UGI INTERNATIONAL, LLC
AND SUBSIDIARIES

CONSOLIDATED FINANCIAL STATEMENTS
and
MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS
OF OPERATIONS
for the years ended September 30, 2019, 2018 and 2017

UGI INTERNATIONAL, LLC AND SUBSIDIARIES

TABLE OF CONTENTS

UGI INTERNATIONAL, LLC AND SUBSIDIARIES

GLOSSARY OF TERMS AND ABBREVIATIONS

Terms and abbreviations used in this document are defined below:

UGI International and Related Entities

AvantiGas - AvantiGas Limited, an indirect wholly owned subsidiary of UGI International

Company - UGI International and its consolidated subsidiaries collectively

DVEP - DVEP Investeringen B.V., an indirect wholly owned subsidiary of UGI International

Enterprises - UGI Enterprises, LLC, a wholly owned subsidiary of UGI

Finagaz - The retail LPG distribution business of Totalgaz SAS acquired by the Company on May 29, 2015

Flaga - Flaga GmbH, an indirect wholly owned subsidiary of UGI International

UGI - UGI Corporation

UGI France - UGI France SAS (*a Société par actions simplifiée*), an indirect wholly owned subsidiary of UGI International

UGI International - UGI International, LLC, a wholly owned subsidiary of Enterprises

UniverGas - UniverGas Italia S.r.l, an indirect wholly owned subsidiary of UGI International

Other Terms and Abbreviations

2015 Senior Facilities Agreement - A five-year senior facilities agreement entered into in April 2015 between UGI France and a consortium of banks consisting of a variable-rate term loan and a revolving credit facility

2017 Credit Agreement - A secured multicurrency revolving facility agreement entered into in December 2017 by UGI International, LLC with a group of banks providing for borrowings up to €300 million that was terminated concurrent with entering into the 2018 UGI International Credit Facilities Agreement

2018 Credit Facilities Agreement - A five-year unsecured Senior Facilities Agreement entered into in October 2018 by UGI International comprising a €300 million term loan facility and a €300 million revolving credit facility

3.25% Senior Notes - An underwritten private placement by UGI International of €350 million principal amount of senior unsecured notes due November 1, 2025

ABO - Accumulated Benefit Obligation

AOCI - Accumulated Other Comprehensive Income (Loss)

ASC - Accounting Standards Codification

ASC 605 - ASC 605, "Revenue Recognition"

ASC 606 - ASC 606, "Revenue from Contracts with Customers"

ASC 740 - ASC 740, "Income Taxes"

ASU - Accounting Standards Update

ASU 2014-09 - Accounting Standards Update No. 2014-09, "Revenue from Contracts with Customers"

BRP - Balance Responsible Party providing electricity balancing services in the European electricity markets

December 2017 French Finance Bills - The French Finance Bill for 2018 and the second amendment to the French Finance Bill for 2017

DVEP Acquisition - The acquisition of DVEP, an energy marketer in the Netherlands, on August 31, 2017 by UGI International through its wholly owned indirect subsidiary, UGI International Holdings B.V.

EBITDA - Earnings before interest expense, income taxes, depreciation and amortization

Euribor - Euro Interbank Offered Rate

FASB - Financial Accounting Standards Board

Fiscal 2017 - The fiscal year ended September 30, 2017

Fiscal 2018 - The fiscal year ended September 30, 2018

Fiscal 2019 - The fiscal year ended September 30, 2019

Fiscal 2020 - The fiscal year ending September 30, 2020

Flaga U.S. Dollar Term Loan - The U.S. dollar denominated variable-rate term loan, as amended to extend the maturity date to April 2020

GAAP - U.S. generally accepted accounting principles

GILTI - Global Intangible Low Taxed Income

IT - Information technology

LIBOR - London Inter-bank Offered Rate

LPG - Liquefied petroleum gas

Net investment hedges - Derivatives used to hedge portions of net investments in foreign subsidiaries

NPNS - Normal purchase and normal sale

PBO - Projected benefit obligation

SPA - Share Purchase Agreement

TCJA - Tax Cuts and Jobs Act

Total - a French multinational integrated oil and gas company

Totalgaz Acquisition - The acquisition of Totalgaz SAS, a retail distributor of LPG in France, on May 29, 2015 by UGI France

UniverGas Acquisition - The acquisition of UniverGas, a retail distributor of LPG in Italy, on October 5, 2017 by UGI International through its wholly owned indirect subsidiary, UGI Italia

U.S. - United States of America

VDP - Voluntary Departure Plans

Building a better
working world

Ernst & Young LLP
One Commerce Square
Suite 700
2005 Market Street
Philadelphia, PA 19103

Tel: +1 215 448 5000
Fax: +1 215 448 5500
ey.com

Report of Independent Auditors

To the Member and Management of UGI International, LLC

We have audited the accompanying consolidated financial statements of UGI International, LLC and subsidiaries, which comprise the consolidated balance sheets as of September 30, 2019 and 2018, and the related consolidated statements of income, comprehensive income, cash flows and changes in equity for each of the three years in the period ended September 30, 2019, and the related notes to the consolidated financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in conformity with U.S. generally accepted accounting principles; this includes the design, implementation and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free of material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of UGI International, LLC and subsidiaries at September 30, 2019 and 2018, and the consolidated results of their operations and their cash flows for each of the three years in the period ended September 30, 2019, in conformity with U.S. generally accepted accounting principles.

Ernst & Young LLP

November 26, 2019

UGI INTERNATIONAL, LLC AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

(Thousands of dollars)

	September 30, 2019	September 30, 2018
ASSETS		
Current assets:		
Cash and cash equivalents	$ 235,190	$ 237,539
Restricted cash	23,847	657
Accounts receivable (less allowances for doubtful accounts of $10,032 and $11,150, respectively)	300,926	371,425
Inventories	65,731	109,260
Derivative instruments	24,160	94,315
Prepaid expenses and other current assets	24,105	48,994
Total current assets	673,959	862,190
Property, plant and equipment:		
Gross property, plant and equipment	1,799,198	1,823,109
Accumulated depreciation	(742,723)	(702,739)
Net property, plant and equipment	1,056,475	1,120,370
Goodwill	929,818	963,748
Intangible assets, net	200,327	220,981
Derivative instruments	41,268	36,614
Other assets	68,727	70,327
Total assets	$ 2,970,574	$ 3,274,230
LIABILITIES AND EQUITY		
Current liabilities:		
Current maturities of long-term debt	$ 146	$ 287
Short-term borrowings	210,899	1,397
Accounts payable	181,816	249,307
Employee compensation and benefits accrued	38,284	35,384
Derivative instruments	25,119	5,512
Other current liabilities	160,128	208,503
Total current liabilities	616,392	500,390
Long-term debt	719,349	748,146
Deferred income taxes	201,758	254,929
Derivative instruments	7,840	4,309
Customer tank and cylinder deposits	279,707	272,037
Other noncurrent liabilities	47,692	48,395
Total liabilities	1,872,738	1,828,206
Commitments and contingencies (Note 12)		
Equity:		
Member's equity	1,088,159	1,436,296
Noncontrolling interests	9,677	9,728
Total equity	1,097,836	1,446,024
Total liabilities and equity	$ 2,970,574	$ 3,274,230

See accompanying notes to consolidated financial statements.

UGI INTERNATIONAL, LLC AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF INCOME
(Thousands of dollars)

	Year Ended September 30,		
	2019	2018	2017
Revenues	$ 2,372,208	$2,683,788	$1,877,503
Costs and expenses:			
Cost of sales	1,558,917	1,527,226	916,354
Operating and administrative expenses	620,600	708,832	629,015
Operating and administrative expenses - related parties	8,992	9,920	9,620
Depreciation and amortization	123,816	140,551	120,814
Other operating income, net	(8,255)	(3,198)	(2,144)
	2,304,070	2,383,331	1,673,659
Operating income	68,138	300,457	203,844
Income (loss) from equity investees	24	(529)	(96)
Loss on extinguishments of debt	(6,124)	—	—
Other non-operating income (expense), net	37,560	21,813	(22,524)
Interest expense	(25,003)	(21,105)	(20,649)
Income before income taxes	74,595	300,636	160,575
Income tax expense	(22,529)	(85,407)	(8,555)
Net income including noncontrolling interests	52,066	215,229	152,020
Add net loss (deduct net income) attributable to noncontrolling interests	119	2,998	(155)
Net income attributable to UGI International, LLC	$ 52,185	$ 218,227	$ 151,865

See accompanying notes to consolidated financial statements.

UGI INTERNATIONAL, LLC AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(Thousands of dollars)

	Year Ended September 30,		
	2019	2018	2017
Net income including noncontrolling interests	$ 52,066	$ 215,229	$ 152,020
Other comprehensive income (loss):			
Net (losses) gains on derivative instruments (net of tax of $805, $(669), and $(586), respectively)	(1,291)	993	1,654
Reclassifications of net (gains) losses on derivative instruments (net of tax of $149, $(1,479), and $5,501, respectively)	(413)	1,955	(11,674)
Foreign currency translation adjustments (net of tax of $(13,261), $(479), and $(576), respectively)	(23,226)	(21,341)	34,599
Foreign currency (losses) gains on long-term intra-company transactions	(58,950)	(9,100)	24,797
Benefit plans, principally actuarial (losses) gains (net of tax of $951, $1,844, and $(2,088), respectively)	(1,871)	(3,504)	3,976
Reclassifications of benefit plans net actuarial losses and prior service benefits (net of tax of $(127), $(2,344), and $(914), respectively)	242	4,283	1,775
Other comprehensive (loss) income	(85,509)	(26,714)	55,127
Comprehensive (loss) income including noncontrolling interests	(33,443)	188,515	207,147
Add comprehensive loss (deduct comprehensive income) attributable to noncontrolling interests	119	2,998	(155)
Comprehensive (loss) income attributable to UGI International, LLC	$ (33,324)	$ 191,513	$ 206,992

See accompanying notes to consolidated financial statements.

UGI INTERNATIONAL, LLC AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

(Thousands of dollars)

	Year Ended September 30,		
	2019	2018	2017
CASH FLOWS FROM OPERATING ACTIVITIES			
Net income including noncontrolling interests	$ 52,066	$ 215,229	$ 152,020
Adjustments to reconcile net income including noncontrolling interests to net cash provided by operating activities:			
Depreciation and amortization	123,816	140,551	120,814
Deferred income tax (benefit) expense, net	(53,828)	8,741	(36,145)
Changes in unrealized gains and losses on derivative instruments	110,287	(121,750)	4,806
Noncash operating and administrative expenses - related parties	8,992	9,920	9,620
Loss on extinguishments of debt	6,124	—	—
Other, net	(6,342)	1,456	2,200
Net change in:			
Accounts receivable	61,927	(56,931)	(47,403)
Inventories	39,369	(22,118)	(14,084)
Accounts payable	(54,149)	22,826	5,233
Derivative instruments collateral (paid) received	(13,391)	4,640	(7)
Other current assets	16,120	(3,090)	249
Other current liabilities	(8,255)	(5,649)	4,506
Net cash provided by operating activities	282,736	193,825	201,809
CASH FLOWS FROM INVESTING ACTIVITIES			
Expenditures for property, plant and equipment	(106,436)	(111,359)	(89,321)
Acquisitions of businesses, net of cash acquired	(42,922)	(106,858)	(64,733)
Other, net	6,849	13,047	9,054
Net cash used by investing activities	(142,509)	(205,170)	(145,000)
CASH FLOWS FROM FINANCING ACTIVITIES			
Increase (decrease) in short-term borrowings	209,555	(16,546)	17,440
Distributions paid	(386,250)	(2,450)	(110,000)
Capital contribution received	65,000	—	38,000
Issuances of long-term debt, net of issuance costs	728,928	—	—
Repayments of long-term debt and capital leases	(717,246)	(85,055)	(527)
Other	(3,162)	(2,774)	—
Net cash used by financing activities	(103,175)	(106,825)	(55,087)
Foreign exchange effect on cash, cash equivalents and restricted cash	(16,211)	(5,008)	1,153
Cash, cash equivalents and restricted cash increase (decrease)	$ 20,841	$ (123,178)	$ 2,875
CASH, CASH EQUIVALENTS AND RESTRICTED CASH			
Cash, cash equivalents and restricted cash at end of period	$ 259,037	$ 238,196	$ 361,374
Cash, cash equivalents and restricted cash at beginning of period	238,196	361,374	358,499
Cash, cash equivalents and restricted cash increase (decrease)	$ 20,841	$ (123,178)	$ 2,875
SUPPLEMENTAL CASH FLOW INFORMATION			
Cash paid for:			
Interest	$ 17,161	$ 17,923	$ 18,139
Income taxes	$ 58,465	$ 75,840	$ 58,530

See accompanying notes to consolidated financial statements.

UGI INTERNATIONAL, LLC AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

(Thousands of dollars)

	Member's Equity	Noncontrolling Interests	Total
Balance September 30, 2016	$ 1,071,490	$ 12,421	$ 1,083,911
Net income	151,865	155	152,020
Capital contribution - cash	38,000	—	38,000
Capital contribution - Midlands Note (Note 17)	28,384	—	28,384
Capital contribution - allocated expenses (Note 17)	5,626	—	5,626
Cash distributions	(110,000)	—	(110,000)
Changes in AOCI balance (Note 15)	55,127	—	55,127
Other	—	597	597
Balance September 30, 2017	$ 1,240,492	$ 13,173	$ 1,253,665
Net income (loss)	218,227	(2,998)	215,229
Capital contribution - allocated expenses (Note 17)	6,741	—	6,741
Cash distributions	(2,450)	—	(2,450)
Changes in AOCI balance (Note 15)	(26,714)	—	(26,714)
Other	—	(447)	(447)
Balance September 30, 2018	$ 1,436,296	$ 9,728	$ 1,446,024
Net income (loss)	52,185	(119)	52,066
Capital contribution - cash	65,000	—	65,000
Capital contribution - allocated expenses (Note 17)	6,437	—	6,437
Cash distributions	(386,250)	—	(386,250)
Changes in AOCI balance (Note 15)	(85,509)	—	(85,509)
Other	—	68	68
Balance September 30, 2019	$ 1,088,159	$ 9,677	$ 1,097,836

See accompanying notes to consolidated financial statements.

Index to Notes

Note 1 — Nature of Operations

UGI International is a limited liability company domiciled in the Commonwealth of Pennsylvania in the U.S. UGI International is a wholly owned subsidiary of Enterprises, a Pennsylvania limited liability company, and is a second-tier wholly owned subsidiary of UGI. UGI is a U.S.-based holding company that, through subsidiaries, distributes, stores, transports and markets energy products and related services principally in the U.S. and Europe.

UGI International, through its subsidiaries and affiliates, conducts (1) an LPG distribution business throughout much of Europe and (2) an energy marketing business in France, Belgium, the Netherlands and the United Kingdom. These businesses are conducted principally through our subsidiaries, UGI France, Flaga, AvantiGas, DVEP and UniverGas.

Note 2 — Summary of Significant Accounting Policies

Basis of Presentation

Our consolidated financial statements are prepared in accordance with GAAP. The preparation of financial statements in accordance with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, expenses and costs. These estimates are based on management's knowledge of current events, historical experience and various other assumptions that are believed to be reasonable under the circumstances. Accordingly, actual results may be different from these estimates and assumptions.

Certain amounts in the Company's Fiscal 2018 and Fiscal 2017 Consolidated Financial Statements and Notes have been reclassified as a result of the adoption of new accounting guidance relating to certain net periodic pension and other postretirement benefit costs and restricted cash (See Note 3). In addition, certain other amounts in the Fiscal 2018 and Fiscal 2017 Consolidated Financial Statements and Notes have been reclassified to conform to the Fiscal 2019 presentation.

Principles of Consolidation

The consolidated financial statements include the accounts of UGI International and its controlled subsidiary companies which are majority-owned. We report outside ownership interests in other consolidated but less than 100%-owned subsidiaries as noncontrolling interests. We eliminate intercompany accounts and transactions when we consolidate.

We account for privately held equity securities of entities without readily determinable fair values in which we do not have control, but have significant influence over operating and financial policies, under the equity method. Investments in equity securities related to such entities in which we do not have significant influence over operating and financial policies are valued at their cost less impairment (if any). Our investments in such entities totaled $60,392 and $65,386 at September 30, 2019 and 2018, respectively, and are included in "Other assets" on the Consolidated Balance Sheets.

Fair Value Measurements

The Company applies fair value measurements on a recurring and, as otherwise required under GAAP, on a nonrecurring basis. Fair value in GAAP is defined as the price that would be received to sell an asset or paid to transfer a liability (an exit price) in an orderly transaction between market participants at the measurement date. Fair value measurements performed on a recurring basis principally relate to derivative instruments.

GAAP establishes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value into three levels. The hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). A level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement.

We use the following fair value hierarchy, which prioritizes the inputs to valuation techniques used to measure fair value into three broad levels:

- Level 1 — Quoted prices (unadjusted) in active markets for identical assets and liabilities that we have the ability to access at the measurement date.

- Level 2 — Inputs other than quoted prices included within Level 1 that are either directly or indirectly observable for the asset or liability, 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, and inputs that are derived from observable market data by correlation or other means.

- Level 3 — Unobservable inputs for the asset or liability including situations where there is little, if any, market activity for the asset or liability.

Fair value is based upon assumptions that market participants would use when pricing an asset or liability, including assumptions about risk and risks inherent in valuation techniques and inputs to valuations. This includes not only the credit standing of counterparties and credit enhancements but also the impact of our own nonperformance risk on our liabilities. We evaluate the need for credit adjustments to our derivative instrument fair values. These credit adjustments were not material to the fair values of our derivative instruments.

Derivative Instruments

Derivative instruments are reported on the Consolidated Balance Sheets at their fair values, unless the NPNS exception is elected. The accounting for changes in fair value depends upon the purpose of the derivative instrument and whether it qualifies and is designated as a hedge for accounting purposes.

Certain of our derivative instruments qualify and are designated as cash flow hedges. For cash flow hedges, changes in the fair values of the derivative instruments are recorded in AOCI, to the extent effective at offsetting changes in the hedged item, until earnings are affected by the hedged item. We discontinue cash flow hedge accounting if occurrence of the forecasted transaction is determined to be no longer probable. Hedge accounting is also discontinued for derivatives that cease to be highly effective. We do not designate our commodity and certain foreign currency derivative instruments as hedges under GAAP. Changes in the fair values of these derivative instruments are reflected in net income.

Cash flows from derivative instruments, other than certain cross-currency swaps and net investment hedges, if any, are included in cash flows from operating activities on the Consolidated Statements of Cash Flows. Cash flows from the interest portion of our cross-currency hedges, if any, are included in cash flows from operating activities, while cash flows from the currency portion of such hedges, if any, are included in cash flows from financing activities. Cash flows from net investment hedges, if any, are included in cash flows from investing activities on the Consolidated Statements of Cash Flows.

For a more detailed description of the derivative instruments we use, our accounting for derivatives, our objectives for using them and other information, see Note 14.

Foreign Currency Translation

Balance sheets of international subsidiaries are translated into U.S. dollars using the exchange rate at the balance sheet date. Income statements and equity investee results are translated into U.S. dollars using an average exchange rate for each reporting period. Where the local currency is the functional currency, translation adjustments are recorded in other comprehensive income. Transactions denominated in currencies other than the functional currency are recorded based on exchange rates at the time such transactions arise with the impact of subsequent changes in such rates reflected in the income statement. The functional currency of a significant portion of our operations is the euro.

Revenue Recognition

Effective October 1, 2018, the Company adopted ASU No. 2014-09, "Revenue from Contracts with Customers," which, as amended, is included in ASC 606. This new accounting guidance supersedes previous revenue recognition requirements in ASC 605. ASC 606 requires that an entity recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. We adopted this new accounting guidance using the modified retrospective transition method to those contracts which were not completed as of October 1, 2018. Periods prior to October 1, 2018, have not been restated and continue to be reported in accordance with ASC 605. Upon adoption, there were no cumulative effect adjustments made to the October 1, 2018, retained earnings. The adoption of ASC 606 did not, and is not expected to, have a material impact on the amount or timing of our revenue recognition and on our consolidated net income, cash flows or financial position.

Certain revenues such as revenue from leases, financial instruments and other revenues are not within the scope of ASC 606 because they are not from contracts with customers. Such revenues are accounted for in accordance with other GAAP. Revenue-related taxes collected on behalf of customers and remitted to taxing authorities are not included in revenues. The Company has elected to use the practical expedient to expense the costs to obtain contracts when incurred as such amounts are generally not material.

See Note 4 for additional disclosures regarding the Company's revenue from contracts with customers.

Accounts Receivable

Accounts receivable are reported on the Consolidated Balance Sheets at the gross outstanding amount adjusted for an allowance for doubtful accounts. Accounts receivable that are acquired are initially recorded at fair value on the date of acquisition. Provisions for uncollectible accounts are established based upon our collection experience and the assessment of the collectability of specific amounts. Accounts receivable are written off in the period in which the receivable is deemed uncollectible.

LPG Delivery Expenses

Expenses associated with the delivery of LPG to customers (including vehicle expenses, expenses of delivery personnel, vehicle repair and maintenance and general liability expenses) are classified as "Operating and administrative expenses" on the Consolidated Statements of Income. Depreciation expense associated with delivery vehicles is classified in "Depreciation and amortization" on the Consolidated Statements of Income.

Income Taxes

We file income tax returns in the United States and in 18 European countries, including France. We join with UGI and its subsidiaries in filing a consolidated U.S. federal income tax return. We joined with UGI in Fiscal 2019 and Fiscal 2018 and joined with UGI Enterprises in Fiscal 2017 in filing state tax returns. Our U.S. subsidiaries are charged or credited for their share of current taxes resulting from the effects of transactions in the UGI consolidated federal income tax return including giving effect to intercompany transactions. With respect to state income taxes, our U.S. subsidiaries are charged or credited for their share of current taxes resulting from the effects of transactions in the UGI state income tax return in Fiscal 2019 and Fiscal 2018, and the UGI Enterprises state income tax returns in Fiscal 2017, including giving effect to intercompany transactions. The result of these allocations is consistent with income taxes calculated on a separate return basis. Accordingly, income tax-related payments and accrued income tax balances reflect both the impact of separate jurisdictional filings in European countries and transactions with UGI or UGI Enterprises resulting from the allocation from the U.S. consolidation. We record interest on tax deficiencies and income tax penalties, if any, in "Income tax expense" on the Consolidated Statements of Income.

See Note 7 for information regarding the December 22, 2017, enactment of the TCJA in the U.S. and changes in French tax laws.

(Currency in thousands, except where indicated otherwise)

Other Non-Operating Income (Expense), Net

Included in "Other non-operating income (expense), net," on the Consolidated Statements of Income are net gains (losses) on forward foreign currency contracts used to reduce volatility in net income associated with our foreign operations, and non-service income (expense) associated with our pension and other postretirement plans. Other non-operating income (expense), net comprises the following:

	2019	2018	2017
Gain (loss) on foreign currency contracts, net	$ 37,759	$ 16,198	$ (23,853)
Pension and other postretirement plans non-service (expense) income , net	(199)	5,615	1,329
Total other non-operating income (expense), net	$ 37,560	$ 21,813	$ (22,524)

Cash, Cash Equivalents and Restricted Cash

Cash and cash equivalents include cash on hand, cash in banks and highly liquid investments with maturities of three months or less when purchased.

Restricted cash principally represents those cash balances in our commodity futures brokerage accounts that are restricted from withdrawal. Upon adoption of revised accounting guidance in October 2018 (see Note 3), changes in restricted cash are no longer reflected as a separate investing activity but included in cash, cash equivalents and restricted cash when reconciling the beginning and end of period total amounts in the Company's Consolidated Statements of Cash Flows. The guidance required retrospective application, which resulted in immaterial adjustments to the previously reported cash flows from investing activities for Fiscal 2018 and Fiscal 2017.

The following table provides a reconciliation of the total cash, cash equivalents and restricted cash reported on the Company's Consolidated Balance Sheets to the corresponding amounts reported on the Consolidated Statements of Cash Flows.

	Cash, Cash Equivalents and Restricted Cash			
	September 30, 2019	September 30, 2018	September 30, 2017	September 30, 2016
Cash and cash equivalents	$ 235,190	$ 237,539	$ 360,574	$ 358,499
Restricted cash	23,847	657	800	—
Cash, cash equivalents and restricted cash	$ 259,037	$ 238,196	$ 361,374	$ 358,499

Inventories

Our inventories are stated at the lower of cost or net realizable value. We determine cost primarily using an average cost method.

Property, Plant and Equipment and Related Depreciation

We record property, plant and equipment at the lower of original cost or fair value, if impaired. Capitalized costs include labor, materials and other direct and indirect costs. We also include in property, plant and equipment costs associated with computer software we develop or obtain for use in our business. The amounts assigned to property, plant and equipment of acquired businesses are based upon estimated fair value at date of acquisition. When we retire or otherwise dispose of plant and equipment, we eliminate the associated cost and accumulated depreciation and recognize any resulting gain or loss in "Other operating income, net" on the Consolidated Statements of Income.

(Currency in thousands, except where indicated otherwise)

We record depreciation expense on property, plant and equipment on a straight-line basis over estimated economic useful lives. At September 30, 2019, estimated useful lives by asset type were as follows:

Asset Type	Minimum Estimated Useful Life (in years)	Maximum Estimated Useful Life (in years)
Buildings and improvements	10	40
Equipment, primarily cylinders and tanks	5	30
Transportation equipment and office furniture and fixtures	3	10
Computer software	1	5

We classify amortization of computer software and related IT system installation costs included in property, plant and equipment as depreciation expense. Depreciation expense totaled $107,931, $124,109 and $110,834 for Fiscal 2019, Fiscal 2018 and Fiscal 2017, respectively. No depreciation expense is included in "Cost of sales" on the Consolidated Statements of Income.

Segment Information

We have determined that we have a single reportable operating segment that primarily engages in the distribution of LPG and related equipment and supplies. Substantially all of our revenues are derived from sources in Europe and substantially all of our long-lived assets are located in Europe. Our revenues and long-lived assets associated with operations in France represent approximately 50% and 70% of the respective consolidated amounts. No single customer represents ten percent or more of consolidated revenues.

Goodwill and Intangible Assets

Intangible Assets. We amortize intangible assets over their estimated useful lives unless we determine their lives to be indefinite. No amortization expense of intangible assets is included in "Cost of sales" on the Consolidated Statements of Income (see Note 11). Estimated useful lives of definite-lived intangible assets, primarily consisting of customer relationships and certain tradenames, do not exceed 15 years. We review definite-lived intangible assets for impairment whenever events or changes in circumstances indicate that the associated carrying amounts may not be recoverable. Determining whether an impairment loss occurred requires comparing the carrying amount to the sum of undiscounted cash flows expected to be generated by the asset. Intangible assets with indefinite lives, consisting of certain tradenames and trademarks, are not amortized but are tested for impairment annually (and more frequently if events or changes in circumstances between annual tests indicate that it is more likely than not that they are impaired) and written down to fair value, if impaired.

Goodwill. We do not amortize goodwill, but test it at least annually for impairment at the reporting unit level. A reporting unit is an operating segment or a business one level below an operating segment (a component) if discrete financial information is prepared and regularly reviewed by segment management. Components are aggregated as a single reporting unit if they have similar economic characteristics. A reporting unit with goodwill is required to perform an impairment test annually or whenever events or circumstances indicate that the value of goodwill may be impaired.

We are required to recognize an impairment charge under GAAP if the carrying amount of a reporting unit exceeds its fair value. From time to time, we assess qualitative factors to determine whether it is more likely than not that the fair value of such reporting unit is less than its carrying amount. We bypass the qualitative assessment and perform the quantitative assessment by comparing the fair value of the reporting unit with its carrying amount, including goodwill. We determine fair values generally based on a weighting of income and market approaches. For purposes of the income approach, fair value is determined based upon the present value of the reporting unit's estimated future cash flows, including an estimate of the reporting unit's terminal value based upon these cash flows, discounted at appropriate risk-adjusted rates. We use our internal forecasts to estimate future cash flows which may include estimates of long-term future growth rates based upon our most recent reviews of the long-term outlook. Cash flow estimates used to establish fair values under our income approach involve management judgments based on a broad range of information and historical results. In addition, external economic and competitive conditions can influence future performance. For purposes of the market approach, we use valuation multiples for companies comparable to our reporting unit. The market approach requires judgment to determine the appropriate valuation multiples. If the carrying amount of our reporting unit exceeds its fair value, an impairment loss is recognized in an amount equal to such excess but not to exceed the total amount of the goodwill of the reporting unit.

There were no accumulated goodwill impairment losses at September 30, 2019 and 2018, and no provisions for goodwill or other intangible asset impairments were recorded during Fiscal 2019, Fiscal 2018 or Fiscal 2017. For further information on our goodwill and intangible assets, see Note 11.

Impairment of Long-Lived Assets

We evaluate long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. We evaluate recoverability based upon undiscounted future cash flows expected to be generated by such assets. If the undiscounted future cash flows indicate that the recorded amounts are not expected to be recoverable, such long-lived assets are reduced to their estimated fair values. No material provisions for impairments of long-lived assets were recorded during Fiscal 2019, Fiscal 2018 or Fiscal 2017.

Refundable Tank and Cylinder Deposits

Included in "Other current liabilities" and "Customer tank and cylinder deposits” on our Consolidated Balance Sheets are customer paid deposits on tanks and cylinders primarily owned by subsidiaries of UGI France. Deposits are refundable to customers when the tanks or cylinders are returned in accordance with contract terms. We record cylinder deposit income when our refund obligation is extinguished including by contract terms, government statute or cylinder abandonment. Refunds of deposits were not material during Fiscal 2019, Fiscal 2018 or Fiscal 2017.

Subsequent Events

Management has evaluated the impact of subsequent events through November 26, 2019, the date these consolidated financial statements were issued and the effects, if any, of such evaluation have been reflected in the consolidated financial statements and related disclosures.

Note 3 — Accounting Changes

New Accounting Standards Adopted in Fiscal 2019

Revenue Recognition. Effective October 1, 2018, the Company adopted new accounting guidance regarding revenue recognition. See Notes 2 and 4 for a detailed description of the impact of the new guidance and related disclosures.

Cloud Computing Implementation Costs. In August 2018, the FASB issued ASU No. 2018-15, “Customer’s Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract.” The new guidance requires a customer in a cloud computing arrangement that is a service contract to capitalize certain implementation costs as if the arrangement was an internal-use software project. These deferred implementation costs are expensed over the fixed, noncancelable term of the service arrangement plus any reasonably certain renewal periods. The new guidance also requires the entity to present the expense related to the capitalized implementation costs in the same income statement line as the hosting service fees; to classify payments for capitalized implementation costs in the statement of cash flows in the same manner as payments for hosting service fees; and to present the capitalized implementation costs in the balance sheet in the same line item in which prepaid hosting service fees are presented. We adopted this ASU effective October 1, 2018, and applied the guidance prospectively to all implementation costs associated with cloud computing arrangements that are service contracts incurred beginning October 1, 2018. The adoption of the new guidance did not have a material impact on our results of operations during Fiscal 2019.

Pension and Other Postretirement Benefit Costs. In March 2017, the FASB issued ASU No. 2017-07, “Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost.” This ASU requires entities to disaggregate the service cost component from the other components of net periodic benefit cost and present it with compensation costs for related employees in the income statement. The other components are required to be presented elsewhere in the income statement and outside of income from operations. The amendments in this ASU permit only the service cost component to be eligible for capitalization, when applicable.

We adopted this ASU effective October 1, 2018, with retrospective adoption for the presentation of pension and postretirement expense on the income statement and a prospective adoption for capitalization as required by the ASU. The adoption of the new standard did not have a material impact on our financial statements.

Statement of Cash Flows - Restricted Cash. In November 2016, the FASB issued ASU No. 2016-18, "Statement of Cash Flows: Restricted Cash." The guidance in this ASU requires that a statement of cash flows explain the change during the period in the total of cash, cash equivalents, as well as restricted cash or restricted cash equivalents. As a result, amounts generally described as restricted cash and restricted cash equivalents are included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts on the statement of cash flows. The amendments in the ASU are required to be adopted on a retrospective basis. We adopted this ASU effective October 1, 2018 with retrospective adoption as required by the ASU.

Pension and Other Postretirement Benefit Costs Disclosures. In August 2018, the FASB issued ASU No. 2018-14, "Changes to the Disclosure Requirements for Defined Benefit Plans." This ASU modifies the disclosure requirements for employers that sponsor defined benefit pension or other postretirement plans by removing and adding certain disclosures for these plans. We adopted this ASU during the fourth quarter of Fiscal 2019 and applied the new guidance retrospectively for all periods presented in the financial statements. The adoption of the new guidance did not have a material impact on the Company's financial statements.

Fair Value Measurements Disclosures. In August 2018, the FASB issued ASU No. 2018-13, "Changes to the Disclosure Requirements for Fair Value Measurement." This ASU modifies the disclosure requirements for fair value measurements by removing, modifying, or adding certain disclosures. We adopted this ASU during the fourth quarter of Fiscal 2019. The guidance regarding removing and modifying disclosures was adopted on a retrospective basis and the guidance regarding new disclosures has been adopted on a prospective basis. The adoption of the new guidance did not have a material impact on the Company's financial statement disclosures.

New Accounting Standards Adopted Effective October 1, 2019

Derivatives and Hedging. In August 2017, the FASB issued ASU No. 2017-12, "Targeted Improvements to Accounting for Hedging Activities." This ASU amends and simplifies existing guidance to allow companies to more accurately present the economic effects of risk management activities in the financial statements. The amendments in this ASU are effective for the Company for interim and annual periods beginning October 1, 2019 (Fiscal 2020). For cash flow and net investment hedges as of the adoption date, the guidance requires a modified retrospective approach. The amended presentation and disclosure guidance is required prospectively. The Company adopted the new guidance effective October 1, 2019. We do not expect the adoption of this new guidance will have a material impact on our financial statements.

Leases. In February 2016, the FASB issued ASU No. 2016-02, "Leases." This ASU, as subsequently updated, amends existing guidance to require entities that lease assets to recognize the assets and liabilities for the rights and obligations created by those leases on the balance sheet. The new guidance also requires additional disclosures about the amount, timing and uncertainty of cash flows from leases. The amendments in this ASU are effective for the Company for interim and annual periods beginning October 1, 2019 (Fiscal 2020). Lessees must apply a modified retrospective transition approach for leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements unless an entity chooses the transition option in ASU 2018-11, "Leases: Targeted Improvements" which, among other things, provides entities with a transition option to recognize the cumulative-effect adjustment from the modified retrospective application to the opening balance of retained earnings in the period of adoption.

We adopted this ASU, as updated, effective October 1, 2019, using the transition method which allows the Company to maintain historical presentation for periods before October 1, 2019. The Company elected to apply the following practical expedients:

- Short-term leases: We have excluded short-term leases (term of 12 months or less) from balance sheet presentation.
- Easements: We did not re-evaluate existing land easements that were not previously accounted for as leases.
- Other: We did not reassess the classification of expired or existing contracts or determine whether they are or contain a lease. We also did not reassess whether initial direct costs qualify for capitalization under this new guidance.

We enhanced controls and processes and implemented a new lease system that will enable the accumulation and presentation of financial information as required by the new standard. We continue to finalize our implementation efforts and estimate that the adoption will result in the recognition of approximately $60,000 to $70,000 of offsetting operating lease right-of-use assets and operating lease liabilities associated with operating leases in effect at the date of adoption. We do not expect the adoption to have a material impact on the consolidated statements of income or cash flows.

Accounting Standard Not Yet Adopted

Credit Losses. In June 2016, the FASB issued ASU 2016-13, "Measurement of Credit Losses on Financial Instruments*.*" This ASU requires entities to estimate lifetime expected credit losses for financial instruments not measured at fair value through net income, including trade and other receivables, net investments in leases, financial receivables, debt securities, and other financial instruments, which may result in earlier recognition of credit losses. Further, the new current expected credit loss model may affect how entities estimate their allowance for loss for receivables that are current with respect to their payment terms. ASU 2016-13 is effective for the Company for interim and annual periods beginning October 1, 2020 (Fiscal 2021). Early adoption is permitted. The Company is in the process of assessing the impact on its financial statements from the adoption of the new guidance and determining the period in which the new guidance will be adopted.

Note 4 — Revenue from Contracts with Customers

The Company recognizes revenue when control of promised goods or services is transferred to our customers in an amount that reflects the consideration to which we expect to be entitled in exchange for those goods or services. The Company generally has the right to consideration from a customer in an amount that corresponds directly with the value to the customer for our performance completed to date. As such, we have elected to recognize revenue in the amount to which we have a right to invoice.

We do not have a significant financing component in our contracts because we receive payment shortly before, at, or shortly after the transfer of control of the good or service. Because the period between the time the performance obligation is satisfied and payment is received is one year or less, the Company has elected to apply the significant financing component practical expedient and no amount of consideration has been allocated as a financing component.

The Company's revenues from contracts with customers are discussed below.

LPG. We record revenue principally from the sale of LPG to retail and wholesale customers. The primary performance obligation associated with the sale of LPG is the delivery of LPG to (1) the customer's point of delivery for retail customers and (2) the customer's specified location where LPG is picked up by wholesale customers, at which point control of the LPG is transferred to the customer, the performance obligation is satisfied, and the associated revenue is recognized. For contracts with retail customers that consume LPG from a metered tank, we recognize revenue as LPG is consumed, at which point we have the right to invoice, and generally invoice monthly based on consumption.

Contracts with customers comprise different types of contracts with varying length terms, fixed or variable prices, and fixed or variable quantities. Contracts with our residential customers, which comprise a substantial number of our customer contracts, are generally five years or less. Customer contracts for the sale of LPG include fixed-price, fixed-quantity contracts under which LPG is provided to a customer at a fixed price and a fixed volume, and contracts that provide for the sale of LPG at either fixed prices or market prices at date of delivery with no fixed volumes.

We also distribute LPG to customers in portable cylinders. Under certain contracts, filled cylinders are delivered, and control is transferred, to a reseller. In such instances, the reseller is our customer and we record revenue upon delivery to the reseller. Under other contracts, filled cylinders are delivered to a reseller, but the Company retains control of the cylinders. In such instances, we record revenue at the time the reseller transfers control of the cylinder to the end user.

Energy Marketing. The Company operates energy marketing businesses that sell energy commodities, principally natural gas and electricity, to residential, commercial, industrial and wholesale customers. In addition, DVEP provides system balancing and procurement services to other energy marketers in the Netherlands.

We market natural gas and electricity on full-requirements or agreed-upon volume bases under contracts with varying length terms and at fixed or floating prices that are based on market indices adjusted for differences in price between the market location and delivery locations. Performance obligations associated with these contracts primarily comprise the delivery of the natural gas and electricity over a contractual period of time. Performance obligations also include other energy-related ancillary services provided to customers such as capacity. For performance obligations that are satisfied at a point in time such as the delivery of natural gas, revenue is recorded when customers take control of the natural gas. Revenue is recorded for performance obligations that qualify as a series, when customers consume the natural gas or electricity delivered, which corresponds to the amount invoiced to the customer. For transactions where the price or volume is not fixed, the transaction price is not determined until delivery occurs. The billed amount, and the revenue recorded, is based upon consumption by the customer.

(Currency in thousands, except where indicated otherwise)

In addition to providing natural gas and electricity to end user customers, DVEP has contracts with third-party natural gas and electricity marketers to provide BRP services in the electricity and natural gas markets in the Netherlands. These contracts are typically multi-year agreements and include full BRP services which include, among other things, estimating, procuring and scheduling all energy requirements to meet third-party marketers' needs, or provide more limited system procurement and balancing services. The amount of revenue recognized from our BRP customers is based upon the amount of energy delivered with respect to these agreements, and the level of BRP services provided. We typically receive payments from our BRP customers one month in advance of our performing the related services. Amounts received in advance are deferred on the balance sheet as contract liabilities. Based upon an evaluation of the terms and conditions of the BRP contracts and our ability to control the goods or services provided to the third-party marketers, in addition to other factors, we are considered a principal in these contracts and are required to record the revenue associated with the sale of energy to the third-party energy marketers on a gross basis. We record the associated revenue ratably over time, typically monthly, as the performance obligations are satisfied.

Other. Other revenues from contracts with customers are generated primarily from certain fees we charge associated with the delivery of LPG. Revenues from fees are typically recorded when the LPG is delivered to the customer or the associated service is completed.

Contract Balances

The timing of revenue recognition may differ from the timing of invoicing to customers or cash receipts. Contract assets represent our right to consideration after the performance obligations have been satisfied when such right is conditioned on something other than the passage of time. Contract assets were not material at September 30, 2019. Substantially all of our receivables are unconditional rights to consideration and are included in "Accounts receivable" on the Consolidated Balance Sheets. Amounts billed are generally due within the following month.

Contract liabilities arise when payment from a customer is received before the performance obligations have been satisfied and represent the Company's obligations to transfer goods or services to a customer for which we have received consideration. The balances of contract liabilities were $14,757 and $11,336 at September 30, 2019 and October 1, 2018, respectively, and are included in "Other current liabilities" on the Consolidated Balance Sheets. Revenue recognized during Fiscal 2019 from the amount included in contract liabilities at October 1, 2018 was $10,155.

Revenue Disaggregation

The following table presents our disaggregated revenues during Fiscal 2019:

	2019
Revenues from contracts with customers:	
LPG:	
Retail	$ 1,667,042
Wholesale	169,370
Energy Marketing	448,303
Other	54,937
Total revenues from contracts with customers	2,339,652
Other revenues (a)	32,556
Total revenues	$ 2,372,208

(a) Primarily represents revenues from tank rentals that are not within the scope of ASC 606 and accounted for in accordance with other GAAP.

Remaining Performance Obligations

We have elected to use practical expedients as allowed in ASC 606 to exclude disclosures related to the aggregate amount of the transaction price allocated to the performance obligations that are unsatisfied as of the end of the reporting period because these contracts have an initial expected term of one year or less or we have a right to bill the customer in an amount that corresponds directly with the value of services provided to the customer to date.

(Currency in thousands, except where indicated otherwise)

Note 5 — Acquisitions

DVEP Acquisition. On August 31, 2017, UGI International, through its wholly owned indirect subsidiary, UGI International Holdings B.V., completed the DVEP Acquisition for €88,449 ($105,342) in cash. The DVEP Acquisition was consummated pursuant to a SPA dated July 28, 2017 between the Company and Majoto Holding B.V. The DVEP Acquisition expands our energy marketing business in Europe and is consistent with our growth strategies, one of which is to grow our natural gas and electricity marketing business in Europe. The DVEP Acquisition was funded from existing cash balances of €70,949 ($84,500) and a €17,500 ($20,842) note payable to the seller due August 2022.

The Company accounted for the DVEP Acquisition using the acquisition method. The components of the final purchase price allocation are as follows:

Assets acquired:	
Cash	$ 32,152
Accounts receivable (a)	4,475
Prepaid expenses and other current assets (including commodity derivatives of $12,333)	13,544
Property, plant and equipment	3,856
Intangible assets (b)	47,549
Other assets (including commodity derivatives of $3,741)	4,201
Total assets acquired	$ 105,777
Liabilities assumed:	
Accounts payable	14,373
Other current liabilities (including commodity derivatives of $3,291)	33,801
Deferred income taxes	12,521
Other noncurrent liabilities (including commodity derivatives of $1,443)	2,294
Total liabilities assumed	$ 62,989
Goodwill	62,554
Net consideration transferred (including working capital adjustments)	$ 105,342

(a) Approximates the gross contractual amounts of receivables acquired.
(b) Comprises $40,755 of customer relationships having amortization periods not exceeding 15 years and $6,794 of tradenames (which is not subject to amortization).

The excess of the purchase price for the DVEP Acquisition over the fair values of the assets acquired and liabilities assumed has been reflected as goodwill, and results principally from value creation and anticipated synergies resulting from the Company's expansion of its energy marketing business in Europe. The goodwill is not deductible for income tax purposes.

Direct transaction-related costs associated with the DVEP Acquisition during Fiscal 2017 were not material.

We allocated the purchase prices of the DVEP Acquisition to identifiable intangible assets, property, plant and equipment and commodity derivative contracts based on estimated fair values determined as follows:

- Customer relationships were valued using a multi-period, excess earnings method. Key assumptions used in this method include discount rates, growth rates and cash flow projections. These assumptions are most sensitive and susceptible to change as they require significant management judgment;

- Tradenames were valued using the relief from royalty method, which estimates our theoretical royalty savings from ownership of the tradenames. Key assumptions used in this method include discount rates, royalty rates, growth rates and sales projections. These assumptions are most sensitive and susceptible to change as they require significant management judgment; and

- Property, plant and equipment were valued based on estimated fair values primarily using depreciated replacement cost and market value methods.

(Currency in thousands, except where indicated otherwise)

- The fair values of commodity derivative contracts were valued using market prices in active markets for standard electricity and natural gas marketing gas forwards.

UniverGas Acquisition. On October 5, 2017, UGI International, through its wholly owned indirect subsidiary, UGI Italia, acquired all of the outstanding shares of Totalgaz Italia S.r.l. (now known as "UniverGas"), a retail distributor of LPG in Italy, for €103,200 ($121,920) in cash. The UniverGas Acquisition was consummated pursuant to the terms of an SPA dated September 20, 2017, between the Company and certain affiliates of Total. The UniverGas Acquisition was funded from existing cash balances.

The Company accounted for the UniverGas Acquisition using the acquisition method. The components of the final purchase price allocation are as follows:

Assets acquired:		
Cash	$	1,772
Accounts receivable (a)		22,092
Prepaid expenses and other current assets		14,768
Property, plant and equipment		51,155
Intangible assets (b)		29,062
Other assets		5,315
Total assets acquired	$	124,164
Liabilities assumed:		
Accounts payable		28,944
Other current liabilities		4,017
Deferred income taxes		15,594
Other noncurrent liabilities		8,624
Total liabilities assumed	$	57,179
Goodwill		54,935
Net consideration transferred (including working capital adjustments)	$	121,920

(a) Approximates the gross contractual amounts of receivables acquired.
(b) Comprises customer relationships having amortization periods not exceeding 15 years.

The allocation of the purchase price to the identifiable intangible assets and property, plant and equipment, was determined using the methods described above.

The excess of the purchase price for the UniverGas Acquisition over the fair values of the assets acquired and liabilities assumed has been reflected as goodwill, and results principally from anticipated synergies and value creation resulting from the Company's combined LPG businesses in Europe. The goodwill is not deductible for income tax purposes.

Direct transaction-related costs associated with the UniverGas Acquisition during Fiscal 2018 were not material.

Other Acquisitions

During Fiscal 2019, UGI International acquired several LPG distribution businesses with operations in the U.K., Belgium and the Netherlands for total cash consideration of $49,258. During Fiscal 2017, in addition to the DVEP Acquisition, UGI International acquired an LPG distribution business with operations in Sweden for total cash consideration of $14,970.

Note 6 — Debt

Significant Financing Activities

UGI International. On October 18, 2018, UGI International entered into the 2018 Credit Facilities Agreement, a five-year unsecured Senior Facilities Agreement with a consortium of banks consisting of (1) a €300,000 variable-rate term loan which was drawn on October 25, 2018, and (2) a €300,000 senior unsecured multicurrency revolving facility agreement. The 2018 Credit Facilities Agreement matures on October 18, 2023. Term loan borrowings bear interest at rates per annum comprising the aggregate of the applicable margin and the associated euribor rate, which euribor rate has a floor of zero. The margin on term loan borrowings, which ranges from 1.55% to 3.20%, is dependent upon a ratio of net consolidated indebtedness to consolidated EBITDA, as defined. The initial margin on term loan borrowings is 1.70%. UGI International has entered into pay-fixed, receive-variable interest rate swaps through October 18, 2022, to fix the underlying euribor rate on term loan borrowings at 0.34%. Under the multicurrency revolving credit facility agreement, UGI International may borrow in euros or U.S. dollars. Loans made in euros will bear interest at the associated euribor rate plus a margin ranging from 1.20% to 2.85%. Loans made in U.S. dollars will bear interest at the associated LIBOR rate plus a margin ranging from 1.45% to 3.10%. The margin on revolving facility borrowings is dependent upon a ratio of net consolidated indebtedness to consolidated EBITDA, as defined.

(Currency in thousands, except where indicated otherwise)

On October 25, 2018, UGI International issued in an underwritten private placement €350,000 principal amount of the 3.25% Senior Notes due November 1, 2025. The 3.25% Senior Notes rank equal in right of payment with indebtedness issued under the 2018 Credit Facilities Agreement.

The net proceeds from the 3.25% Senior Notes and the 2018 Credit Facilities Agreement variable-rate term loan plus cash on hand were used on October 25, 2018 (1) to repay €540,000 outstanding principal of UGI France's variable-rate term loan under its 2015 Senior Facilities Agreement; €45,800 outstanding principal of Flaga's variable-rate term loan; and $49,914 outstanding principal of Flaga's U.S. dollar variable-rate term loan, plus accrued and unpaid interest, and (2) for general corporate purposes. Because these outstanding term loans were refinanced on a long-term basis in October 2018, we classified €60,000 of such debt due in April 2019 as long-term debt on the September 30, 2018 Consolidated Balance Sheet. Upon entering into the 2018 Credit Facilities Agreement, we also terminated (1) the 2017 Credit Agreement, (2) UGI France's revolving credit facility under the 2015 Senior Facilities Agreement and (3) Flaga's credit facility agreement. We have designated term loan borrowings under the 2018 Credit Facilities Agreement and the 3.25% Senior Notes as net investment hedges. In connection with these early repayments of debt, UGI International recognized pre-tax losses of $6,124, which are reflected in "Loss on extinguishments of debt" on the 2019 Consolidated Statement of Income and primarily comprises the write-off of unamortized debt issuance costs and transaction costs.

In December 2017, UGI International entered into the 2017 Credit Agreement, a secured multicurrency revolving facility agreement due April 2020 with a group of banks providing for borrowings up to €300,000, with borrowings available in euros or U.S. dollars. Upon entering the 2018 Credit Facilities Agreement on October 25, 2018, the 2017 Credit Agreement was terminated. There were no borrowings made under the 2017 Credit Agreement.

Flaga. In December 2017, Flaga repaid $9,164 of the outstanding principal amount of its then-existing $59,078 U.S. dollar denominated variable-rate term loan due September 2018. Concurrently, Flaga entered into the Flaga U.S. Dollar Term Loan which amended the aforementioned term loan to extend the maturity to April 2020. Prior to its repayment in October 2018, borrowings under the Flaga U.S. Dollar Term Loan bore interest at the one-month LIBOR rate plus a margin of 1.125%. Flaga effectively fixed the LIBOR component of the interest rate, and effectively fixed the U.S. dollar value of the interest and principal payments payable under the Flaga U.S. Dollar Term Loan, by entering into a cross-currency swap arrangement with a bank.

Long-term Debt

Long-term debt comprises the following at September 30:

	2019	2018
3.25% Senior Notes due November 2025	$ 381,500	$ —
UGI International variable-rate term loan due October 2023 (a)	327,000	—
UGI France Senior Facilities term loan (b)	—	626,994
Flaga variable-rate term loan (c)	—	53,178
Flaga U.S. dollar variable-rate term loan (d)	—	49,914
Other (e)	19,298	20,892
Unamortized debt issuance costs	(8,303)	(2,545)
Total long-term debt	719,495	748,433
Less current maturities	(146)	(287)
Total long-term debt due after one year	$ 719,349	$ 748,146

(a) At September 30, 2019, the effective interest rate on the term loan was approximately 2.04%.
(b) At September 30, 2018, the effective interest rate on the term loan was approximately 1.93%.

(Currency in thousands, except where indicated otherwise)

(c) The effective interest rate on this term loan at September 30, 2018, was 1.93%.
(d) At September 30, 2018, the effective interest rate on this term loan was 0.55%.
(e) Borrowings at September 30, 2019, include a note payable of €17,300 ($18,857 and $20,087 at September 30, 2019 and 2018, respectively) due August 2022 resulting from the DVEP Acquisition (see Note 5). The note payable bears interest at increasing rates from 0% to 5% through the date of maturity. The Company may prepay the note payable in full or in part without penalty.

Scheduled principal repayments of long-term debt due in fiscal years ending September 30, 2020 to 2024 are as follow:

	2020	2021	2022	2023	2024
Total	$ 146	$ 94	$ 18,952	$ 96	$ 327,008

Credit Facilities and Short-term Borrowings

Information about the Company's principal credit agreements as of September 30, 2019 and 2018, is presented in the following table. Borrowings outstanding under these agreements, if any, are classified as "Short-term borrowings" on the Consolidated Balance Sheets.

	Expiration Date	Total Capacity	Borrowings Outstanding	Letters of Credit and Guarantees Outstanding	Available Borrowing Capacity	Weighted Average Interest Rate - End of Year
September 30, 2019						
UGI International (a)	October 2023	€ 300,000	€ 192,661	€ —	€ 107,339	3.64%
September 30, 2018						
UGI International	April 2020	€ 300,000	€ —	€ —	€ 300,000	N.A.
UGI France	April 2020	€ 60,000	€ —	€ —	€ 60,000	N.A.
Flaga	October 2020	€ 55,000	€ —	€ 493	€ 54,507	N.A.

(a) The 2018 Credit Facilities Agreement permits UGI International to borrow in euros or dollars. At September 30, 2019, the amount borrowed was USD-denominated borrowings of $210,000, equal to €192,661.

Restrictive Covenants and Guarantees. The 2018 Credit Facilities Agreement requires a ratio of consolidated total net indebtedness to consolidated EBITDA, as defined, not to exceed 3.85 to 1.00.

Note 7 — Income Taxes

The provisions for income taxes consist of the following:

	2019	2018	2017
Current expense (benefit):			
Federal	$ 7,968	$ (1,660)	$ (6,554)
State	2,184	651	(5,047)
Foreign	66,205	77,675	56,301
Total current expense	76,357	76,666	44,700
Deferred (benefit) expense:			
Federal	(3,737)	7,656	(6,037)
State	(1,733)	(793)	1,638
Foreign	(48,358)	1,878	(31,746)
Total deferred (benefit) expense	(53,828)	8,741	(36,145)
Total income tax expense	$ 22,529	$ 85,407	$ 8,555

Federal income taxes for Fiscal 2019, Fiscal 2018 and Fiscal 2017 are net of foreign tax credits of $8,138, $12,981 and $40,864, respectively.

(Currency in thousands, except where indicated otherwise)

A reconciliation of income tax expense attributable to continuing operations to the amount of income tax expense that would result from applying the U.S. federal statutory tax rate to income from continuing operations is as follows:

	2019	2018	2017
Income tax expense at U.S. federal statutory tax rate	$ 15,665	$ 73,746	$ 56,201
Difference in income tax expense due to:			
State income tax expense (benefit), net of federal benefit	202	(108)	(2,216)
Valuation allowance adjustments	—	9,188	(7,600)
French interest disallowance	4,298	4,337	3,244
French CVAE taxes	4,231	4,532	3,609
Deferred tax effects of International tax rate change	(1,824)	(18,076)	(28,993)
French tax refund	—	(1,271)	(7,404)
Other effects of foreign operations[1]	(918)	17,722	(10,000)
Other, net	875	(4,663)	1,714
Total income tax expense	$ 22,529	$ 85,407	$ 8,555

(1) Comprises foreign tax rate differentials, U.S. tax on foreign earnings net of foreign tax credits, and other foreign tax effects not separately disclosed.

On December 22, 2017, the TCJA was enacted into law. Among the significant changes resulting from the law, the TCJA reduced the U.S. federal income tax rate from 35% to 21%, effective January 1, 2018, created a territorial tax system with a one-time mandatory "toll tax" on previously un-repatriated foreign earnings, and allowed for immediate capital expensing of certain qualified property. It also applied restrictions on the deductibility of interest expense and applied a broader application of compensation limitations.

In accordance with GAAP as determined by ASC 740, we are required to record the effects of tax law changes in the period enacted. Our results for the fiscal year ended September 30, 2018, contained provisional estimates of the impact of the TCJA. These amounts were considered provisional because they used estimates for which tax returns had not yet been filed and because estimated amounts could have been impacted by accounting guidance if and when issued. We adjusted provisional amounts as further information became available and as we refined our calculations. During Fiscal 2019, adjustments to provisional amounts recorded in prior periods were not material.

In Fiscal 2018 we were subject to a blended federal tax rate of 24.5% because our fiscal year contained the effective date of the rate change from 35% to 21%. The effects of the tax law changes on current period results were immaterial.

In Fiscal 2018 and Fiscal 2017, earnings of the Company's foreign subsidiaries were generally subject to U.S. taxation upon repatriation to the U.S. and the Company's tax provisions reflected the related incremental U.S. tax except for certain foreign subsidiaries whose unremitted earnings were considered to be indefinitely reinvested. No deferred tax liability had been recognized with regard to remittance of those earnings because the availability of U.S. foreign tax credits made it likely that no U.S. tax would be due if such earnings were repatriated. Upon enactment of the TCJA, substantially all prior unrepatriated earnings were subjected to U.S. tax under the transition tax rules. The transition tax was immaterial to the Company and we generally expect to have the ability to repatriate prior unrepatriated earnings without material U.S. federal tax cost.

Our Fiscal 2019 effective tax rate was subject to the impact of changes to the taxation of foreign source income made by the TCJA. The current Fiscal year tax expense includes $3,830 of GILTI and Branch taxes that are treated as current period costs and carry no related deferred taxes.

(Currency in thousands, except where indicated otherwise)

Deferred tax liabilities (assets) comprise the following at September 30:

	2019	2018
Excess book basis over tax basis of property, plant and equipment	$ 171,217	$ 190,329
Intangible assets and goodwill	43,813	46,443
Derivative instruments	—	10,445
Other	7,522	28,599
Gross deferred tax liabilities	222,552	275,816
Employee-related benefits	(8,627)	(7,215)
Operating loss carryforwards	(8,474)	(12,278)
Foreign tax credit carryforwards	(81,378)	(106,143)
Other	(12,558)	(12,413)
Gross deferred tax assets	(111,037)	(138,049)
Deferred tax assets valuation allowance	89,717	115,699
Net deferred tax liabilities	$ 201,232	$ 253,466

In July 2019, the French Parliament enacted legislation retroactively increasing the corporate income tax rate for tax years beginning in 2019. As a result, the Fiscal 2020 tax rate will remain at 34.43%. The remeasurement impact on deferred income tax liabilities increased Fiscal 2019 income tax expense by approximately $2,400.

In December 2017, the French Parliament approved the December 2017 French Finance Bills. One impact of the December 2017 French Finance Bills was an increase in the Fiscal 2018 corporate income tax rate in France from 34.4% to 39.4%. The December 2017 French Finance Bills also include measures to reduce the corporate income tax rate to 25.8%, effective for fiscal years starting after January 1, 2022 (Fiscal 2023).

As a result of the December 2017 French Finance Bills, during Fiscal 2018 the Company reduced its net French deferred income tax liabilities and recognized an estimated deferred tax benefit of $12,102 to reflect the estimated impact of the corporate income tax rate reductions that will be implemented through Fiscal 2023. The Company's Fiscal 2018 effective income tax rate reflects the impact of the higher Fiscal 2018 income tax rate in France as a result of the December 2017 French Finance Bills, which increased income tax expense for the year by approximately $594.

At September 30, 2019, foreign net operating loss carryforwards principally relating to Flaga and certain subsidiaries of UGI France totaled $10,029 and $22,025, respectively, with no expiration dates. At September 30, 2019, deferred tax assets relating to operating loss carryforwards include $1,986 for Flaga and $6,681 for certain subsidiaries of UGI France.

The valuation allowance for all deferred tax assets decreased by $25,982 in Fiscal 2019. The decrease consisted of the release of $24,766 of valuation allowances of foreign tax credits that expired in Fiscal 2019 and a decrease in foreign operating loss carryforwards of $1,216.

We file tax returns in France and other European countries in which we conduct business and also in the U.S., including numerous state and local jurisdictions. Our U.S. federal income tax returns are settled through the 2015 tax year, our French tax returns are settled through the 2017 tax year, our Austrian tax returns are settled through 2016 and our other European tax returns are effectively settled for various years from 2010 to 2017. State and other income tax returns in the U.S. are generally subject to examination for a period of three to five years after the filing of the respective returns.

UGI Corporation and subsidiaries' 2016 and 2017 consolidated U.S. federal tax returns are currently under examination by the Internal Revenue Service.

As of September 30, 2019, we have unrecognized income tax benefits totaling $8,552 including related accrued interest of $518. If these unrecognized tax benefits were subsequently recognized, they would be recorded as a benefit to income taxes on the Consolidated Statement of Income and, therefore, would impact the reported effective tax rate. Generally, a net reduction in unrecognized tax benefits could occur because of the expiration of the statute of limitations in certain jurisdictions or as a result of settlements with tax authorities. The expected change in unrecognized tax benefits and related interest in the next twelve months is $2,405 related to the lapse of certain statutes of limitation.

(Currency in thousands, except where indicated otherwise)

A reconciliation of the beginning and ending amounts of unrecognized tax benefits is as follows:

	2019	2018
Unrecognized tax benefits - beginning of year	$ 9,592	$ 9,639
Additions for tax positions of the current year	925	1,224
(Reductions) additions for tax positions taken in prior years	(175)	(114)
Settlements with tax authorities/statute lapses	(1,790)	(1,157)
Unrecognized tax benefits - end of year	$ 8,552	$ 9,592

Note 8 — Employee Retirement Plans

Defined Benefit Pension and Other Postretirement Plans.

Certain employees of the Company are covered by defined benefit pension and other postretirement benefit plans. Benefits under defined benefit pension plans are generally based upon years of service and final average pay.

The following table provides a reconciliation of the PBOs of our pension plans, the ABOs of our other postretirement benefit plans, the fair values of assets associated with the pension plans, and the funded status of pension and other postretirement plans as of September 30, 2019 and 2018. Benefit payments associated with the other postretirement benefit plans are funded on a pay as you go basis. ABO is the present value of benefits earned to date with benefits based upon current compensation levels. PBO is ABO increased to reflect estimated future compensation.

(Currency in thousands, except where indicated otherwise)

	Pension Benefits		Other Postretirement Benefits	
	2019	2018	2019	2018
Change in benefit obligations				
Benefit obligations - beginning of year	$ 58,013	$ 58,514	$ 4,143	$ 9,330
Service cost	2,377	2,718	—	269
Interest cost	698	947	64	149
Actuarial loss (gain)	2,091	(913)	357	483
Plan amendments	272	(30)	—	(5,782)
Curtailment	(1,297)	(596)	—	(101)
Settlements	(13,052)	—	—	—
Foreign currency	(3,147)	(1,004)	(259)	(28)
Benefits paid	(1,077)	(1,623)	(175)	(177)
Benefit obligations - end of year	$ 44,878	$ 58,013	$ 4,130	$ 4,143
Change in plan assets				
Fair value of plan assets - beginning of year	$ 31,586	$ 31,081	$ —	$ —
Actual gain on plan assets	94	486	—	—
Foreign currency	(1,467)	(553)	—	—
Employer contributions	949	1,163	175	176
Settlements	(13,052)	—	—	—
Benefits paid	(407)	(591)	(175)	(176)
Fair value of plan assets - end of year	$ 17,703	$ 31,586	$ —	$ —
Funded status of the plans -- end of year [(a)]	$ (27,175)	$ (26,427)	$ (4,130)	$ (4,143)
(a) Amounts are reflected in "Other noncurrent liabilities" on the Consolidated Balance Sheets				
Amounts recorded in UGI International member's equity (pre-tax):				
Prior service cost (benefit)	$ 1,203	$ 522	$ (1,162)	$ (1,336)
Net actuarial loss (gain)	5,362	4,794	281	(79)
Total	$ 6,565	$ 5,316	$ (881)	$ (1,415)

In Fiscal 2019 and Fiscal 2018, the change in the pension plans' PBO due to actuarial gains and losses is principally the result of changes in discount rates. The change in the pension plans' PBO also reflects a settlement resulting from the conversion of a defined benefit pension plan to a defined contribution plan in the Netherlands. The estimated amount of actuarial losses, net of prior service benefits that we will amortize from member's equity into retiree benefit cost during Fiscal 2020 is not expected to be material.

Assumptions for the pension and other postretirement benefit plans are based upon market conditions in France, Belgium and the Netherlands. The discount rates are determined principally by reference to the yields on high-quality fixed income investments currently available and expected to be available during the period to maturity of the pension benefits. The expected rate of return on assets assumption is based on current and future expected returns on plan assets (as further described below).

(Currency in thousands, except where indicated otherwise)

	Pension Plan			Other Postretirement Benefits		
	2019	2018	2017	2019	2018	2017
Weighted-average assumptions:						
Discount rate – benefit obligations	0.48% to 0.56%	1.42% to 1.80%	0.95% to 1.60%	0.59%	1.66%	1.88%
Discount rate – benefit cost	1.42% to 1.80%	0.95% to 1.60%	0.80% to 1.00%	1.66%	1.88%	0.80%
Expected return on plan assets	1.90% to 2.98%	1.90% to 2.98%	1.00% to 3.00%	N/A	N/A	N/A
Rate of increase in salary levels	2.00% to 4.00%	2.00% to 4.00%	2.50% to 4.00%	N/A	N/A	N/A

N/A - Not applicable

The ABO for the pension plans was $40,390 and $51,523 as of September 30, 2019 and 2018, respectively.

The service cost component of our pension and other postretirement plans is reflected in "Operating and administrative expenses" on the Consolidated Statements of Income. The non-service cost component is reflected in "Other non-operating income (expense), net" on the Consolidated Statements of Income. Net periodic pension and other postretirement benefit cost include the following components:

	Pension Benefits			Other Postretirement Benefits		
	2019	2018	2017	2019	2018	2017
Service cost	$ 2,377	$ 2,718	$ 2,891	$ —	$ 269	$ 584
Interest cost	698	947	562	64	149	102
Expected return on assets	(455)	(748)	(604)	—	—	—
Curtailment gain	(493)	(218)	(1,427)	—	—	(399)
Settlement loss	90	—	—	—	—	—
Amortization of:						
Prior service cost (benefit)	26	(4)	(22)	(96)	(5,984)	(103)
Actuarial loss (gain)	177	258	402	(12)	(15)	160
Net benefit cost (benefit)	$ 2,420	$ 2,953	$ 1,802	$ (44)	$ (5,581)	$ 344

The curtailment gains reflected in the table above are principally due to plan participants in France who ceased employment with the Company as a result of restructuring plans subsequent to the Totalgaz Acquisition in Fiscal 2015 (see Note 18) and as a result of voluntary departures pursuant to the terms of a rehire arrangement with Total for certain employees acquired in the Totalgaz Acquisition. Fiscal 2018 other postretirement prior service benefit amortization of $5,984 included in the table above principally reflects the effects of plan amendments eliminating retiree health and welfare benefits for certain active employees in France.

As of September 30, 2019, pension plan benefits are funded through guaranteed or group insurance contracts. In these types of investment contracts, the Company is not entitled to the actual assets held by the insurance company but has a claim on the insurance company corresponding to the mathematical reserves generally equal to the compounded value of the paid contributions after deducting administrative fees and payments, at the contractual interest rate, or the surrender value. The fair values of the assets associated with the insured plans included in the tables above are generally the greater of the value of the discounted vested benefit or the policy surrender value. These investment balances are classified as Level 2 in the fair value hierarchy. During Fiscal 2019 and Fiscal 2018, we made cash contributions associated with our pension and other postretirement benefit plans of $1,124 and $1,339, respectively. Contributions in Fiscal 2020 are not expected to be material.

(Currency in thousands, except where indicated otherwise)

Estimated future payments for pension and other postretirement welfare benefits are as follows:

	Pension Benefits	Other Postretirement Benefits
Fiscal 2020	$ 3,317	$ 166
Fiscal 2021	$ 987	$ 166
Fiscal 2022	$ 946	$ 165
Fiscal 2023	$ 2,063	$ 165
Fiscal 2024	$ 2,380	$ 164
Fiscal 2025 - 2029	$ 15,067	$ 793

Certain employees of the Company may be eligible for long-service award lump-sum payments upon their departure from the Company. These awards are accounted for using the full expense method which requires that actuarial gains and losses be reflected in earnings immediately rather than being deferred and amortized over future periods of service. Benefits under these plans are unfunded. Benefit obligations and benefit expense associated with these plans were not material for Fiscal 2019, Fiscal 2018 and Fiscal 2017.

Note 9 — Inventories

Inventories comprise the following at September 30:

	2019	2018
Liquefied petroleum gas	$ 45,591	$ 75,536
Natural gas	8,535	21,887
Other, principally materials & supplies	11,605	11,837
Total inventories	$ 65,731	$ 109,260

Note 10 — Property, Plant and Equipment

Property, plant and equipment comprise the following at September 30:

	2019	2018
Land	$ 33,777	$ 38,703
Buildings and improvements	130,363	134,781
Transportation equipment	33,905	34,284
Equipment, primarily cylinders and tanks	1,534,590	1,539,084
Other	43,530	61,737
Work in process	23,033	14,520
Property, plant and equipment	$ 1,799,198	$ 1,823,109

(Currency in thousands, except where indicated otherwise)

Note 11 — Goodwill and Intangible Assets

Changes in the carrying amount of goodwill are as follows:

Balance September 30, 2017	$ 925,677
Acquisitions	54,935
Foreign currency translation	(16,864)
Balance September 30, 2018	963,748
Acquisitions	25,640
Foreign currency translation	(59,570)
Balance September 30, 2019	$ 929,818

Intangible assets comprise the following at September 30:

	2019	2018
Customer relationships and other	$ 299,404	$ 321,455
Trademarks and tradenames	8,244	—
Accumulated amortization	(156,708)	(150,765)
Intangible assets, net (subject to amortization)	150,940	170,690
Trademarks and tradenames (not subject to amortization)	49,387	50,291
Total intangible assets, net	$ 200,327	$ 220,981

Amortization expense of intangible assets was $15,885, $16,442 and $9,980 for Fiscal 2019, Fiscal 2018 and Fiscal 2017, respectively. Estimated amortization of intangible assets during each of the next five fiscal years is as follows: Fiscal 2020 - $16,131; Fiscal 2021 - $16,131; Fiscal 2022 - $16,053; Fiscal 2023 - $15,898; and Fiscal 2024 - $15,452.

Note 12 — Commitments and Contingencies

Commitments

We lease various buildings and other facilities and vehicles, computer and office equipment under operating leases. Certain of our leases contain renewal and purchase options and also contain step-rent provisions. Our aggregate rental expense for such leases was $18,616, $16,328 and $13,183 in Fiscal 2019, Fiscal 2018 and Fiscal 2017, respectively.

Minimum future payments under operating leases that have initial or remaining noncancelable terms in excess of one year are as follows:

	2020	2021	2022	2023	2024	After 2024
Minimum operating lease payments	$ 12,905	$ 10,014	$ 6,988	$ 5,662	$ 5,131	$ 6,487

Contingencies

There are pending claims and legal actions arising in the normal course of our businesses. Although we cannot predict the final results of these pending claims and legal actions, we believe, after consultation with counsel, that the final outcome of these matters will not have a material effect on our financial position, results of operations or cash flows.

(Currency in thousands, except where indicated otherwise)

Note 13 — Fair Value Measurements

Derivative Financial Instruments

The following table presents on a gross basis our financial assets and liabilities including both current and noncurrent portions, that are measured at fair value on a recurring basis within the fair value hierarchy as described in Note 2:

	Asset (Liability)			
	Level 1	Level 2	Level 3	Total
September 30, 2019				
Derivative instruments:				
Assets:				
Commodity contracts	$ 10,769	$ —	$ —	$ 10,769
Foreign currency contracts	$ —	$ 58,966	$ —	$ 58,966
Cross-currency contracts	$ —	$ —	$ —	$ —
Liabilities:				
Commodity contracts	$ (1,828)	$ (36,292)	$ —	$ (38,120)
Foreign currency contracts	$ —	$ (4,307)	$ —	$ (4,307)
Interest rate contracts	$ —	$ (3,319)	$ —	$ (3,319)
September 30, 2018				
Derivative instruments:				
Assets:				
Commodity contracts	$ 69,447	$ 54,711	$ —	$ 124,158
Foreign currency contracts	$ —	$ 20,644	$ —	$ 20,644
Cross-currency contracts	$ —	$ 913	$ —	$ 913
Liabilities:				
Commodity contracts	$ (3,989)	$ (281)	$ —	$ (4,270)
Foreign currency contracts	$ —	$ (14,382)	$ —	$ (14,382)
Interest rate contracts	$ —	$ (1,044)	$ —	$ (1,044)

The fair values of our Level 1 non-exchange-traded commodity futures and forward contracts are based upon actively quoted market prices for identical assets and liabilities. The remainder of our derivative instruments are designated as Level 2. The fair values of commodity derivatives designated as Level 2 are based upon indicative price quotations available through brokers, industry price publications or recent market transactions and related market indicators. The fair values of our Level 2 interest rate contracts, cross-currency contracts and foreign currency contracts are based upon third-party quotes or indicative values based on recent market transactions.

Other Financial Instruments

The carrying amounts of other financial instruments included in current assets and current liabilities (except for current maturities of long-term debt) approximate their fair values because of their short-term nature. At September 30, 2019, the carrying amount and estimated fair value of our long-term debt (including current maturities but excluding unamortized debt issuance costs) were $727,798 and $751,993, respectively. Since the majority of our long-term debt at September 30, 2018 was variable-rate term debt indexed to market-based interest rates, the carrying amounts of such long-term debt approximated their fair values.

Financial instruments other than derivative financial instruments, such as cash equivalents, time deposits and trade accounts receivable, could expose us to concentrations of credit risk. We limit our credit risk from cash equivalents and time deposits by investing only in major U.S. and international financial institutions. The credit risk from trade accounts receivable is limited because we have a large customer base which extends across many different markets and several foreign countries. For information regarding concentrations of credit risk associated with our derivative financial instruments, see Note 14.

Note 14 — Derivative Instruments and Hedging Activities

We are exposed to certain market risks related to our ongoing business operations. Management uses derivative financial and commodity instruments, among other things, to manage these risks. The primary risks managed by derivative instruments are (1) commodity price risk, (2) interest rate risk and (3) foreign currency exchange rate risk. Although we use derivative financial and commodity instruments to reduce market risk associated with forecasted transactions, we do not use derivative financial and commodity instruments for speculative or trading purposes. The use of derivative instruments is controlled by our risk management and credit policies which govern, among other things, the derivative instruments we can use, counterparty credit limits and contract authorization limits. Although our commodity derivative instruments extend over a number of years, a significant portion of our commodity derivative instruments economically hedge commodity price risk during the next twelve months. For information on the accounting for our derivative instruments, see Note 2.

Commodity Price Risk

In order to manage market price risk associated changes in prices for LPG, we use over-the-counter price swap contracts to reduce commodity price volatility associated with a portion of our forecasted LPG purchases. At September 30, 2019 and 2018, total volumes associated with LPG commodity derivative instruments totaled 277.3 million gallons and 149.5 million gallons, respectively. At September 30, 2019, the maximum period over which we are economically hedging our exposure to LPG commodity price risk is 23 months.

In order to manage market price risk associated with fixed-price sales contracts for natural gas and electricity, we enter into natural gas and electricity futures and forward contracts, some of which qualify for NPNS under GAAP. At September 30, 2019, total volumes associated with natural gas forward and futures contracts and electricity long forward and futures contracts totaled 6.8 million dekatherms and 2,215 million kilowatt hours, respectively. At September 30, 2018, total volumes associated with natural gas forward and futures contracts and electricity long forward and futures contracts totaled 9.0 million dekatherms and 3,603 million kilowatt hours, respectively. At September 30, 2019, the maximum period over which we are economically hedging our exposure to natural gas and electricity commodity price risk is 52 months and 39 months, respectively.

Interest Rate Risk

Prior to their repayment on October 25, 2018 (see Note 6), UGI France's and Flaga's long-term debt agreements had interest rates that were generally indexed to short-term market interest rates. UGI France and Flaga entered into pay-fixed, receive-variable interest rate swap agreements to hedge the underlying euribor and LIBOR rates of interest on these variable-rate debt agreements. We designated these interest rate swaps as cash flow hedges. These interest rate swaps were settled concurrent with the repayment of the UGI France and Flaga long-term debt. In November 2018, the Company entered into pay-fixed, receive-variable interest rate swaps through October 18, 2022, to fix the underlying euribor rate on 2018 Credit Facilities Agreement term loan borrowings at 0.34%. We designated these interest rate swaps as cash flow hedges.

As of September 30, 2019 and 2018, the total notional amount of variable-rate debt subject to interest rate swap agreements (excluding Flaga's cross-currency swap as described below) was €300,000 and €585,800, respectively. At September 30, 2019, the maximum period over which we are hedging our exposure to variable interest rates is 37 months. At September 30, 2019 and 2018, all interest rate hedges were pay-fixed, receive-variable interest rate swaps.

Foreign Currency Exchange Rate Risk

Forward Foreign Currency Exchange Contracts

In order to reduce the volatility in net income associated with our foreign operations, principally as a result of changes in the U.S. dollar exchange rate to the euro and British pound sterling, we enter into forward foreign currency exchange contracts. We layer in these foreign currency exchange contracts over a multi-year period to eventually equal approximately 90% of anticipated UGI International local currency earnings before income taxes. Because these contracts do not qualify for hedge accounting treatment, realized and unrealized gains and losses on these contracts are recorded in "Other non-operating income (expense), net" on the Condensed Consolidated Statements of Income.

In order to reduce exposure to foreign exchange rate volatility related to our foreign LPG operations, through September 30, 2016, we entered into forward foreign currency exchange contracts to hedge a portion of anticipated U.S. dollar-denominated LPG product purchases primarily during the heating-season months of October through March, expiring through September 2019. We accounted for these foreign currency exchange contracts associated with anticipated purchases of U.S. dollar-denominated LPG as cash flow hedges. At September 30, 2019, there were no amounts associated with these contracts remaining in AOCI.

At September 30, 2019 and 2018, notional amounts associated with forward foreign currency contracts totaled $516,007 and $512,206, respectively. At September 30, 2019, the maximum period over which we are hedging our exposure to forward foreign currency contracts is 36 months.

From time to time, we also enter into forward foreign currency exchange contracts to reduce the volatility of the U.S. dollar value of a portion of our euro-denominated net investments. We account for these foreign currency exchange contracts as net investment hedges. We use the forward rate method for measuring ineffectiveness for these net investment hedges and all changes in the fair value of the forward foreign currency contracts are reported in the cumulative translation adjustment component of AOCI. At September 30, 2019, forward foreign currency contracts designated as net investment hedges totaled €172,785. At September 30, 2018, we had no such euro-denominated net investment hedges.

Concurrent with the issuance of euro-denominated long-term debt under the 2018 Credit Facilities Agreement and the 3.25% Senior Notes in October 2018, we designated this euro-denominated debt as net investment hedges of a portion of our euro-denominated net investment (see Note 6).

Cross-Currency Swaps

Prior to its repayment on October 25, 2018 (see Note 6), Flaga entered into cross-currency swaps to hedge its exposure to the variability in expected future cash flows associated with the foreign currency and interest rate risk of its U.S. dollar denominated variable-rate term loan. These cross-currency hedges included initial and final exchanges of principal from a fixed euro denomination to a fixed U.S. dollar-denominated amount, to be exchanged at a specified rate, which was determined by the market spot rate on the date of issuance. These cross-currency swaps also included interest rate swaps of a floating U.S. dollar-denominated interest rate to a fixed euro-denominated interest rate. We designated these cross-currency swaps as cash flow hedges. These cross-currency hedges were settled concurrent with the repayment of the Flaga U.S. Dollar Term Loan in October 2018. At September 30, 2018, notional amounts associated with cross-currency swaps totaled $49,914.

Derivative Instrument Credit Risk

We are exposed to risk of loss in the event of nonperformance by our derivative instrument counterparties. Our derivative instrument counterparties principally comprise large energy companies and major U.S. and international financial institutions. We maintain credit policies with regard to our counterparties that we believe reduce overall credit risk. These policies include evaluating and monitoring our counterparties' financial condition, including their credit ratings, and entering into agreements with counterparties that govern credit limits or entering into netting agreements that allow for offsetting counterparty receivable and payable balances for certain financial transactions, as deemed appropriate. Certain of these agreements call for the posting of collateral by the counterparty or by the Company in the form of letters of credit, parental guarantees or cash. At September 30, 2019 and 2018, the Company paid (received) cash collateral of $8,480 and $(4,911), respectively. Additionally, our commodity exchange-traded futures contracts generally require cash deposits in margin accounts. At September 30, 2019 and 2018, restricted cash in brokerage accounts totaled $23,847 and $657, respectively. Although we have concentrations of credit risk associated with derivative instruments, the maximum amount of loss we would incur if these counterparties failed to perform according to the terms of their contracts, based upon the gross fair values of the derivative instruments, was not material at September 30, 2019.

Offsetting Derivative Assets and Liabilities

Derivative assets and liabilities are presented net by counterparty on our consolidated balance sheets if the right of offset exists. We offset amounts recognized for the right to reclaim cash collateral or the obligation to return cash collateral against amounts recognized for derivative instruments executed with the same counterparty. Our derivative instruments principally comprise over-the-counter transactions. Over-the-counter contracts are bilateral contracts that are transacted directly with a third party. Certain over-the-counter contracts contain contractual rights of offset through master netting arrangements, derivative clearing agreements, and contract default provisions. In addition, the contracts are subject to conditional rights of offset through counterparty nonperformance, insolvency, or other conditions.

In general, most of our over-the-counter transactions contracts are subject to collateral requirements. Types of collateral generally include cash or letters of credit. Cash collateral paid by us to our derivative counterparties, if any, is reflected in the table below to offset derivative liabilities. Cash collateral received by us from our over-the-counter derivative counterparties, if any, is reflected in the table below to offset derivative assets. Certain other accounts receivable and accounts payable balances recognized on our consolidated balance sheet with our derivative counterparties are not included in the table below but could reduce our net exposure to such counterparties because such balances are subject to master netting or similar arrangements.

(Currency in thousands, except where indicated otherwise)

Fair Value of Derivative Instruments

The following table presents the Company's derivative assets and liabilities by type, as well as the effects of offsetting, as of September 30:

	2019	2018
Derivative assets:		
Derivatives designated as hedging instruments:		
Foreign currency contracts	$ 17,355	$ 1,501
Cross-currency contracts	—	913
	17,355	2,414
Derivatives not designated as hedging instruments:		
Commodity contracts	10,769	124,158
Foreign currency contracts	41,611	19,143
	52,380	143,301
Total derivative assets - gross	69,735	145,715
Gross amounts offset in balance sheet	(4,307)	(9,875)
Cash collateral received	—	(4,911)
Total derivative assets - net	$ 65,428	$ 130,929
Derivative liabilities:		
Derivatives designated as hedging instruments:		
Foreign currency contracts	$ —	$ (359)
Interest rate contracts	(3,319)	(1,044)
	(3,319)	(1,403)
Derivatives not designated as hedging instruments:		
Commodity contracts	(38,120)	(4,270)
Foreign currency contracts	(4,307)	(14,023)
	(42,427)	(18,293)
Total derivative liabilities - gross	(45,746)	(19,696)
Gross amounts offset in balance sheet	4,307	9,875
Cash collateral pledged	8,480	—
Total derivative liabilities - net	$ (32,959)	$ (9,821)

(Currency in thousands, except where indicated otherwise)

Effect of Derivative Instruments

The following tables provide information on the effects of derivative instruments on the Consolidated Statements of Income and changes in AOCI for Fiscal 2019, Fiscal 2018 and Fiscal 2017:

	Gain (Loss) Recognized in AOCI			Gain (Loss) Reclassified from AOCI into Income			Location of Gain (Loss) Reclassified from AOCI into Income
	2019	2018	2017	2019	2018	2017	
Cash Flow Hedges:							
Foreign currency contracts	$ 1,249	$ 369	$ 166	$ 2,390	$ (2,999)	$17,814	Cost of sales
Interest rate contracts	(3,269)	113	1,594	(1,516)	(1,585)	(536)	Interest expense
Cross-currency contracts	(76)	1,180	480	(312)	1,150	(103)	Interest expense/other operating income, net
Total	$ (2,096)	$ 1,662	$ 2,240	$ 562	$ (3,434)	$17,175	
Net Investment Hedges:							
Foreign currency contracts	$ 17,355	$ —					

	Gain (Loss) Recognized in Income			Location of Gain (Loss) Recognized in Income
	2019	2018	2017	
Derivatives Not Designated as Hedging Instruments:				
Commodity contracts	$ (156,059)	$ 110,975	$ 46,288	Cost of sales
Foreign currency contracts	37,759	16,198	(23,853)	Other non-operating income (expense), net
Total	$ (118,300)	$ 127,173	$ 22,435	

For Fiscal 2019, Fiscal 2018 and Fiscal 2017, the amounts of derivative gains or losses representing ineffectiveness, and the amounts of gains or losses recognized in income as a result of excluding derivatives from ineffectiveness testing, were not material.

We are also a party to a number of other contracts that have elements of a derivative instrument. These contracts include, among others, binding purchase orders and contracts which provide for the purchase and delivery, or sale, of energy products. Although certain of these contracts have the requisite elements of a derivative instrument, these contracts qualify for NPNS exception accounting because they provide for the delivery of products or services in quantities that are expected to be used in the normal course of operating our business and the price in the contract is based on an underlying that is directly associated with the price of the product or service being purchased or sold.

Note 15 — Accumulated Other Comprehensive Income

Other comprehensive income (loss) principally comprises (1) gains and losses on derivative instruments qualifying as cash flow hedges, net of reclassifications to net income; (2) actuarial gains and losses on postretirement benefit plans, net of associated amortization; and (3) foreign currency translation and long-term intracompany transaction adjustments.

Changes in AOCI during Fiscal 2019, Fiscal 2018 and Fiscal 2017 are as follows:

	Postretirement Benefit Plans	Derivative Instruments	Foreign Currency	Total
AOCI - September 30, 2016	$ (8,877)	$ 6,401	$ (112,690)	$ (115,166)
Other comprehensive income before reclassification adjustments (after-tax)	3,976	1,654	59,396	65,026
Amounts reclassified from AOCI:				
Reclassification adjustments (pre-tax)	2,689	(17,175)	—	(14,486)
Reclassification adjustments tax (benefit) expense	(914)	5,501	—	4,587
Reclassification adjustments (after-tax)	1,775	(11,674)	—	(9,899)
Other comprehensive income (loss) attributable to UGI	5,751	(10,020)	59,396	55,127
AOCI - September 30, 2017	$ (3,126)	$ (3,619)	$ (53,294)	$ (60,039)
Other comprehensive (loss) income before reclassification adjustments (after-tax)	(3,504)	993	(30,441)	(32,952)
Amounts reclassified from AOCI:				
Reclassification adjustments (pre-tax)	6,627	3,434	—	10,061
Reclassification adjustments tax benefit	(2,344)	(1,479)	—	(3,823)
Reclassification adjustments (after-tax)	4,283	1,955	—	6,238
Other comprehensive income (loss) attributable to UGI	779	2,948	(30,441)	(26,714)
AOCI - September 30, 2018	$ (2,347)	$ (671)	$ (83,735)	$ (86,753)
Other comprehensive loss before reclassification adjustments (after-tax)	(1,871)	(1,291)	(82,176)	(85,338)
Amounts reclassified from AOCI:				
Reclassification adjustments (pre-tax)	369	(562)	—	(193)
Reclassification adjustments tax (benefit) expense	(127)	149	—	22
Reclassification adjustments (after-tax)	242	(413)	—	(171)
Other comprehensive loss attributable to UGI	(1,629)	(1,704)	(82,176)	(85,509)
AOCI - September 30, 2019	$ (3,976)	$ (2,375)	$ (165,911)	$ (172,262)

Note 16 — Other Operating Income, Net

Other operating income, net, comprises the following:

	2019	2018	2017
Interest and dividend income	$ 1,581	$ 1,817	$ 756
Cylinder deposit income	3,654	4,084	3,735
Gain (loss) on sales of assets	357	(335)	(1,752)
Foreign currency transaction losses	(1,599)	(1,073)	(589)
Customer contract settlement	4,021	—	—
Other	241	(1,295)	(6)
Total other operating income, net	$ 8,255	$ 3,198	$ 2,144

Note 17 — Related Party Transactions

UGI provides certain financial and administrative services to the Company. UGI bills the Company for all direct expenses incurred or paid on behalf of the Company and the Company reimburses UGI for such direct expenses. In addition, Enterprises, as the parent company of UGI International, is billed for the Company's allocated share of UGI indirect corporate expenses. This allocated share is based upon a weighted, three-component formula comprising revenues, operating expenses and net assets employed and considers the Company's relative percentage of such items to the total of such items for all UGI Corporation operating subsidiaries for which general and administrative services are provided. Management believes that this allocation method is reasonable and equitable. The amounts of UGI allocated indirect corporate expenses billed to Enterprises on behalf of the Company have been included in "Operating and administrative expenses - related parties" on the Consolidated Statements of Income. The amount of such allocated expenses billed to Enterprises, net of any income tax benefit, is reflected as a "Capital contribution - allocated expenses" on the Consolidated Statements of Changes in Equity.

(Currency in thousands, except where indicated otherwise)

On July 31, 2019 and August 1, 2019, UGI International paid cash distributions to Enterprises totaling $332,500. These distributions were funded by $290,000 of borrowings under the 2018 Credit Facilities Agreement multicurrency revolving facility agreement (of which $210,000 remained outstanding at September 30, 2019) and cash on hand.

From October 2011 through the date of its dividend to Enterprises in September 2016 as further described below, UGI International held a British pound sterling denominated note receivable in the amount of £21,874 from UGI Midlands, Ltd. (the "Midlands Note"). During this period, UGI Midlands, Ltd. was a first-tier subsidiary of UGI International. In September 2016, the Midlands Note and associated accrued interest were dividended to Enterprises. In March 2017, the Midlands Note was contributed by Enterprises to UGI International. This contribution has been reflected as "Capital contribution - Midlands Note" on the Fiscal 2017 Consolidated Statements of Changes in Equity.

Note 18 — Business Integration and Transformation Activities

Beginning in Fiscal 2016, UGI France initiated several VDPs pursuant to which employees are incentivized to voluntarily terminate employment or may be subject to involuntary termination to reach certain headcount reductions approved by employee work councils and government regulatory bodies which assure termination plans are in compliance with French labor laws. During Fiscal 2018 and Fiscal 2017, UGI France recorded pre-tax expenses associated with the VDPs totaling $12,548 and $24,784, respectively. Expenses recorded under the VDPs are included in "Operating and administrative expenses" on the Consolidated Statements of Income.

The following table reflects changes in the accrued amounts during Fiscal 2019, Fiscal 2018 and Fiscal 2017 associated with the VDPs:

Balance at October 1, 2016	$	7,259
Costs incurred and charged to expense		24,784
Amounts paid or settled		(8,127)
Foreign currency translation		603
Balance at September 30, 2017	$	24,519
Costs incurred and charged to expense		12,548
Amounts paid or settled		(17,341)
Foreign currency translation		(285)
Balance at September 30, 2018	$	19,441
Amounts paid or settled		(9,464)
Foreign currency translation and other		437
Balance at September 30, 2019	$	10,414

During the fourth quarter of Fiscal 2019, we began executing on a multi-year business transformation initiative. This initiative is designed to improve long-term operational performance by, among other things, reducing costs and improving efficiency in the areas of sales and marketing, supply and logistics, operations, purchasing, and administration. In addition, this business transformation initiative also focuses on enhancing the customer experience through, among other things, enhanced sales and marketing initiatives and an improved digital customer experience. In connection with these initiatives, during Fiscal 2019 we incurred $9,300 of costs principally comprising consulting, advisory and employee-related costs. These costs are reflected in "Operating and administrative expenses" on the 2019 Consolidated Statement of Income.

Executive Overview

Net income attributable to UGI International, LLC as determined in accordance with GAAP was $52.2 million in Fiscal 2019 compared to $218.2 million in Fiscal 2018. Our GAAP results in Fiscal 2019 reflect after-tax losses on commodity derivative instruments not associated with current-period transactions of $100.9 million compared to after-tax gains of $66.6 million in Fiscal 2018. The significant after-tax losses on commodity derivative instruments in Fiscal 2019 principally reflect decreases in forward prices for electricity and, to a lesser extent, LPG and natural gas. The substantially higher after-tax gains on commodity derivative instruments in Fiscal 2018 principally reflects significant increases in forward prices for electricity and, to a lesser extent, LPG and natural gas that occurred later in Fiscal 2018. Our GAAP results also reflect after-tax unrealized gains on foreign currency derivative instruments not associated with current period transactions of $22.9 million and $19.6 million in Fiscal 2019 and Fiscal 2018, respectively. In addition, our Fiscal 2019 GAAP results include expenses associated with business transformation initiatives and a loss on extinguishments of debt, while our Fiscal 2018 results include Finagaz integration expenses and certain effects from changes in tax laws in the U.S. and in France. Although these items are reflected in our GAAP results, we have excluded these items from our non-GAAP measures. See "Non-GAAP Financial Measures" below.

Our adjusted net income attributable to UGI International, LLC in Fiscal 2019 was $141.4 million, $5.1million (3.5%) lower than adjusted net income of $146.5 million in Fiscal 2018. Temperatures in Fiscal 2019 were 5.8% warmer than normal and 0.5% warmer than the prior year. Although average temperatures for Fiscal 2019 were only 0.5% warmer than the prior year, temperatures during the six months ended March 2019, which include our peak heating season months, were 8.5% warmer than the prior-year period. The lower results in Fiscal 2019 reflect the margin effects of lower volumes sold for crop drying due to a very dry and warm summer and early fall in Europe and the negative volume and associated adjusted total margin effects of the warmer weather on heating-related bulk sales, primarily sales to residential heating customers, during the peak heating season months. The lower adjusted total margin was partially offset by lower operating and administrative expenses, lower depreciation and amortization, and higher other operating and non-operating income including higher realized gains on foreign currency contracts used to reduce volatility in foreign earnings.

During Fiscal 2019, we were able to offset the normal inflationary impacts on operating costs associated with increases in compensation and benefits, other operating and administrative costs, incremental expenses associated with current-year acquisitions and the absence of a curtailment benefit associated with a postretirement plan recorded in Fiscal 2018, by focusing our attention on aggressively controlling operating expenses. This intense focus on controlling our operating costs not only enabled us to offset these impacts of inflation and other prior year benefits, but to reduce local currency costs below the level of such costs incurred in the prior year.

Base-currency results are translated into U.S. dollars based upon exchange rates experienced during the reporting periods. The functional currency of a significant portion of our results is the euro and, to a much lesser extent, the British pound sterling. During Fiscal 2019 and Fiscal 2018, the average unweighted euro-to-dollar translation rates were $1.13 and $1.19, respectively, and the average unweighted British pound sterling-to-dollar translation rates were $1.28 and $1.35, respectively. During Fiscal 2019 and Fiscal 2018, realized gains and losses on foreign currency exchange contracts used to reduce volatility in our foreign operations' net income settled at average euro-to-dollar exchange rates of $1.18 and $1.09, respectively, and at average British pound sterling-to-dollar exchange rates of $1.31 and $1.27, respectively.

Driving operational efficiencies will be an important component of our strategy for the next several years. We have begun to implement significant strategic and sustainable programs that will increase profitability and provide for an enhanced customer experience. We have engaged strategic partners to assist us in the identification and execution of these programs.

We began the process of centralizing certain functions in Fiscal 2019 after having completed the integration of Finagaz in Fiscal 2018. We launched an initiative and have embarked on a process of identifying operational synergies across all 17 countries in which we currently do business. We call this initiative Project Alliance, the goal of which is to focus attention on enhanced customer service and safe and efficient operations through the establishment of two centers of excellence. One such center will be focused on commercial excellence to identify and execute projects that improve the customer's experience. The second center will be focused on operational excellence across our distribution network and our filling centers. These efforts will be executed primarily over the next two years and, once completed, will generate over €30 million of annual savings. We estimate the total cumulative cost of executing on these Project Alliance initiatives, including related capital expenditures, to be approximately €55 million.

Fiscal 2018 Impact of Tax Law Changes

Net income for Fiscal 2018 was affected by the December 2017 French Finance Bills and the enactment of the TCJA in the U.S. In December 2017, the French Parliament approved the December 2017 French Finance Bills. Among other things, the December

2017 French Finance Bills increased the Fiscal 2018 corporate income tax rate in France from 34.4% to 39.4%. In addition, the December 2017 French Finance Bills included measures to ratably reduce the corporate income tax rate to 25.8% effective for fiscal years starting after January 1, 2022 (Fiscal 2023). We were subject to a 34.4% French corporate tax rate in Fiscal 2019.

The TCJA was enacted into law on December 22, 2017. Among other things, the TCJA reduced the U.S. federal income tax rate from 35% to 21% effective January 1, 2018, and created a territorial tax system with a one-time mandatory “toll tax” on previously un-repatriated foreign earnings. In the U.S. we were subject to a blended U.S. federal income tax rate of 24.5% for Fiscal 2018 because our fiscal year contains the effective date of the rate change from 35% to 21%. In the U.S., we were subject to a U.S. federal income tax rate of 21% in Fiscal 2019.

Our financial results for Fiscal 2018 include remeasurement adjustments to our deferred income tax assets and liabilities, accrued income taxes and deferred tax valuation allowances existing as of the dates these tax laws were enacted. The remeasurement adjustments recorded in Fiscal 2018 have been excluded from adjusted net income attributable to UGI International, LLC, a non-GAAP financial measure, which is presented under "Non-GAAP Financial Measures" below.

Non-GAAP Financial Measures

We present the non-GAAP measures adjusted total margin, adjusted operating income, adjusted income before income taxes and adjusted net income attributable to UGI International, LLC, in order to assist in the evaluation of our overall performance. We believe that these non-GAAP measures provide meaningful information to investors about our performance because they eliminate the impact of (1) gains and losses on commodity and certain foreign currency derivative instruments not associated with current-period transactions, principally comprising unrealized gains and losses on such derivative instruments, and (2) other significant discrete items that can affect the comparisons of period-over-period results. These financial measures are not in accordance with, or an alternative to, GAAP and should be considered in addition to, and not as a substitute for, the comparable GAAP measures.

The following table includes reconciliations of adjusted total margin, adjusted operating income, adjusted income before income taxes and adjusted net income attributable to UGI International, LLC to the most directly comparable financial measures calculated and presented in accordance with GAAP for the periods presented.

(Millions of dollars)	Year Ended September 30, 2019	2018
Adjusted total margin:		
Total revenues	$ 2,372.2	$ 2,683.8
Cost of sales	(1,558.9)	(1,527.2)
French energy certificates (a)	—	(20.5)
Total margin	813.3	1,136.1
Net losses (gains) on commodity derivative instruments not associated with current-period transactions	142.5	(92.9)
Adjusted total margin	$ 955.8	$ 1,043.2
Adjusted operating income:		
Operating income	$ 68.1	$ 300.5
Net losses (gains) on commodity derivative instruments not associated with current-period transactions	142.5	(92.9)
Business transformation expenses	9.3	—
Integration expenses associated with Finagaz	—	30.5
Adjusted operating income	$ 219.9	$ 238.1
Adjusted income before income taxes:		
Income before income taxes	$ 74.6	$ 300.6
Net losses (gains) on commodity derivative instruments not associated with current-period transactions	142.5	(92.9)
Unrealized (gains) on foreign currency derivative instruments	(32.2)	(28.9)
Loss on extinguishments of debt	6.1	—
Business transformation expenses	9.3	—
Integration expenses associated with Finagaz	—	30.5
Adjusted income before income taxes	$ 200.3	$ 209.3
Adjusted net income attributable to UGI International, LLC:		
Net income attributable to UGI International, LLC	$ 52.2	$ 218.2
Net losses (gains) on commodity derivative instruments not associated with current-period transactions	100.9	(66.6)
Unrealized (gains) on foreign currency derivative instruments	(22.9)	(19.6)
Loss on extinguishments of debt	4.2	—
Business transformation expenses	7.0	—
Integration expenses associated with Finagaz	—	18.5
Remeasurement impact from TCJA	—	8.1
Impact from December 2017 French Finance Bills	—	(12.1)
Adjusted net income attributable to UGI International, LLC	$ 141.4	$ 146.5

(a) Total margin for Fiscal 2018 is net of French energy certificate costs of $20.5 million. For financial statement purposes, French energy certificate costs in Fiscal 2018 are included in "operating and administrative expenses" on the Consolidated Statement of Income. In Fiscal 2019, French energy certificate costs are included in cost of sales on the Consolidated Statement of Income.

Analysis of Results of Operations

The following analysis compares UGI International's results of operations for Fiscal 2019 with Fiscal 2018.

Fiscal 2019 Compared with Fiscal 2018:

UGI International		2019		2018		Decrease	
(Dollars in millions)							
Revenues	$	2,372.2	$	2,683.8	$	(311.6)	(11.6)%
Total margin (a)	$	813.3	$	1,136.1	$	(322.8)	(28.4)%
Operating and administrative expenses (a)(b)	$	629.6	$	698.2	$	(68.6)	(9.8)%
Operating income	$	68.1	$	300.5	$	(232.4)	(77.3)%
Income before income taxes (c)	$	74.6	$	300.6	$	(226.0)	(75.2)%
Net income attributable to UGI International, LLC	$	52.2	$	218.2	$	(166.0)	(76.1)%
Non-GAAP financial measures (d):							
Adjusted total margin (e)	$	955.8	$	1,043.2	$	(87.4)	(8.4)%
Adjusted operating income	$	219.9	$	238.1	$	(18.2)	(7.6)%
Adjusted income before income taxes	$	200.3	$	209.3	$	(9.0)	(4.3)%
Adjusted net income attributable to UGI International, LLC	$	141.4	$	146.5	$	(5.1)	(3.5)%
LPG retail gallons sold (millions) (e)		832.6		875.0		(42.4)	(4.8)%
Degree days – % (warmer) than normal (f)		(5.8)%		(5.3)%		—	—

(a) Total margin represents total revenues less total cost of sales. Total margin for Fiscal 2019 and Fiscal 2018 includes net pre-tax (losses) gains of $(142.5) million and $92.9 million, respectively, on commodity derivative instruments not associated with current-period transactions and, in Fiscal 2018, French energy certificate costs of $20.5 million. For financial statement purposes, French energy certificate costs in Fiscal 2018 are included in "operating and administrative expenses" on the Consolidated Statement of Income (but are excluded from operating expenses presented in the table above). In Fiscal 2019, French energy certificate costs are included in cost of sales on the Consolidated Statement of Income.

(b) Includes business transformation expenses of $9.3 million in Fiscal 2019 and Finagaz integration expenses of $30.5 million in Fiscal 2018.

(c) Income before income taxes and net income attributable to UGI International, LLC in Fiscal 2019 and Fiscal 2018 includes net pre-tax unrealized gains on foreign currency derivative contracts of $32.2 million and $28.9 million, respectively. Income before income taxes for Fiscal 2019 and Fiscal 2018 also includes realized gains (losses) on foreign currency derivative contracts of $5.5 million and $(12.7) million, respectively.

(d) These financial measures are non-GAAP financial measures and are not in accordance with, or an alternative to, GAAP and should be considered in addition to, and not a substitute for, the comparable GAAP measures. See "Non-GAAP Financial Measures" above.

(e) Prior-year amount adjusted to conform with current-year classification

(f) Deviation from average heating degree days for the 15-year period 2002-2016 at locations in our UGI International service territories.

Average temperatures during Fiscal 2019 were 5.8% warmer than normal and 0.5% warmer than the prior year. Although average temperatures for Fiscal 2019 were only 0.5% warmer than the prior year, temperatures during the six months ended March 2019, which include the peak heating season months, were 8.5% warmer than the prior-year period. Total retail gallons sold during Fiscal 2019 were 4.8% lower reflecting lower volumes associated with crop drying as a result of a very warm and dry summer, the loss of a low-margin cylinder dealer in Poland, and the effects of the warmer weather on heating-related bulk sales, primarily sales to residential heating customers, during the peak heating season months. Notwithstanding higher wholesale LPG prices at the beginning of the Fiscal 2019 heating season, average wholesale prices for propane and butane in northwest Europe were approximately 19% and 16% lower than in Fiscal 2018, respectively, reflecting a significant decline in LPG prices during Fiscal 2019.

Base-currency results are translated into U.S. dollars based upon exchange rates experienced during the reporting periods. Differences in these translation rates affect the comparison of line item amounts presented in the table above. The functional currency of a significant portion of our UGI International results is the euro and, to a much lesser extent, the British pound sterling.

During Fiscal 2019 and Fiscal 2018, the average unweighted euro-to-dollar translation rates were approximately $1.13 and $1.19, respectively, and the average unweighted British pound sterling-to-dollar translation rates were approximately $1.28 and $1.35, respectively. During Fiscal 2019 and Fiscal 2018, realized gains and losses on foreign currency exchange contracts used to reduce volatility in our foreign operations' net income settled at average euro-to-dollar exchange rates of $1.18 and $1.09, respectively, and at average British pound sterling-to-dollar exchange rates of $1.31 and $1.27, respectively.

UGI International revenues decreased $311.6 million during Fiscal 2019 principally reflecting the lower retail and lower wholesale LPG volumes sold and the translation effects of the weaker euro and British pound sterling (approximately $140 million).

Cost of sales increased $31.7 million in Fiscal 2019 compared to Fiscal 2018. Cost of sales in Fiscal 2019 and Fiscal 2018 include (losses) gains on commodity derivative instruments not associated with current period transactions of $(142.5) million and $92.9 million, respectively. Excluding the effects of these gains and losses on commodity derivative instruments, cost of sales decreased $203.7 million principally reflecting the effects of the lower LPG retail and wholesale volumes sold, the translation effects of the weaker euro and British pound sterling (approximately $80 million), and the effects of slightly lower average wholesale prices for LPG. Although the average unweighted wholesale price for propane during Fiscal 2019 was approximately 19% lower than in Fiscal 2018, wholesale propane prices during late Fiscal 2018 and early Fiscal 2019 were higher than the prior year resulting in higher LPG inventory costs entering the Fiscal 2019 heating season.

Total margin decreased $322.8 million in Fiscal 2019. Adjusted total margin decreased $87.4 million primarily reflecting the lower retail LPG volumes sold and the translation effects of the weaker euro and British pound sterling (approximately $60 million). These decreases in total margin were partially offset by slightly higher average retail LPG unit margin reflecting margin management efforts including the recovery of energy conservation compliance costs.

Fiscal 2019 operating income (which includes the previously mentioned unrealized (losses) gains on commodity derivative instruments not associated with current-period transactions, business transformation expenses in Fiscal 2019 and Finagaz integration expenses in Fiscal 2018) decreased $232.4 million. Adjusted operating income decreased $18.2 million principally reflecting the previously mentioned $87.4 million decrease in adjusted total margin partially offset by lower operating and administrative expenses (a decrease of $47.4 million after excluding the $9.3 million of business transformation expenses in Fiscal 2019 and the $30.5 million of Finagaz transition expense in Fiscal 2018), lower depreciation and amortization expense ($16.7 million), and higher other operating income ($5.1 million) including higher income on asset sales and income from a customer contract settlement. The decrease in operating and administrative expenses as adjusted for the business transformation expenses and the Finagaz transition expenses reflects, in large part, the impact of the weaker euro and British pound sterling (approximately $35 million) and lower local currency operating and administrative expenses. Local currency operating and administrative expenses were lower than the prior year principally reflecting lower expenses associated with operational safety requirements, and lower advertising, information technology and outside services expense. The lower depreciation and amortization expense principally reflects adjustments recorded in Fiscal 2018 resulting mainly from changes in depreciable lives of certain cylinders and tanks and, to a lesser extent, the translation effects of the weaker currencies.

Income before income taxes (which includes the previously mentioned unrealized losses and gains on commodity derivative instruments not associated with current-period transactions and unrealized gains on certain foreign currency contracts; business transformation expenses in Fiscal 2019 and Finagaz integration expenses in Fiscal 2018) decreased $226.0 million. Adjusted income before income taxes decreased $9.0 million principally reflecting the previously mentioned $18.2 million decrease in adjusted operating income, the absence of a $5.8 million postretirement plan curtailment gain recorded in the prior year, and slightly higher interest expense ($3.9 million) partially offset by higher realized gains on foreign currency exchange contracts entered into in order to reduce volatility in net income resulting from changes in foreign exchange rates ($18.3 million).

Interest Expense and Income Taxes

Interest expense in Fiscal 2019 was $25.0 million compared to interest expense in Fiscal 2018 of $21.1 million. The slightly higher interest expense principally reflects the effects of higher average long-term debt outstanding and higher average short-term borrowings partially offset by the effects of the weaker euro.

As previously mentioned, our consolidated income taxes for Fiscal 2018 were impacted by the enactment of the TCJA in the U.S. and the December 2017 French Finance Bills. Our effective tax rate for Fiscal 2018 reflects the effects of deferred income tax asset and liability remeasurement adjustments resulting from the TCJA and the December 2017 French Finance Bills, which remeasurement adjustments reduced Fiscal 2018 income tax expense by $4.0 million.

Liquidity and Capital Resources

We depend on both internal and external sources of liquidity to provide funds for working capital and to fund capital requirements. Our short-term cash requirements not met by cash from operations can generally be satisfied with borrowings under our revolving credit facility. Long-term cash requirements are generally met through the issuance of long-term debt or capital contributions. We believe that we have sufficient liquidity in the forms of cash and cash equivalents on hand; cash expected to be generated from operations; credit facility borrowing capacity; and the ability to obtain long-term financing to meet anticipated contractual and projected cash commitments. Issuances of debt in the capital markets and additional credit facilities may not, however, be available to us on acceptable terms.

The primary sources of our cash and cash equivalents have been cash flows generated from operations and cash contributions made by UGI Corporation principally to fund acquisitions of businesses. However, there can be no assurance that UGI Corporation will make contributions to our capital or otherwise provide funding in the future. Our primary uses of cash have been to fund acquisitions of businesses, repay long-term debt and pay distributions to our parent company. Our ability to service debt has been, and will continue to be, dependent upon our ability to generate cash from our operations. On July 31, 2019 and August 1, 2019, UGI International paid cash distributions to Enterprises totaling $332.5 million. These distributions were funded by $290 million of borrowings under the multicurrency revolving credit facility agreement (of which $210 million remained outstanding at September 30, 2019) and cash on hand. We expect to use a substantial portion of the dividends paid by our operating subsidiaries in Fiscal 2020 to pay down a portion of outstanding borrowings under the 2018 Credit Facilities Agreement multicurrency revolving facility.

Our cash and cash equivalents totaled $235.2 million at September 30, 2019 and $237.5 million at September 30, 2018. A substantial portion of this cash is located outside of the United States.

Long-term debt and credit facility

UGI International's debt outstanding at September 30, 2019, totaled $930.4 million (including current maturities of long-term debt of $0.1 million and short-term borrowings of $210.9 million). UGI International's debt outstanding at September 30, 2018, totaled $749.8 million (including current maturities of long-term debt of $0.3 million and short-term borrowings of $1.4 million). Total long-term debt outstanding at September 30, 2019, including current maturities, comprises $381.5 million of 3.25% Senior Notes, a $327.0 million variable-rate term loan, and $19.3 million of other long-term debt, and is net of $8.3 million of unamortized debt issuance costs.

At September 30, 2019, there were €192.7 million ($210.0 million) of borrowings outstanding under the 2018 Credit Facilities Agreement multicurrency revolving facility. The weighted average interest rate on revolving facility borrowings at September 30, 2019 was 3.64%. The average daily and peak short-term borrowings outstanding under the 2018 Credit Facilities Agreement multicurrency revolving facility in Fiscal 2019 were €41.0 million ($44.7 million) and €266.1 million ($290.0 million), respectively. At September 30, 2019, the Company's available borrowing capacity under the 2018 Credit Facilities Agreement multicurrency revolving facility was €107.3 million ($117.0 million).

Significant financing activities

On October 18, 2018, UGI International entered into the 2018 Credit Facilities Agreement, a five-year unsecured Senior Facilities Agreement with a consortium of banks consisting of (1) a €300 million variable-rate term loan which was drawn on October 25, 2018, and (2) a €300 million senior unsecured multicurrency revolving facility agreement. Term loan borrowings bear interest at rates per annum comprising the aggregate of the applicable margin (as defined in the agreement) and the associated euribor rate. UGI International has entered into pay-fixed, receive-variable interest rate swaps to fix the underlying euribor rate on term loan borrowings at 0.34% through October 18, 2022. Under the multicurrency revolving credit facility agreement, UGI International may borrow in euros or U.S. dollars. Such loans will bear interest at the applicable rate (euribor or LIBOR rate) plus a margin as defined in the agreement.

On October 25, 2018, UGI International issued, in an underwritten private placement, €350 million principal amount of 3.25% senior unsecured notes due November 1, 2025. The 3.25% Senior Notes rank equal in right of payment with indebtedness issued under the 2018 Credit Facilities Agreement.

The net proceeds from the 3.25% Senior Notes and the Credit Facilities Agreement variable-rate term loan plus cash on hand were used on October 25, 2018 (1) to repay €540 million outstanding principal of UGI France's variable-rate term loan under its 2015 Senior Facilities Agreement due April 2020; €45.8 million of outstanding principal of Flaga's variable-rate term loan due October 2020; and $49.9 million of outstanding principal of Flaga's U.S. dollar variable-rate term loan due April 2020, plus accrued and unpaid interest, and (2) for general corporate purposes. Upon entering into the 2018 Credit Facilities Agreement, we terminated (1) the 2017 Credit Agreement; (2) UGI France's revolving credit facility under the 2015 Senior Facilities Agreement; and (3) Flaga's credit facility agreement.

For further information on these transactions and the Company's other long-term borrowings, see Note 6 to Consolidated Financial Statements.

Analysis of Adjusted EBITDA

We use the non-GAAP measures "EBITDA" and "Adjusted EBITDA" in assessing our ability to service debt and to comply with loan covenants. These financial measures are not in accordance with, or an alternative to, GAAP and should be considered in addition to, and not as an alternative to, comparable GAAP measures. See the table below for reconciliations of "EBITDA" and "Adjusted EBITDA" to net income attributable to UGI International, LLC, the most directly comparable financial measure calculated and presented in accordance with GAAP.

	Year Ended September 30,	
(Millions of dollars)	2019	2018
EBITDA and Adjusted EBITDA:		
Net income attributable to UGI International, LLC	$ 52.2	$ 218.2
Subtract net loss attributable to noncontrolling interests (a)	(0.1)	(2.9)
Income tax expense (a)	22.5	85.4
Interest expense	25.0	21.1
Depreciation	107.9	124.1
Amortization	15.9	16.4
EBITDA	223.4	462.3
Net losses (gains) on commodity derivative instruments not associated with current-period transactions	142.5	(92.9)
Unrealized (gains) on foreign currency derivative instruments	(32.2)	(28.9)
Loss on extinguishments of debt	6.1	—
Business transformation expenses	9.3	—
Integration expenses associated with Finagaz	—	30.5
Adjusted EBITDA	$ 349.1	$ 371.0

(a) Includes impact of rounding.

Fiscal 2019 and Fiscal 2018

Adjusted EBITDA was $349.1 million in Fiscal 2019, a decrease of $21.9 million from Fiscal 2018, principally reflecting a decrease in adjusted total margin of $87.4 million partially offset by a $47.4 million decrease in operating and administrative expenses (excluding the effects of the business transformation expenses in Fiscal 2019 and the Finagaz integration expenses in Fiscal 2018 and as adjusted for the French energy certificates classification in Fiscal 2018) and an $18.3 million increase in realized gains on certain foreign currency exchange contracts resulting from the weaker euro and British pound sterling. Adjusted total margin decreased $87.4 million principally reflecting the lower retail LPG volumes sold and the translation effects of the weaker euro and British pound sterling (approximately $60 million). These decreases in adjusted total margin were partially offset by slightly higher average retail LPG unit margins reflecting margin management efforts including the recovery of energy conservation compliance costs. The decrease in operating and administrative expenses (as adjusted for the items above) reflects, in large part, the impact of the weaker euro and British pound sterling (approximately $35 million) and lower local currency operating and administrative expenses. Local currency operating and administrative expenses were lower than the prior year principally reflecting lower expenses associated with operational safety requirements, and lower advertising, information technology and outside services expense.

Cash Flows

Due to the seasonal nature of the Company's businesses, cash flows from operating activities are generally strongest during the second and third fiscal quarters when customers pay for LPG consumed during the peak heating season months. Conversely, operating cash flows are generally at their lowest levels during the fourth and first fiscal quarters when the Company's investment in working capital, principally inventories and accounts receivable, is generally greatest.

Cash flows from operating activities can be significantly affected by year-to-year variations in changes in operating working capital reflecting changes in LPG commodity prices. Cash flow from investing activity is principally affected by cash expenditures for property, plant and equipment; cash paid for acquisitions of businesses; and net cash proceeds from sales and retirements of property, plant and equipment. Changes in cash flow from financing activities are primarily due to issuances and repayments of long-term debt, cash capital contributions from UGI usually in conjunction with material business acquisitions, revolving credit facility borrowings, and distributions paid to Enterprises.

Operating Activities:

Cash flow from operating activities was $282.7 million in Fiscal 2019 compared to $193.8 million in Fiscal 2018. Cash flow from operating activities before changes in operating working capital were $241.1 million in Fiscal 2019 compared to $258.8 million in Fiscal 2018. The year-over-year differences in cash flows from operating activities before changes in operating working capital principally reflects the lower Fiscal 2019 adjusted operating results. Changes in operating working capital provided (used) operating cash flow of $41.6 million in Fiscal 2019 compared to $(65.0) million in Fiscal 2018. The higher cash from changes in operating working capital in Fiscal 2019 principally reflects the impact of decreases in LPG and natural gas prices on cash flow from changes in accounts receivable and inventories while the use of cash flow from changes in operating working capital in Fiscal 2018 principally reflects the impact of general increases in LPG prices on these working capital items.

Investing Activities:

Cash flow used by investing activities was $142.5 million in Fiscal 2019 compared to $205.2 million in Fiscal 2018. Cash capital expenditures for property, plant and equipment totaled $106.4 million in Fiscal 2019 compared to $111.4 million in Fiscal 2018. Net cash paid for acquisitions of businesses was $42.9 million in Fiscal 2019 compared to $106.9 million in Fiscal 2018. The net cash paid for acquisitions of businesses in Fiscal 2019 includes retail LPG operations in Belgium, the Netherlands and the United Kingdom. Amounts in Fiscal 2018 include the acquisition of UniverGas.

Financing Activities:

Cash flow used by financing activities was $103.2 million in Fiscal 2019 and $106.8 million in Fiscal 2018. On October 25, 2018, the Company, pursuant to the 2018 Credit Facilities Agreement, borrowed €300 million under a variable-rate term loan facility. Also on October 25, 2018, the Company issued in an underwritten private placement €350 million principal amount of the 3.25% Senior Notes due November 1, 2025. The net proceeds from these borrowings plus cash on hand were used principally to repay €540 million outstanding principal of UGI France's variable-rate term loan; €45.8 million of outstanding principal of Flaga's variable-rate term loan; and $49.9 million of outstanding principal of Flaga's U.S. dollar variable-rate term loan, plus accrued and unpaid interest. Repayments of debt and capital leases in Fiscal 2018 include approximately $82.0 million of term loan debt repayments at UGI France and Flaga. Cash flow from financing activities in Fiscal 2019 includes $65.0 million of cash capital contributions received from Enterprises.

On July 31, 2019 and August 1, 2019, UGI International paid cash distributions to Enterprises totaling $332.5 million. These distributions were funded by $290.0 million of borrowings under the 2018 Credit Facilities Agreement multicurrency revolving facility agreement (of which $210 million remained outstanding at September 30, 2019) and cash on hand.

Capital Expenditures

Our capital expenditures include, among other things, amounts to replace and maintain our bulk tank and cylinder assets as well as amounts to enhance site safety to meet regulatory requirements. During Fiscal 2019, Fiscal 2018, and Fiscal 2017, our capital expenditures totaled $106.4 million, $111.4 million, and $90.3 million, respectively. We expect capital expenditures of approximately $115 million in Fiscal 2020.

Contractual Obligations and Commitments

The following is a summary of our significant contractual obligations existing as of September 30, 2019:

	Payments Due by Period				
(Millions of dollars)	Total	Fiscal 2020	Fiscal 2021 - 2022	Fiscal 2023 - 2024	Thereafter
Long-term debt (a)	$ 727.8	$ 0.1	$ 19.1	$ 327.1	$ 381.5
Interest on long-term-fixed rate debt (a)(b)(c)	103.2	19.5	39.6	30.7	13.4
Operating leases	47.2	12.9	17.0	10.8	6.5
Supply contracts	449.5	449.5	—	—	—
Derivative instruments (d)	29.6	24.0	5.6	—	—
Total	$ 1,357.3	$ 506.0	$ 81.3	$ 368.6	$ 401.4

(a) Based upon stated maturity dates for debt outstanding at September 30, 2019.

(b) Based upon stated interest rates adjusted for the effects of interest rate swaps.

(c) Based on Company and subsidiary leverage levels at September 30, 2019.

(d) Represents the sum of amounts due if derivative instrument liabilities were settled at the September 30, 2019 amounts reflected in the Consolidated Balance Sheet (but excluding amounts associated with interest rate contracts).

Critical Accounting Policies and Estimates

The accounting policies and estimates discussed in this section are those that we consider to be the most critical to an understanding of our financial statements because they involve significant judgments and uncertainties. The application of these accounting policies and estimates necessarily requires management's most subjective or complex judgments regarding estimates and projected outcomes of future events. Changes in these policies and estimates could have a material effect on our financial statements. Also, see Note 2 to Consolidated Financial Statements which discusses the significant accounting policies that we have selected from acceptable alternatives.

Goodwill Impairment Evaluation

Our goodwill is the result of business acquisitions. Under GAAP, we do not amortize goodwill, but test it at least annually for impairment at the reporting unit level. A reporting unit is the operating segment, or a business one level below the operating segment (a component), if discrete financial information is prepared and regularly reviewed by segment management. Components are aggregated as a single reporting unit if they have similar economic characteristics. A reporting unit with goodwill is required to perform an impairment test annually or whenever events or circumstances indicate that the value of goodwill may be impaired.

We are required to recognize an impairment charge under GAAP if the carrying amount of a reporting unit exceeds its fair value. From time to time, we assess qualitative factors to determine whether it is more likely than not that the fair value of such reporting unit is less than its carrying amount. We bypass the qualitative assessment and perform the quantitative assessment by comparing the fair value of the reporting unit with its carrying amount, including goodwill. We determine fair values generally based on a weighting of income and market approaches. For purposes of the income approach, fair values are determined based upon the present value of the reporting unit's estimated future cash flows, including an estimate of the reporting unit's terminal value based upon these cash flows, discounted at appropriate risk-adjusted rates. We use our internal forecasts to estimate future cash flows which may include estimates of long-term future growth rates based upon our most recent reviews of the long-term outlook. Cash flow estimates used to establish fair values under our income approach involve management judgments based on a broad range of information and historical results. In addition, external economic and competitive conditions can influence future performance. For purposes of the market approach, we use valuation multiples for companies comparable to our reporting units. The market approach requires judgment to determine the appropriate valuation multiples. If the carrying amount of our reporting unit exceeds its fair value, an impairment loss is recognized in an amount equal to such excess but not to exceed the total amount of the goodwill of the reporting unit. As of September 30, 2019, our goodwill totaled $929.8 million. No impairments of goodwill were recorded during any of the periods presented.

Impairment of Long-Lived Assets

Impairment testing for individual long-lived assets, or groups of long-lived assets, is required when circumstances indicate that such assets may be impaired. If it is determined that a triggering event has occurred, we prepare a quantitative evaluation based upon undiscounted cash flow projections expected to be realized over the remaining useful life of the asset or the primary asset of an asset group. A long-lived asset or group of assets is considered impaired when the carrying amount of such assets exceeds the associated undiscounted estimated future cash flows. When determining whether an asset or group of assets has been impaired, management groups assets at the lowest level that has identifiable cash flows. Performing an impairment test on long-lived assets involves judgment in areas such as identifying when a triggering event requiring evaluation occurs; identifying and grouping assets; and, if the asset or group of assets is determined to be impaired based upon an excess of carrying amount over estimated undiscounted future cash flows, determining the fair value of the asset or asset group. Although cash flow estimates are based upon relevant information at the time the estimates are made, estimates of future cash flows are by nature highly uncertain and contemplate factors that change over time such as the expected use of the asset including future production and sales volumes, expected fluctuations in prices of commodities and expected proceeds from disposition. No material provisions for impairments of long-lived assets were recorded during Fiscal 2019, Fiscal 2018 or Fiscal 2017.

Business Combination Purchase Price Allocations

From time to time, the Company enters into material business combinations. In accordance with accounting guidance associated with business combinations, the purchase price is allocated to the various assets acquired and liabilities assumed at their estimated fair value as of the acquisition date with the residual of the purchase price allocated to goodwill. From time to time we engage third-party valuation experts to assist us in determining the fair values of certain assets acquired and liabilities assumed. Such valuations require management to make significant judgments, estimates and assumptions especially with respect to intangible assets. Management makes estimates of fair value based upon assumptions it believes to be reasonable. These estimates are based upon historical experience and information obtained from the management of the acquired companies and are inherently uncertain. Critical estimates in valuing certain of the intangible assets include, but are not limited to, discount rates and expected future cash flows from and the economic lives of customer relationships, trade names, existing technology, and other intangible assets. Unanticipated events and circumstances may occur, which may affect the accuracy or validity of such assumptions or estimates. The allocation of the purchase price may be modified up to one year after the acquisition date, under certain circumstances, as more information is obtained about the fair value of assets acquired and liabilities assumed.

Income Taxes

We use the asset and liability method of accounting for income taxes. Under this method, income tax expense is recognized for the amount of taxes payable or refundable for the current year and for deferred tax liabilities and assets for the future tax consequences of events that have been recognized in our financial statements or tax returns. Positions taken by an entity in its tax returns must satisfy a more-likely-than-not recognition threshold assuming the positions will be examined by tax authorities with full knowledge of relevant information. We use assumptions, judgments and estimates to determine our current provision for income taxes. We also use assumptions, judgments and estimates to determine our deferred tax assets and liabilities and any valuation allowance to be recorded against a deferred tax asset. The interpretation of tax laws, including the provisions of the TCJA, involves uncertainty, since tax authorities may interpret the laws differently. In addition, the states in which we operate may or may not conform to some or all of the provisions in the TCJA. Our assumptions, judgments and estimates relative to the current provision for income tax give consideration to current tax laws, our interpretation of current tax laws and possible outcomes of current and future audits conducted by foreign and domestic tax authorities. Changes in tax law or our interpretation thereof and the resolution of current and future tax audits could significantly impact the amounts provided for income taxes in our consolidated financial statements. Our assumptions, judgments and estimates relative to the amount of deferred income taxes take into account estimates of the amount of future taxable income. Actual taxable income or future estimates of taxable income could render our current assumptions, judgments and estimates inaccurate. Changes in the assumptions, judgments and estimates mentioned above could cause our actual income tax obligations to differ significantly from our estimates. As of September 30, 2019, our net deferred tax liabilities totaled $201.2 million.

Recently Issued Accounting Pronouncements

See Note 3 to the Consolidated Financial Statements for a discussion of the effects of recently issued accounting guidance.

Off-Balance Sheet Arrangements

We do not have any off-balance-sheet arrangements that are expected to have a material effect on our financial condition, change in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources.

Qualitative and Quantitative Disclosures About Market Risk

Our primary market risk exposures are (1) commodity price risk; (2) interest rate risk; and (3) foreign currency exchange rate risk. Although we use derivative financial and commodity instruments to reduce market price risk associated with forecasted transactions, we do not use derivative financial and commodity instruments for speculative or trading purposes.

Commodity Price Risk

The risk associated with fluctuations in the prices we pay for LPG is principally a result of market forces reflecting changes in supply and demand for LPG and other energy commodities. Our profitability is sensitive to changes in LPG supply costs. Increases in supply costs are generally passed on to customers. We may not, however, always be able to pass through product cost increases fully or on a timely basis, particularly when product costs rise rapidly. In order to reduce the volatility of LPG market price risk, we use over-the-counter derivative commodity instruments and may from time to time enter into other derivative contracts to reduce market risk associated with a portion of our LPG purchases. Over-the-counter derivative commodity instruments used to economically hedge forecasted purchases of LPG are generally settled at expiration of the contract. Our natural gas and electricity marketing businesses also use natural gas and electricity futures and forward contracts to economically hedge market risk associated with fixed-price sales and purchase contracts.

Interest Rate Risk

We have both fixed-rate and variable-rate debt. Changes in interest rates impact the cash flows of variable-rate debt but generally do not impact their fair value. Conversely, changes in interest rates impact the fair value of fixed-rate debt but do not impact their cash flows.

Our variable-rate debt at September 30, 2019, includes short-term borrowings and the 2018 Credit Facilities Agreement variable-rate term loan. These debt agreements have interest rates that are generally indexed to short-term market interest rates. UGI International has entered into pay-fixed, receive-variable interest rate swaps that generally fix the underlying euribor interest rate on the 2018 Credit Facilities Agreement variable-rate term loan for a significant portion of its tenor. We have designated these interest rate swaps as cash flow hedges. At September 30, 2019, combined borrowings outstanding under variable-rate debt agreements, excluding the previously mentioned effectively fixed-rate term loan debt, totaled $210.9 million. Based upon average borrowings outstanding during Fiscal 2019 under variable-rate debt borrowings (excluding the effectively fixed-rate term loan debt), an increase in short-term interest rates of 100 basis points (1%) would have increased our Fiscal 2019 interest expense by approximately $0.5 million. The remainder of our debt outstanding is subject to fixed rates of interest. A 100 basis point increase in market interest rates would result in decreases in the fair value of this fixed-rate debt of approximately $10.8 million at September 30, 2019. A 100 basis point decrease in market interest rates would result in increases in the fair value of this fixed-rate debt of approximately $2.6 million at September 30, 2019.

Foreign Currency Exchange Rate Risk

Our primary currency exchange rate risk is associated with the U.S. dollar versus the euro and, to a lesser extent, the U.S. dollar versus the British pound sterling. The U.S. dollar value of our foreign currency denominated assets and liabilities will fluctuate with changes in the associated foreign currency exchange rates. From time to time, we use derivative instruments to hedge portions of our net investments in foreign subsidiaries. Gains or losses on these net investment hedges remain in AOCI until such foreign operations are sold or liquidated. With respect to our substantial net investments in foreign (non U.S. based) operations, a 10% decline in the value of the foreign currencies versus the U.S. dollar would reduce their aggregate net book value at September 30, 2019, by approximately $105 million, which amount would be reflected in other comprehensive income. In October 2018, in connection with entering into the 2018 Credit Facilities Agreement and the 3.25% Senior Notes, we designated the €300 million term loan borrowings under the 2018 Credit Facilities Agreement and the €350 million 3.25% Senior notes borrowings as net investment hedges.

In order to reduce the volatility in net income associated with our operations, principally as a result of changes in the U.S. dollar exchange rate between the euro and British pound sterling, we have entered into forward foreign currency exchange contracts. We layer in these foreign currency exchange contracts over a multi-year period to eventually equal approximately 90% of anticipated UGI International local currency earnings before income taxes.

Derivative Instrument Credit Risk

We are exposed to risk of loss in the event of nonperformance by our derivative instrument counterparties. Our derivative instrument counterparties principally comprise large energy companies and major U.S. and international financial institutions. We maintain credit policies with regard to our counterparties that we believe reduce overall credit risk. These policies include evaluating and monitoring our counterparties' financial condition, including their credit ratings, and entering into agreements with counterparties that govern credit limits or entering into netting agreements that allow for offsetting counterparty receivable and payable balances for certain financial transactions as deemed appropriate.

Certain of these derivative instrument agreements call for the posting of collateral by the counterparty or by the Company in the forms of letters of credit, parental guarantees or cash. At September 30, 2019 and 2018, the Company paid (received) cash collateral of $8.5 million and $(4.9) million, respectively. Additionally, our commodity exchange-traded futures contracts generally require cash deposits in margin accounts. At September 30, 2019, restricted cash in brokerage accounts was $23.8 million. Although we have concentrations of credit risk associated with derivative instruments, the maximum amount of loss, based upon the gross fair values of the derivative instruments, we would incur if these counterparties failed to perform according to the terms of their contracts was not material at September 30, 2019.

The following table summarizes the fair values of unsettled market risk sensitive derivative instrument assets (liabilities) held at September 30, 2019. The table also includes the changes in fair values of derivative instruments that would result if there were (1) a 10% adverse change in the market prices of LPG, gasoline, natural gas, electricity and electricity transmission congestion charges; (2) a 50 basis point adverse change in prevailing market interest rates; and (3) a 10% change in the value of the euro and the British pound sterling versus the U.S. dollar.

	Asset (Liability)	
(Millions of dollars)	Fair Value	Change in Fair Value
September 30, 2019		
Commodity price risk	$ (27.4)	$ (28.6)
Interest rate risk	$ (3.3)	$ (0.2)
Foreign currency exchange rate risk	$ 54.7	$ (47.9)