consent to, or a waiver, amendment, modification or other change of, any of the terms, conditions, obligations, covenant or agreements contained in the First Amendment other than as provided herein.

4. Severability. If any term, provision, covenant or condition of this First Amendment is held invalid or unenforceable for any reason, the remaining provisions of this First Amendment shall continue in full force and effect as if this First Amendment had been executed with the invalid portion eliminated, provided the effectiveness of the remaining portions of this First Amendment will not defeat the overall intent of the Parties. In such a situation, the Parties agree, to the extent legal and possible, to incorporate a replacement provision to accomplish the originally intended effect.

5. Electronic/Facsimile Signatures; Counterparts. The Parties agree that a facsimile or electronically-copied signature has the same effect as an original signature. This First Amendment may be executed in multiple copies, each of which is an original and all of which constitute one instrument.

[REMAINDER OF PAGE INTENTIONALLY BLANK – SIGNATURE PAGE TO FOLLOW]

IN WITNESS WHEREOF, the Parties hereto have executed this First Amendment or caused the same to be executed by a duly authorized officer as of the First Amendment Effective Date.

ALCOA USA CORP.	HOWMET AEROSPACE INC.
/s/ Nicklaus A. Oliver	/s/ Randall Scheps
By: Signature	By: Signature
Nicklaus A. Oliver	Randall Scheps
Name:	Name:
Associate General Counsel	President HWS
Title:	Title:
Pittsburgh, PA, USA	Cleveland, OH, USA
Place:	Place:
March 31, 2022	March 31, 2022
Date:	Date:

EXHIBIT 10.3

ALCOA CORPORATION
TERMS AND CONDITIONS FOR DEFERRED FEE RESTRICTED SHARE UNITS
DIRECTOR AWARDS

These terms and conditions, including Appendices A and B attached hereto, (jointly, the "Award Terms") are authorized by the Board of Directors as of May 4, 2022. They are deemed to be incorporated into and form a part of every Award of Restricted Share Units issued to a Director in lieu of Fees (as defined in the Alcoa Corporation 2016 Deferred Fee Plan for Directors) under the Alcoa Corporation 2016 Stock Incentive Plan, as may be amended from time to time (the "Plan").

Terms that are defined in the Plan have the same meanings in the Award Terms.

General Terms and Conditions

1. This Award of Restricted Share Units is granted in lieu of Fees pursuant to the Participant's election under the Alcoa Corporation 2016 Deferred Fee Plan for Directors, as may be amended from time to time (the "Deferred Fee Plan"). In accordance with the Deferred Fee Plan, the number of Shares subject to this Award has been determined by dividing the dollar amount of the Fees subject to the Director's election by the fair market value of a Share on the date(s) that such Fees (or any installment thereof) would otherwise have been paid in cash to the Participant, rounded down to the nearest number of whole Shares; any remaining amount representing the value of a fractional Share will be paid in cash to the Participant as soon as practicable following the grant date of this Award, but in any event by no later than March 15th of the year following the year in which the relevant Fees were earned. Restricted Share Units are subject to the provisions of the Plan and the provisions of the Award Terms. If the Plan and the Award Terms are inconsistent, the provisions of the Plan will govern. Interpretations of the Plan and the Award Terms by the Board are binding on the Participant and the Company. A Restricted Share Unit is an undertaking by the Company to issue the number of Shares indicated in the Participant's account with the Company's designated stock plan broker or service provider (the "Broker"), subject to the fulfillment of certain conditions, except to the extent otherwise provided in the Plan or herein. A Participant has no voting rights or rights to receive dividends on Restricted Share Units, but the Board of Directors may authorize that dividend equivalents be accrued on Restricted Share Units. Any dividend equivalents on Restricted Share Units will be paid in the same manner and at the same time as the Restricted Share Units to which they relate, as set forth in paragraph 3 below.

Vesting and Payment

2. *Vesting*. A Restricted Share Unit granted in lieu of Fees pursuant to the Participant's election under the Deferred Fee Plan (a "Deferred Fee RSU Award" as defined in the Deferred Fee Plan) is 100% vested on the grant date.

3. *Payment*. A Participant will receive one Share upon payment of each Restricted Share Unit. Payment of Restricted Share Units is governed by the Deferred Fee Plan. Except as otherwise set forth in the Deferred Fee Plan, payment of Restricted Share Units will occur upon the earlier of the Participant's "separation from service" (as defined in Section 409A of the Code and the Treasury Regulations thereunder) and the Participant's death, within the payment periods specified in the Deferred Fee Plan. In accordance with the deferral election provisions of the Deferred Fee Plan, the Participant may elect to receive payment of his or her Restricted Share Units in either a single lump sum or in ten (10) annual installments, except as otherwise required or recommended due to applicable local law or set forth in the Deferred Fee Plan. In the absence of such election by the Participant, a Restricted Share Unit will be paid in a single lump sum.

Taxes

4. The Participant acknowledges that the Participant will consult with his or her personal tax advisor regarding any income tax, social security contributions or other tax-related items ("Taxes") that arise in connection with the Restricted Share Units. The Participant is relying solely on such advisor and is not relying in any part on any statement or representation of the Company or any of its agents. The Company shall not be responsible for

withholding any applicable Taxes, unless required by applicable law. The Company may take such action as it deems appropriate to ensure that all Taxes, which are the Participant's sole and absolute responsibility, are withheld or collected from the Participant, if and to the extent required by applicable law. In this regard, the Company will have the power and the right to require the Participant to remit to the Company, the amount necessary to satisfy federal, state and local taxes, U.S. or non-U.S., required by law or regulation to be withheld with respect to any taxable event arising as a result of the Restricted Share Units. Notwithstanding the foregoing, unless otherwise determined by the Board, any obligation to withhold Taxes will be met by the Company by withholding from the Shares to be issued upon payment of the Restricted Share Unit that number of Shares with a fair market value on the payment date equal to the Taxes required to be withheld at the minimum required rates or, to the extent permitted under applicable accounting principles, at up to the maximum individual tax rate for the applicable tax jurisdiction.

Beneficiaries

5. If permitted by the Company, the Participant will be entitled to designate one or more beneficiaries to receive all Restricted Share Units at the time of death of the Participant. All beneficiary designations will be on beneficiary designation forms approved for the Plan. Copies of the form will generally be available from the Broker or may otherwise be obtained from the Company.

6. Beneficiary designations on an approved form will be effective at the time received by the Company, including, as applicable, through submission to the Broker. A Participant may revoke a beneficiary designation at any time by written notice to the Company, including as applicable, through submission to the Broker, or by filing a new designation form. Any designation form previously filed by a Participant will be automatically revoked and superseded by a later-filed form.

7. A Participant will be entitled to designate any number of beneficiaries on the form, and the beneficiaries may be natural or corporate persons.

8. The failure of any Participant to obtain any recommended signature on the form will not prohibit the Company from treating such designation as valid and effective. No beneficiary will acquire any beneficial or other interest in any Restricted Share Unit prior to the death of the Participant who designated such beneficiary.

9. Unless the Participant indicates on the form that a named beneficiary is to receive Restricted Share Units only upon the prior death of another named beneficiary, all beneficiaries designated on the form will be entitled to share equally in the Restricted Share Units. Unless otherwise indicated, all such beneficiaries will have an equal, undivided interest in all such Restricted Share Units.

10. Should a beneficiary die after the Participant but before the Restricted Share Unit is paid, such beneficiary's rights and interest in the Award will be transferable by the beneficiary's last will and testament or by the laws of descent and distribution. A named beneficiary who predeceases the Participant will obtain no rights or interest in a Restricted Share Unit, nor will any person claiming on behalf of such individual. Unless otherwise specifically indicated by the Participant on the beneficiary designation form, beneficiaries designated by class (such as "children," "grandchildren" etc.) will be deemed to refer to the members of the class living at the time of the Participant's death, and all members of the class will be deemed to take "per capita."

11. If a Participant does not designate a beneficiary or if the Company does not permit a beneficiary designation, the Restricted Share Units that have not been paid at the time of death of the Participant will be paid to the Participant's legal heirs pursuant to the Participant's last will and testament or by the laws of descent and distribution.

Adjustments

12. In the event of an Equity Restructuring, the Board will equitably adjust the Restricted Share Unit as it deems appropriate to reflect the Equity Restructuring, which may include (i) adjusting the number and type of securities subject to the Restricted Share Unit; and (ii) adjusting the terms and conditions of the Restricted Share Unit. The adjustments provided under this paragraph 12 will be nondiscretionary and final and binding on all interested

parties, including the affected Participant and the Company; provided that the Board will determine whether an adjustment is equitable.

Miscellaneous Provisions

13. *Stock Exchange Requirements; Applicable Laws.* Notwithstanding anything to the contrary in the Award Terms, no Shares issuable upon payment of the Restricted Share Units, and no certificate representing all or any part of such Shares, shall be issued or delivered if, in the opinion of counsel to the Company, such issuance or delivery would cause the Company to be in violation of, or to incur liability under, any securities law, or any rule, regulation or procedure of any U.S. national securities exchange upon which any securities of the Company are listed, or any listing agreement with any such securities exchange, or any other requirement of law or of any administrative or regulatory body having jurisdiction over the Company or a Subsidiary.

14. *Stockholder Rights.* No person or entity shall be entitled to vote, receive dividends or be deemed for any purpose the holder of any Shares until the Restricted Share Unit shall have vested and been paid in the form of Shares in accordance with the provisions of the Award Terms.

15. *Notices*. Any notice required or permitted under the Award Terms shall be in writing and shall be deemed sufficient when delivered personally or sent by confirmed email, telegram, or fax or five days after being deposited in the mail, as certified or registered mail, with postage prepaid, and addressed to the Company at the Company's principal corporate offices or to the Participant at the address maintained for the Participant in the Company's records or, in either case, as subsequently modified by written notice to the other party.

16. *Severability and Judicial Modification*. If any provision of the Award Terms is held to be invalid or unenforceable under the applicable laws of any country, state, province, territory or other political subdivision or the Company elects not to enforce such restriction, the remaining provisions shall remain in full force and effect and the invalid or unenforceable provision shall be modified only to the extent necessary to render that provision valid and enforceable to the fullest extent permitted by law. If the invalid or unenforceable provision cannot be, or is not, modified, that provision shall be severed from the Award Terms and all other provisions shall remain valid and enforceable.

17. *Successors.* The Award Terms shall be binding upon and inure to the benefit of the Company and its successors and assigns, on the one hand, and the Participant and his or her heirs, beneficiaries, legatees and personal representatives, on the other hand.

18. *Appendices*. Notwithstanding any provisions in the Award Terms, for Participants residing and/or providing services outside the United States, the Restricted Share Unit shall be subject to the additional terms and conditions set forth in Appendix A to the Award Terms and to any special terms and conditions for the Participant's country set forth in Appendix B to the Award Terms. Moreover, if the Participant relocates outside the United States or relocates between the countries included in Appendix B, subject to compliance with Section 409A of the Code, the additional terms and conditions set forth in Appendix A and the special terms and conditions for such country set forth in Appendix B will apply to the Participant, to the extent the Company determines that the application of such terms and conditions is necessary or advisable for legal or administrative reasons. The Appendices constitute part of the Award Terms.

19. *Imposition of Other Requirements*. The Company reserves the right to impose other requirements on the Participant's participation in the Plan, on the Restricted Share Unit and on any Shares acquired under the Plan, to the extent the Company determines it is necessary or advisable for legal or administrative reasons, and to require the Participant to sign any additional agreements or undertakings that may be necessary to accomplish the foregoing.

20. *Compliance with Code Section 409A*. It is intended that the Restricted Share Unit granted pursuant to the Award Terms be compliant with Section 409A of the Code and the Award Terms shall be interpreted, construed and operated to reflect this intent. Notwithstanding the foregoing, the Award Terms and the Plan may be amended at any time, without the consent of any party, to the extent necessary or desirable to satisfy any of the requirements under Section 409A of the Code, but the Company shall not be under any obligation to make any such amendment.

Further, the Company and its Subsidiaries do not make any representation to the Participant that the Restricted Share Unit granted pursuant to the Award Terms satisfies the requirements of Section 409A of the Code, and the Company and its Subsidiaries will have no liability or other obligation to indemnify or hold harmless the Participant or any other party for any tax, additional tax, interest or penalties that the Participant or any other party may incur in the event that any provision of the Award Terms or any amendment or modification thereof or any other action taken with respect thereto, is deemed to violate any of the requirements of Section 409A of the Code.

21. *Waiver*. A waiver by the Company of breach of any provision of the Award Terms shall not operate or be construed as a waiver of any other provision of the Award Terms, or of any subsequent breach by the Participant or any other Participant.

22. *No Advice Regarding Award*. The Company is not providing any tax, legal or financial advice, nor is the Company making any recommendations regarding the Participant's participation in the Plan, or the Participant's acquisition or sale of the underlying Shares. The Participant is hereby advised to consult with the Participant's own personal tax, legal and financial advisors regarding the Participant's participation in the Plan before taking any action related to the Plan.

23. *Governing Law and Venue.* As stated in the Plan, the Restricted Share Unit and the provisions of the Award Terms and all determinations made and actions taken thereunder, to the extent not otherwise governed by the laws of the United States, shall be governed by the laws of the State of Delaware, United States of America, without reference to principles of conflict of laws, and construed accordingly. The jurisdiction and venue for any disputes arising under, or any actions brought to enforce (or otherwise relating to), the Restricted Share Unit will be exclusively in the courts in the State of Delaware, including the Federal Courts located therein (should Federal jurisdiction exist).

24. *Electronic Delivery and Acceptance*. The Company may, in its sole discretion, decide to deliver any documents related to current or future participation in the Plan by electronic means. The Participant hereby consents to receive such documents by electronic delivery and agrees to participate in the Plan through an on-line or electronic system established and maintained by the Company or a third party designated by the Company.

25. *Entire Agreement*. The Award Terms and the Plan embody the entire understanding and agreement of the parties with respect to the subject matter hereof, and no promise, condition, representation or warranty, express or implied, not stated or incorporated by reference herein, shall bind either party hereto.

Acceptance of Award

26. In accordance with Section 15(c) of the Plan (as in effect at the grant date), the Participant may reject the Restricted Share Unit by notifying the Company within 30 days of the grant date that he or she does not accept the Restricted Share Unit. The Participant's acceptance of the Restricted Share Unit constitutes the Participant's acceptance of and agreement with the Award Terms. Notwithstanding the foregoing, if required by the Company, the Participant will provide a signed copy of the Award Terms in such manner and within such timeframe as may be requested by the Company. The Company has no obligation to issue Shares to the Participant if the Participant does not accept the Restricted Share Unit.

APPENDIX A
TO THE ALCOA CORPORATION
2016 Stock Incentive Plan
Terms and Conditions for Restricted Share Units
For Non-U.S. Participants

This Appendix A contains additional (or, if so indicated, different) terms and conditions that govern the Restricted Share Units if the Participant resides and/or provides services outside of the United States. Capitalized terms used but not defined herein shall have the same meanings assigned to them in the Plan and the Terms and Conditions for Restricted Share Units (the "Terms and Conditions").

A. *Termination*. This provision supplements paragraph 3 of the Terms and Conditions.

The Company will determine when the Participant is no longer providing services for purposes of the Restricted Share Units (including whether the Participant may still be considered to be providing services while on a leave of absence).

B. *Responsibility for Taxes*. This provision supplements paragraph 4 of the Terms and Conditions.

The Participant acknowledges that, regardless of any action taken by the Company or any Subsidiary, the ultimate liability for all Taxes is and remains the Participant's responsibility and may exceed any amount actually withheld by the Company or any Subsidiary. The Participant further acknowledges that the Company (a) makes no representations or undertakings regarding the treatment of any Taxes in connection with any aspect of these Restricted Shares Units, including, but not limited to, the grant, vesting or payment of Restricted Shares Units, the subsequent sale of Shares acquired pursuant to the Restricted Share Unit and the receipt of any dividends or dividend equivalents; and (b) does not commit to and is under no obligation to structure the terms of the Restricted Share Units or any aspect of the Restricted Share Units to reduce or eliminate the Participant's liability for Taxes or achieve any particular tax result. The Participant shall not make any claim against the Company or any Subsidiary, or their respective board, officers or employees related to Taxes arising from this Award. Furthermore, if the Participant has become subject to Taxes in more than one jurisdiction, the Participant acknowledges that the Company or a Subsidiary may be required to withhold or account for Taxes in more than one jurisdiction.

The Participant shall pay to the Company or any Subsidiary any amount of Taxes that the Company or any Subsidiary may be required to withhold or account for as a result of the Participant's participation in the Plan that cannot be satisfied by the means described in paragraph 4 of the Terms and Conditions. The Company may refuse to issue or deliver the Shares or the proceeds of the sale of Shares if the Participant fails to comply with his or her obligations in connection with the Taxes.

C. Data Privacy. The Participant hereby explicitly and unambiguously consents to the collection, use and transfer, in electronic or other form, of the Participant's personal data as described in these Award Terms and any other grant materials by and among, as applicable, the Company and any Subsidiary for the exclusive purpose of implementing, administering and managing the Participant's participation in the Plan and this Award.

The Participant understands that the Company may hold certain personal information about the Participant, including, but not limited to, the Participant's name, home address, email address and telephone number, date of birth, social insurance number, passport or other identification number, nationality, any shares of stock held in the Company, details of all Restricted Share Units or any other entitlement to shares of stock awarded, canceled, exercised, vested, unvested or outstanding in the Participant's favor ("Data"), for the exclusive purpose of implementing, administering and managing the Plan and this Award.

The Participant understands that Data will be transferred to the Broker, or such additional or other stock plan service providers as may be selected by the Company, which are assisting the Company with the implementation,

administration and management of the Plan and this Award. The Participant understands that the recipients of Data may be located in the United States or elsewhere, and that the recipients' country may have different data privacy laws and protections than the Participant's country. The Participant understands that the Participant may request a list with the names and addresses of any other potential recipients of Data by contacting the Company. The Participant authorizes the Company, the Broker and any other possible recipients which may assist the Company (presently or in the future) with implementing, administering and managing the Plan and this Award to receive, possess, use, retain and transfer Data, in electronic or other form, for the sole purpose of implementing, administering and managing the Participant's participation in the Plan and this Award. The Participant understands that Data will be held only as long as is necessary to implement, administer and manage the Participant's participation in the Plan and this Award. The Participant understands that the Participant may, at any time, view Data, request additional information about the storage and processing of Data, require any necessary amendments to Data or refuse or withdraw the consents herein, in any case without cost, by contacting in writing the Company. Further, the Participant understands that the Participant is providing the consents herein on a purely voluntary basis. If the Participant does not consent, or if the Participant later seeks to revoke the Participant's consent, the Participant's service as a Director will not be affected; the only consequence of refusing or withdrawing the Participant's consent is that the Company would not be able to grant this Award of Restricted Share Units or other Awards to the Participant or administer or maintain such Awards. Therefore, the Participant understands that refusing or withdrawing the Participant's consent may affect the Participant's ability to participate in the Plan. For more information on the consequences of the Participant's refusal to consent or withdrawal of consent, the Participant understands that the Participant may contact the Company.

D. *Language.* If the Participant has received these Award Terms, or any other document related to this Award of Restricted Share Units and/or the Plan translated into a language other than English and if the meaning of the translated version is different than the English version, the English version will control.

E. *Insider Trading Restrictions/Market Abuse Laws*. The Participant acknowledges that, depending on his or her country, the Participant may be subject to insider trading restrictions and/or market abuse laws, which may affect his or her ability to acquire or sell Shares or rights to Shares under the Plan during such times as the Participant is considered to have "inside information" regarding the Company (as defined by applicable laws in his or her country). Any restrictions under these laws or regulations are separate from and in addition to any restrictions that may be imposed under any applicable Company insider trading policy. The Participant acknowledges that it is his or her responsibility to comply with any applicable restrictions, and the Participant should consult his or her personal advisor on this matter.

F.*Foreign Asset/Account Reporting Requirements, Exchange Controls and Tax Requirements*. The Participant acknowledges that his or her country may have certain foreign asset and/or account reporting requirements and exchange controls which may affect his or her ability to acquire or hold Shares under the Plan or cash received from participating in the Plan (including from any dividends received or sale proceeds arising from the sale of Shares) in a brokerage or bank account outside his or her country. The Participant understands that he or she may be required to report such accounts, assets or transactions to the tax or other authorities in his or her country. The Participant also may be required to repatriate sale proceeds or other funds received as a result of the Participant's participation in the Plan to his or her country through a designated bank or broker and/or within a certain time after receipt. The Participant acknowledges that it is his or her responsibility to be compliant with all such requirements, and that the Participant should consult his or her personal legal and tax advisors, as applicable, to ensure the Participant's compliance.

APPENDIX B
TO THE ALCOA CORPORATION
2016 Stock Incentive Plan
Terms and Conditions for Restricted Share Units
For Non-U.S. Participants

Capitalized terms used but not defined in this Appendix B have the meanings set forth in the Plan and the Terms and Conditions for Restricted Share Units (the "Terms and Conditions").

Terms and Conditions

This Appendix B includes special terms and conditions that govern the Restricted Share Units if the Participant resides and/or provides services in one of the countries listed below.

If the Participant is a citizen or resident of a country other than the country in which the Participant is currently residing and/or providing services, or if the Participant transfers to another country after the grant of Restricted Share Units or is considered a resident of another country for local law purposes, the Board shall, in its discretion, determine to what extent the special terms and conditions contained herein shall be applicable to the Participant.

Notifications

This Appendix B also includes information regarding exchange controls, tax and certain other issues of which the Participant should be aware with respect to participation in the Plan. The information is based on the securities, exchange control, tax and other laws in effect in the respective countries as of March 2022. Such laws are often complex and change frequently. As a result, the Company strongly recommends that the Participant not rely on the information in this Appendix B as the only source of information relating to the consequences of participation in the Plan because the information may be out of date at the time the Participant receives Shares or sells Shares acquired under the Plan.

In addition, the information contained herein is general in nature and may not apply to the Participant's particular situation and the Company is not in a position to assure the Participant of any particular result. Accordingly, the Participant should seek appropriate professional advice as to how the relevant laws in the Participant's country may apply to his or her situation.

Finally, if the Participant is a citizen or resident of a country other than the country in which the Participant currently provides services and/or resides, or if the Participant transfers to another country after the grant of the Restricted Share Unit, or is considered a resident of another country for local law purposes, the information contained herein may not be applicable to the Participant in the same manner.

CANADA

Payment. Notwithstanding anything to the contrary in the Terms and Conditions, a Participant will receive one Share upon payment of each Restricted Share Unit granted pursuant to the Terms and Conditions. Further, notwithstanding anything to the contrary in the Terms and Conditions, the Company shall not have discretion to substitute a cash payment in lieu of Shares.

Further, in no event will the Restricted Share Units carry any right to receive payment of any dividend equivalents in cash. To the extent the Board of Directors authorizes that dividend equivalents be accrued on Restricted Share Units, such dividend equivalents shall be paid in such whole number of Shares with a fair market value at the time the Restricted Share Units are paid equal to the amount of dividend equivalents accrued on the Restricted Share Units at that time. Any fractional Shares attributable to dividend equivalents shall be rounded down to the nearest whole Share, and the Participant shall not be entitled to any consideration for such fractional Shares, or any other amount in respect of the accrued dividend equivalents.

Withholding.

Notwithstanding anything to the contrary in the Terms and Conditions, the number of Shares otherwise required to be issued to a Participant on payment of a vested Restricted Share Unit shall not be reduced to satisfy the payment of Taxes, except for at the election of a Participant, in the Participant's sole discretion.

The Following Provisions Apply for Participants Resident in Quebec:

Consent to Receive Information in English.

The Participant acknowledges that it is the express wish of the parties that these Award Terms, as well as all documents, notices and legal proceedings entered into, given or instituted pursuant hereto or relating directly or indirectly hereto, be written in English.

Les parties reconnaissent avoir exigé la rédaction en anglais de Conditions d'attribution, ainsi que de tous documents, avis et procédures judiciaires, exécutés, donnés ou intentés en vertu de, ou liés directement ou indirectement à, la présente convention.

Authorization to Release and Transfer Necessary Personal Information.

The following provision supplements paragraph D "Data Privacy" of Appendix A:

The Participant hereby authorizes the Company and the Company's representatives to discuss with and obtain all relevant information from all personnel, professional or not, involved in the administration and operation of the Plan. The Participant further authorizes the Company, any Subsidiary and the administrator of the Plan to disclose and discuss the Plan with their advisors. The Participant further authorizes the Company and any Subsidiary to record such information and to keep such information in the Participant's human resources file.

Notifications

Securities Law Information.

The Participant is permitted to sell Shares acquired under the Plan through the Broker, provided the resale of such Shares takes place outside of Canada through the facilities of a stock exchange on which the Stock is listed. The Stock is currently traded on the New York Stock Exchange which is located outside of Canada, under the ticker symbol "AA", and Shares acquired under the Plan may be sold through this exchange.

Foreign Asset/Account Reporting Information.

The Participant is required to report his or her foreign property on Form T1135 (Foreign Income Verification Statement) if the total cost of such foreign property exceeds C$100,000 at any time during the year. The form must

be filed by April 30th of the following year. Foreign property includes Shares acquired under the Plan, and may include Restricted Share Units granted under the Plan. When Shares are acquired, their cost generally is the adjusted cost base ("ACB") of the Shares. The ACB ordinarily would equal the fair market value of the Shares at the time of acquisition, but if the Participant owns other shares of the same company, this ACB may have to be averaged with the ACB of the other shares. The Participant should consult with his or her personal tax advisor to determine his or her reporting requirements.

EXHIBIT 10.4

ALCOA CORPORATION
TERMS AND CONDITIONS FOR RESTRICTED SHARE UNITS
ANNUAL DIRECTOR AWARDS

These terms and conditions, including Appendices A and B attached hereto (jointly, the "Award Terms"), are authorized by the Board of Directors as of May 4, 2022. They are deemed to be incorporated into and form a part of every Award of Restricted Share Units issued as an annual equity award to a Director under the Alcoa Corporation 2016 Stock Incentive Plan, as may be amended from time to time (the "Plan").

Terms that are defined in the Plan have the same meanings in the Award Terms.

General Terms and Conditions

1. This Award of Restricted Share Units is granted as the Participant's annual equity award pursuant to the Company's Non-Employee Director Compensation Policy (the "Director Compensation Policy"). The number of Shares subject to this Award has been determined by dividing the dollar value of the annual equity award provided for under the Director Compensation Policy by the fair market value of a Share on the grant date, rounded to the nearest number of whole Shares. Restricted Share Units are subject to the provisions of the Plan and the provisions of the Award Terms. If the Plan and the Award Terms are inconsistent, the provisions of the Plan will govern. Interpretations of the Plan and the Award Terms by the Board are binding on the Participant and the Company. A Restricted Share Unit is an undertaking by the Company to issue the number of Shares indicated in the Participant's account with the Company's designated stock plan broker or service provider (the "Broker"), subject to the fulfillment of certain conditions, except to the extent otherwise provided in the Plan or herein. A Participant has no voting rights or rights to receive dividends on Restricted Share Units, but the Board of Directors may authorize that dividend equivalents be accrued on Restricted Share Units, subject to vesting in accordance with paragraphs 2 and 4 below. Any dividend equivalents on Restricted Share Units will be paid in the same manner and at the same time as the Restricted Share Units to which they relate, as set forth in paragraph 5 below.

Vesting and Payment

2. A Restricted Share Unit vests on the first anniversary date of the grant date, or, if earlier, the date of the next subsequent annual meeting of stockholders following the grant date.

3. Except as provided in paragraph 4, if a Participant's service with the Company is terminated before the Restricted Share Unit vests, the Award is forfeited and is automatically canceled.

4. The following are exceptions to the vesting rules:

- Death or Disability: a Restricted Share Unit held by a Participant who dies while a Director or whose service as a Director terminates due to permanent and total disability is not forfeited but becomes fully vested as of the date of the Participant's death or termination of service due to disability, as applicable.

  A Participant is deemed to be permanently and totally disabled if the Participant is unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or which has lasted or can be expected to last for a continuous period of not less than 12 months. A Participant shall not be considered to be permanently and totally disabled unless the Participant furnishes proof of the existence thereof in such form and manner, and at such times, as the Company may require. In the event of a dispute, the determination whether a Participant is permanently and totally disabled will be made by the Board.

- Change in Control: to the extent that (i) a Replacement Award is not provided to the Participant following a Change in Control; or (ii) the Participant's service is not continued by the successor or survivor corporation in connection with or following such Change in Control, the Restricted Share Unit will become fully vested immediately prior to the consummation of the Change in Control subject to the Participant's continued service through the date of such Change in Control.

5. *Payment*. A Participant will receive one Share upon payment of each vested Restricted Share Unit. Payment of vested Restricted Share Units is governed by the Alcoa Corporation 2016 Deferred Fee Plan for Directors, as may be amended from time to time (the "Deferred Fee Plan"). Except as otherwise set forth in the Deferred Fee Plan, payment of vested Restricted Share Units will occur upon the earlier of the Participant's "separation from service" (as defined in Section 409A of the Code and the Treasury Regulations thereunder) and the Participant's death, within the payment periods specified in the Deferred Fee Plan. In accordance with the deferral election provisions of the Deferred Fee Plan, the Participant may elect to receive payment of his or her vested Restricted Share Units in either a single lump sum or in ten (10) annual installments, except as otherwise required or recommended due to applicable local law or set forth in the Deferred Fee Plan. In the absence of such election by the Participant, a vested Restricted Share Unit will be paid in a single lump sum.

Taxes

6. The Participant acknowledges that the Participant will consult with his or her personal tax advisor regarding any income tax, social security contributions or other tax-related items ("Taxes") that arise in connection with the Restricted Share Units. The Participant is relying solely on such advisor and is not relying in any part on any statement or representation of the Company or any of its agents. The Company shall not be responsible for withholding any applicable Taxes, unless required by applicable law. The Company may take such action as it deems appropriate to ensure that all Taxes, which are the Participant's sole and absolute responsibility, are withheld or collected from the Participant, if and to the extent required by applicable law. In this regard, the Company will have the power and the right to require the Participant to remit to the Company the amount necessary to satisfy federal, state and local taxes, U.S. or non-U.S., required by law or regulation to be withheld with respect to any taxable event arising as a result of the Restricted Share Units. Notwithstanding the foregoing, unless otherwise determined by the Board, any obligation to withhold Taxes will be met by the Company by withholding from the Shares to be issued upon payment of the Restricted Share Unit that number of Shares with a fair market value on the payment date equal to the Taxes required to be withheld at the minimum required rates or, to the extent permitted under applicable accounting principles, at up to the maximum individual tax rate for the applicable tax jurisdiction.

Beneficiaries

7. If permitted by the Company, the Participant will be entitled to designate one or more beneficiaries to receive all Restricted Share Units that have not yet vested or that have vested but have not been paid at the time of death of the Participant. All beneficiary designations will be on beneficiary designation forms approved for the Plan. Copies of the form will generally be available from the Broker or may otherwise be obtained from the Company.

8. Beneficiary designations on an approved form will be effective at the time received by the Company, including, as applicable, through submission to the Broker. A Participant may revoke a beneficiary designation at any time by written notice to the Company, including as applicable, through submission to the Broker, or by filing a new designation form. Any designation form previously filed by a Participant will be automatically revoked and superseded by a later-filed form.

9. A Participant will be entitled to designate any number of beneficiaries on the form, and the beneficiaries may be natural or corporate persons.

10. The failure of any Participant to obtain any recommended signature on the form will not prohibit the Company from treating such designation as valid and effective. No beneficiary will acquire any beneficial or other interest in any Restricted Share Unit prior to the death of the Participant who designated such beneficiary.

11. Unless the Participant indicates on the form that a named beneficiary is to receive Restricted Share Units only upon the prior death of another named beneficiary, all beneficiaries designated on the form will be entitled to share equally in the Restricted Share Units. Unless otherwise indicated, all such beneficiaries will have an equal, undivided interest in all such Restricted Share Units.

12. Should a beneficiary die after the Participant but before the Restricted Share Unit is paid, such beneficiary's rights and interest in the Award will be transferable by the beneficiary's last will and testament or by the laws of descent and distribution. A named beneficiary who predeceases the Participant will obtain no rights or interest in a Restricted Share Unit, nor will any person claiming on behalf of such individual. Unless otherwise specifically indicated by the Participant on the beneficiary designation form, beneficiaries designated by class (such as "children," "grandchildren" etc.) will be deemed to refer to the members of the class living at the time of the Participant's death, and all members of the class will be deemed to take "*per capita*."

13. If a Participant does not designate a beneficiary or if the Company does not permit a beneficiary designation, the Restricted Share Units that have not yet vested or been paid at the time of death of the Participant will be paid to the Participant's legal heirs pursuant to the Participant's last will and testament or by the laws of descent and distribution.

Adjustments

14. In the event of an Equity Restructuring, the Board will equitably adjust the Restricted Share Unit as it deems appropriate to reflect the Equity Restructuring, which may include (i) adjusting the number and type of securities subject to the Restricted Share Unit; and (ii) adjusting the terms and conditions of the Restricted Share Unit. The adjustments provided under this paragraph 14 will be nondiscretionary and final and binding on all interested parties, including the affected Participant and the Company; provided that the Board will determine whether an adjustment is equitable.

Miscellaneous Provisions

15. *Stock Exchange Requirements; Applicable Laws.* Notwithstanding anything to the contrary in the Award Terms, no Shares issuable upon vesting and payment of the Restricted Share Units, and no certificate representing all or any part of such Shares, shall be issued or delivered if, in the opinion of counsel to the Company, such issuance or delivery would cause the Company to be in violation of, or to incur liability under, any securities law, or any rule, regulation or procedure of any U.S. national securities exchange upon which any securities of the Company are listed, or any listing agreement with any such securities exchange, or any other requirement of law or of any administrative or regulatory body having jurisdiction over the Company or a Subsidiary.

16. *Stockholder Rights.* No person or entity shall be entitled to vote, receive dividends or be deemed for any purpose the holder of any Shares until the Restricted Share Unit shall have vested and been paid in the form of Shares in accordance with the provisions of the Award Terms.

17. *Notices*. Any notice required or permitted under the Award Terms shall be in writing and shall be deemed sufficient when delivered personally or sent by confirmed email, telegram, or fax or five days after being deposited in the mail, as certified or registered mail, with postage prepaid, and addressed to the Company at the Company's principal corporate offices or to the Participant at the address maintained for the Participant in the Company's records or, in either case, as subsequently modified by written notice to the other party.

18. *Severability and Judicial Modification*. If any provision of the Award Terms is held to be invalid or unenforceable under the applicable laws of any country, state, province, territory or other political subdivision or the Company elects not to enforce such restriction, the remaining provisions shall remain in full force and effect and the invalid or unenforceable provision shall be modified only to the extent necessary to render that provision valid and enforceable to the fullest extent permitted by law. If the invalid or unenforceable provision cannot be, or is not, modified, that provision shall be severed from the Award Terms and all other provisions shall remain valid and enforceable.

19. *Successors*. The Award Terms shall be binding upon and inure to the benefit of the Company and its successors and assigns, on the one hand, and the Participant and his or her heirs, beneficiaries, legatees and personal representatives, on the other hand.

20. *Appendices*. Notwithstanding any provisions in the Award Terms, for Participants residing and/or providing services outside the United States, the Restricted Share Unit shall be subject to the additional terms and conditions set forth in Appendix A to the Award Terms and to any special terms and conditions for the Participant's country set forth in Appendix B to the Award Terms. Moreover, if the Participant relocates outside the United States or relocates between the countries included in Appendix B, subject to compliance with Section 409A of the Code, the additional terms and conditions set forth in Appendix A and the special terms and conditions for such country set forth in Appendix B will apply to the Participant, to the extent the Company determines that the application of such terms and conditions is necessary or advisable for legal or administrative reasons. The Appendices constitute part of the Award Terms.

21. *Imposition of Other Requirements*. The Company reserves the right to impose other requirements on the Participant's participation in the Plan, on the Restricted Share Unit and on any Shares acquired under the Plan, to the extent the Company determines it is necessary or advisable for legal or administrative reasons, and to require the Participant to sign any additional agreements or undertakings that may be necessary to accomplish the foregoing.

22. *Compliance with Code Section 409A*. It is intended that the Restricted Share Unit granted pursuant to the Award Terms be compliant with Section 409A of the Code and the Award Terms shall be interpreted, construed and operated to reflect this intent. Notwithstanding the foregoing, the Award Terms and the Plan may be amended at any time, without the consent of any party, to the extent necessary or desirable to satisfy any of the requirements under Section 409A of the Code, but the Company shall not be under any obligation to make any such amendment. Further, the Company and its Subsidiaries do not make any representation to the Participant that the Restricted Share Unit granted pursuant to the Award Terms satisfies the requirements of Section 409A of the Code, and the Company and its Subsidiaries will have no liability or other obligation to indemnify or hold harmless the Participant or any other party for any tax, additional tax, interest or penalties that the Participant or any other party may incur in the event that any provision of the Award Terms or any amendment or modification thereof or any other action taken with respect thereto, is deemed to violate any of the requirements of Section 409A of the Code.

23. *Waiver*. A waiver by the Company of breach of any provision of the Award Terms shall not operate or be construed as a waiver of any other provision of the Award Terms, or of any subsequent breach by the Participant or any other Participant.

24. *No Advice Regarding Award*. The Company is not providing any tax, legal or financial advice, nor is the Company making any recommendations regarding the Participant's participation in the Plan, or the Participant's acquisition or sale of the underlying Shares. The Participant is hereby advised to consult with the Participant's own personal tax, legal and financial advisors regarding the Participant's participation in the Plan before taking any action related to the Plan.

25. *Governing Law and Venue.* As stated in the Plan, the Restricted Share Unit and the provisions of the Award Terms and all determinations made and actions taken thereunder, to the extent not otherwise governed by the laws of the United States, shall be governed by the laws of the State of Delaware, United States of America, without reference to principles of conflict of laws, and construed accordingly. The jurisdiction and venue for any disputes arising under, or any actions brought to enforce (or otherwise relating to), the Restricted Share Unit will be exclusively in the courts in the State of Delaware, including the Federal Courts located therein (should Federal jurisdiction exist).

26. *Electronic Delivery and Acceptance*. The Company may, in its sole discretion, decide to deliver any documents related to current or future participation in the Plan by electronic means. The Participant hereby consents to receive such documents by electronic delivery and agrees to participate in the Plan through an on-line or electronic system established and maintained by the Company or a third party designated by the Company.

27. *Entire Agreement*. The Award Terms and the Plan embody the entire understanding and agreement of the parties with respect to the subject matter hereof, and no promise, condition, representation or warranty, express or implied, not stated or incorporated by reference herein, shall bind either party hereto.

Acceptance of Award

28. In accordance with Section 15(c) of the Plan (as in effect at the grant date), the Participant may reject the Restricted Share Unit by notifying the Company within 30 days of the grant date that he or she does not accept the Restricted Share Unit. The Participant's acceptance of the Restricted Share Unit constitutes the Participant's acceptance of and agreement with the Award Terms. Notwithstanding the foregoing, if required by the Company, the Participant will provide a signed copy of the Award Terms in such manner and within such timeframe as may be requested by the Company. The Company has no obligation to issue Shares to the Participant if the Participant does not accept the Restricted Share Unit.

APPENDIX A
TO THE ALCOA CORPORATION
2016 Stock Incentive Plan
Terms and Conditions for Restricted Share Units
For Non-U.S. Participants

This Appendix A contains additional (or, if so indicated, different) terms and conditions that govern the Restricted Share Units if the Participant resides and/or provides services outside of the United States. Capitalized terms used but not defined herein shall have the same meanings assigned to them in the Plan and the Terms and Conditions for Restricted Share Units (the "Terms and Conditions").

A. *Termination*. This provision supplements paragraph 3 of the Terms and Conditions.

The Company will determine when the Participant is no longer providing services for purposes of the Restricted Share Units (including whether the Participant may still be considered to be providing services while on a leave of absence).

B. *Responsibility for Taxes*. This provision supplements paragraph 6 of the Terms and Conditions.

The Participant acknowledges that, regardless of any action taken by the Company or any Subsidiary, the ultimate liability for all Taxes is and remains the Participant's responsibility and may exceed any amount actually withheld by the Company or any Subsidiary. The Participant further acknowledges that the Company (a) makes no representations or undertakings regarding the treatment of any Taxes in connection with any aspect of these Restricted Shares Units, including, but not limited to, the grant, vesting or payment of Restricted Shares Units, the subsequent sale of Shares acquired pursuant to the Restricted Share Unit and the receipt of any dividends or dividend equivalents; and (b) does not commit to and is under no obligation to structure the terms of the Restricted Share Units or any aspect of the Restricted Share Units to reduce or eliminate the Participant's liability for Taxes or achieve any particular tax result. The Participant shall not make any claim against the Company or any Subsidiary, or their respective board, officers or employees, related to Taxes arising from this Award. Furthermore, if the Participant has become subject to Taxes in more than one jurisdiction, the Participant acknowledges that the Company or a Subsidiary may be required to withhold or account for Taxes in more than one jurisdiction.

The Participant shall pay to the Company or any Subsidiary any amount of Taxes that the Company or any Subsidiary may be required to withhold or account for as a result of the Participant's participation in the Plan that cannot be satisfied by the means described in paragraph 6 of the Terms and Conditions. The Company may refuse to issue or deliver the Shares or the proceeds of the sale of Shares if the Participant fails to comply with his or her obligations in connection with the Taxes.

C. *Nature of Award.* In accepting the Restricted Share Units, the Participant acknowledges, understands and agrees that:

a. the Plan is established voluntarily by the Company, is discretionary in nature and may be modified, amended, suspended, or terminated by the Company at any time, to the extent permitted by the Plan;

b. this Award of Restricted Share Units and the Participant's participation in the Plan shall not create a right to, or be interpreted as forming an employment contract with the Company;

c. the Participant's participation in the Plan is voluntary;

d. the future value of the Shares subject to the Restricted Share Unit is unknown and cannot be predicted with certainty;

e. no claim or entitlement to compensation or damages shall arise from forfeiture of any portion of this Award of Restricted Share Units resulting from termination of the Participant's service as a Director (for any reason whatsoever and regardless of whether later found to be invalid or in breach of the laws of any applicable jurisdiction), and, in consideration of this Award of Restricted Share Units, the Participant irrevocably agrees never to institute any claim against the Company and any Subsidiary, waives his or her ability, if any, to bring any such claim, and releases the Company and all Subsidiaries from any such claim; if, notwithstanding the foregoing, any such claim is allowed by a court of competent jurisdiction, then, by participating in the Plan, the Participant shall be deemed irrevocably to have agreed not to pursue such claim and agrees to execute any and all documents necessary to request dismissal or withdrawal of such claims;

f. unless otherwise provided in the Plan or by the Company in its discretion, this Award of Restricted Share Units and the benefits under the Plan evidenced by these Award Terms do not create any entitlement to have this Award of Restricted Share Units or any such benefits transferred to, or assumed by, another company nor to be exchanged, cashed out or substituted for, in connection with any corporate transaction affecting the Shares; and

g. neither the Company nor any Subsidiary shall be liable for any foreign exchange rate fluctuation between the Participant's local currency and the United States Dollar that may affect the value of the Restricted Share Units or of any amounts due to the Participant pursuant to the Restricted Share Units or the subsequent sale of any Shares acquired under the Plan.

D. Data Privacy. The Participant hereby explicitly and unambiguously consents to the collection, use and transfer, in electronic or other form, of the Participant's personal data as described in these Award Terms and any other grant materials by and among, as applicable, the Company and any Subsidiary for the exclusive purpose of implementing, administering and managing the Participant's participation in the Plan and this Award.

The Participant understands that the Company may hold certain personal information about the Participant, including, but not limited to, the Participant's name, home address, email address and telephone number, date of birth, social insurance number, passport or other identification number, nationality, any shares of stock held in the Company, details of all Restricted Share Units or any other entitlement to shares of stock awarded, canceled, exercised, vested, unvested or outstanding in the Participant's favor ("Data"), for the exclusive purpose of implementing, administering and managing the Plan and this Award.

The Participant understands that Data will be transferred to the Broker, or such additional or other stock plan service providers as may be selected by the Company, which are assisting the Company with the implementation, administration and management of the Plan and this Award. The Participant understands that the recipients of Data may be located in the United States or elsewhere, and that the recipients' country may have different data privacy laws and protections than the Participant's country. The Participant understands that the Participant may request a list with the names and addresses of any other potential recipients of Data by contacting the Company. The Participant authorizes the Company, the Broker and any other possible recipients which may assist the Company (presently or in the future) with implementing, administering and managing the Plan and this Award to receive, possess, use, retain and transfer Data, in electronic or other form, for the sole purpose of implementing, administering and managing the Participant's participation in the Plan and this Award. The Participant understands that Data will be held only as long as is necessary to implement, administer and manage the Participant's participation in the Plan and this Award. The Participant understands that the Participant may, at any time, view Data, request additional information about the storage and processing of Data, require any necessary amendments to Data or refuse or withdraw the consents herein, in any case without cost, by contacting in writing the Company. Further, the Participant understands that the Participant is providing the consents herein on a purely voluntary basis. If the Participant does not consent, or if the Participant later seeks to revoke the Participant's consent, the Participant's service as a Director will not be affected; the only consequence of refusing or withdrawing the Participant's consent is that the Company would not be able to grant this Award of Restricted Share Units or other Awards to the Participant or administer or maintain such Awards. Therefore, the Participant understands that refusing or withdrawing the Participant's consent may affect the Participant's

ability to participate in the Plan. For more information on the consequences of the Participant's refusal to consent or withdrawal of consent, the Participant understands that the Participant may contact the Company.

E.*Language*. If the Participant has received these Award Terms, or any other document related to this Award of Restricted Share Units and/or the Plan translated into a language other than English and if the meaning of the translated version is different than the English version, the English version will control.

F. *Insider Trading Restrictions/Market Abuse Laws*. The Participant acknowledges that, depending on his or her country, the Participant may be subject to insider trading restrictions and/or market abuse laws, which may affect his or her ability to acquire or sell Shares or rights to Shares under the Plan during such times as the Participant is considered to have "inside information" regarding the Company (as defined by applicable laws in his or her country). Any restrictions under these laws or regulations are separate from and in addition to any restrictions that may be imposed under any applicable Company insider trading policy. The Participant acknowledges that it is his or her responsibility to comply with any applicable restrictions, and the Participant should consult his or her personal advisor on this matter.

G.*Foreign Asset/Account Reporting Requirements, Exchange Controls and Tax Requirements*. The Participant acknowledges that his or her country may have certain foreign asset and/or account reporting requirements and exchange controls which may affect his or her ability to acquire or hold Shares under the Plan or cash received from participating in the Plan (including from any dividends received or sale proceeds arising from the sale of Shares) in a brokerage or bank account outside his or her country. The Participant understands that he or she may be required to report such accounts, assets or transactions to the tax or other authorities in his or her country. The Participant also may be required to repatriate sale proceeds or other funds received as a result of the Participant's participation in the Plan to his or her country through a designated bank or broker and/or within a certain time after receipt. The Participant acknowledges that it is his or her responsibility to be compliant with all such requirements, and that the Participant should consult his or her personal legal and tax advisors, as applicable, to ensure the Participant's compliance.

APPENDIX B
TO THE ALCOA CORPORATION
2016 Stock Incentive Plan
Terms and Conditions for Restricted Share Units
For Non-U.S. Participants

Capitalized terms used but not defined in this Appendix B have the meanings set forth in the Plan and the Terms and Conditions for Restricted Share Units (the "Terms and Conditions").

Terms and Conditions

This Appendix B includes special terms and conditions that govern the Restricted Share Units if the Participant resides and/or provides services in one of the countries listed below.

If the Participant is a citizen or resident of a country other than the country in which the Participant is currently residing and/or providing services, or if the Participant transfers to another country after the grant of Restricted Share Units or is considered a resident of another country for local law purposes, the Board shall, in its discretion, determine to what extent the special terms and conditions contained herein shall be applicable to the Participant.

Notifications

This Appendix B also includes information regarding exchange controls, tax and certain other issues of which the Participant should be aware with respect to participation in the Plan. The information is based on the securities, exchange control, tax and other laws in effect in the respective countries as of March 2022. Such laws are often complex and change frequently. As a result, the Company strongly recommends that the Participant not rely on the information in this Appendix B as the only source of information relating to the consequences of participation in the Plan because the information may be out of date at the time the Participant receives Shares or sells Shares acquired under the Plan.

In addition, the information contained herein is general in nature and may not apply to the Participant's particular situation and the Company is not in a position to assure the Participant of any particular result. Accordingly, the Participant should seek appropriate professional advice as to how the relevant laws in the Participant's country may apply to his or her situation.

Finally, if the Participant is a citizen or resident of a country other than the country in which the Participant currently provides services and/or resides, or if the Participant transfers to another country after the grant of the Restricted Share Unit, or is considered a resident of another country for local law purposes, the information contained herein may not be applicable to the Participant in the same manner.

CANADA

Terms and Conditions

Payment. Notwithstanding anything to the contrary in the Terms and Conditions, a Participant will receive one Share upon payment of each Restricted Share Unit that vests pursuant to the Terms and Conditions. Further, notwithstanding anything to the contrary in the Terms and Conditions, the Company shall not have discretion to substitute a cash payment in lieu of Shares.

Further, in no event will the Restricted Share Units carry any right to receive payment of any dividend equivalents in cash. To the extent the Board of Directors authorizes that dividend equivalents be accrued on Restricted Share Units, such dividend equivalents shall be paid in such whole number of Shares with a fair market value at the time the Restricted Share Units are paid equal to the amount of dividend equivalents accrued on the Restricted Share Units at that time. Any fractional Shares attributable to dividend equivalents shall be rounded down to the nearest whole Share, and the Participant shall not be entitled to any consideration for such fractional Shares, or any other amount in respect of the accrued dividend equivalents.

Withholding.

Notwithstanding anything to the contrary in the Terms and Conditions, the number of Shares otherwise required to be issued to a Participant on payment of a vested Restricted Share Unit shall not be reduced to satisfy the payment of Taxes, except for at the election of a Participant, in the Participant's sole discretion.

The Following Provisions Apply for Participants Resident in Quebec:

Consent to Receive Information in English.

The Participant acknowledges that it is the express wish of the parties that these Award Terms, as well as all documents, notices and legal proceedings entered into, given or instituted pursuant hereto or relating directly or indirectly hereto, be written in English.

Les parties reconnaissent avoir exigé la rédaction en anglais de Conditions d'attribution, ainsi que de tous documents, avis et procédures judiciaires, exécutés, donnés ou intentés en vertu de, ou liés directement ou indirectement à, la présente convention.

Authorization to Release and Transfer Necessary Personal Information.

The following provision supplements paragraph D "Data Privacy" of Appendix A:

The Participant hereby authorizes the Company and the Company's representatives to discuss with and obtain all relevant information from all personnel, professional or not, involved in the administration and operation of the Plan. The Participant further authorizes the Company, any Subsidiary and the administrator of the Plan to disclose and discuss the Plan with their advisors. The Participant further authorizes the Company and any Subsidiary to record such information and to keep such information in the Participant's human resources file.

Notifications

Securities Law Information.

The Participant is permitted to sell Shares acquired under the Plan through the Broker, provided the resale of such Shares takes place outside of Canada through the facilities of a stock exchange on which the Stock is listed. The Stock is currently traded on the New York Stock Exchange, which is located outside of Canada, under the ticker symbol "AA", and Shares acquired under the Plan may be sold through this exchange.

Foreign Asset/Account Reporting Information.

The Participant is required to report his or her foreign property on Form T1135 (Foreign Income Verification Statement) if the total cost of such foreign property exceeds C$100,000 at any time during the year. The form must be filed by April 30th of the following year. Foreign property includes Shares acquired under the Plan, and may include Restricted Share Units granted under the Plan. When Shares are acquired, their cost generally is the adjusted cost base ("ACB") of the Shares. The ACB ordinarily would equal the fair market value of the Shares at the time of acquisition, but if the Participant owns other shares of the same company, this ACB may have to be averaged with the ACB of the other shares. The Participant should consult with his or her personal tax advisor to determine his or her reporting requirements.

EXHIBIT 31.1

Certifications

I, Roy C. Harvey, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Alcoa Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: July 25, 2022

/s/ ROY C. HARVEY
Name: Roy C. Harvey
Title: President and Chief Executive Officer

EXHIBIT 31.2

Certifications

I, William F. Oplinger, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Alcoa Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: July 25, 2022

/s/ WILLIAM F. OPLINGER

Name: William F. Oplinger
Title: Executive Vice President and Chief Financial Officer

EXHIBIT 32.1

Certification
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code), the undersigned officer of Alcoa Corporation, a Delaware corporation (the "Company"), does hereby certify that:

1. The Quarterly Report on Form 10-Q for the quarter ended June 30, 2022 (the "Form 10-Q") of the Company fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and,
2. The information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: July 25, 2022

/s/ ROY C. HARVEY
Name: Roy C. Harvey
Title: President and Chief Executive Officer

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

The foregoing certification is being furnished to the Securities and Exchange Commission as an exhibit to the Form 10-Q and shall not be considered filed as part of the Form 10-Q.

EXHIBIT 32.2

Certification
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code), the undersigned officer of Alcoa Corporation, a Delaware corporation (the "Company"), does hereby certify that:

1. The Quarterly Report on Form 10-Q for the quarter ended June 30, 2022 (the "Form 10-Q") of the Company fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and,
2. The information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: July 25, 2022

/s/ WILLIAM F. OPLINGER
Name: William F. Oplinger
Title: Executive Vice President and Chief Financial Officer

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

The foregoing certification is being furnished to the Securities and Exchange Commission as an exhibit to the Form 10-Q and shall not be considered filed as part of the Form 10-Q.