UGI ENERGY SERVICES, 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 and 2018

UGI ENERGY SERVICES, LLC AND SUBSIDIARIES

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UGI ENERGY SERVICES, LLC AND SUBSIDIARIES

GLOSSARY OF TERMS AND ABBREVIATIONS

Terms and abbreviations used in this document are defined below:

<u>UGI Energy Services and Related Entities</u>

AmeriGas - AmeriGas Propane, L.P., a wholly-owned subsidiary of UGI

CMG - Columbia Midstream Group, LLC

Company - UGI Energy Services, LLC and its consolidated subsidiaries collectively

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

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

ESFC - Energy Services Funding Corporation, a wholly owned subsidiary of Energy Services

Pennant - Pennant Midstream, LLC, a Delaware limited liability company

PennEast - PennEast Pipeline Company, LLC

UGI - UGI Corporation

UGI PennEast, LLC - A wholly owned subsidiary of Energy Services that holds a 20% membership interest in PennEast

UGI Utilities - UGI Utilities, Inc., a wholly owned subsidiary of UGI

UGID - UGI Development Company, a wholly owned subsidiary of Energy Services

<u>Other Terms and Abbreviations</u>

Adjusted LIBOR - A rate derived from LIBOR

AFUDC - Allowance for Funds Used During Construction

AOCI - Accumulated Other Comprehensive Income (loss)

ARO - Asset Retirement Obligations

ASC - Accounting Standards Codification

ASC 605 - ASC 605, “Revenue Recognition”

ASC 606 - ASC 606, “Revenue from Contracts with Customers”

ASU - Accounting Standards Update

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

CMG Acquisition - Acquisition of CMG and Columbia Pennant, LLC on August 1, 2019 pursuant to the CMG Acquisition Agreements

CMG Acquisition Agreements - Agreements related to the CMG Acquisition comprising (1) a purchase and sale agreement related to the CMG acquisition, dated July 2, 2019, by and among Columbia Midstream & Minerals Group, LLC, Energy Services, UGI and TransCanada PipeLine USA Ltd., and (2) a purchase and sale agreement related to the Colombia Pennant, LLC acquisition, dated July 2, 2019, by and among Columbia Midstream & Minerals Group, LLC, Energy Services, and TransCanada PipeLine USA Ltd.

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

Energy Services Credit Agreement - An unsecured revolving credit agreement entered into by Energy Services providing for borrowings up to $200 million, including a letter of credit subfacility of up to $50 million expiring March 2021

Energy Services Term Loan - A seven-year $700 million senior secured term loan agreement entered into by Energy Services on August 13, 2019, with a group of lenders

FASB - Financial Accounting Standards Board

FERC - Federal Energy Regulatory Commission

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

GAAP - U.S. generally accepted accounting principles

ICE - Intercontinental Exchange

LIBOR - London Inter-bank Offered Rate

LNG - Liquefied natural gas

MD&A - Management's Discussion and Analysis of Financial Condition and Results of Operations

NPNS - Normal purchase and normal sale

NYMEX - New York Mercantile Exchange

PADEP - Pennsylvania Department of Environmental Protection

PJM - PJM Interconnection, LLC

Receivables Facility - A receivables purchase facility of Energy Services with an issuer of receivables-backed commercial paper

SAR - Stock Appreciation Rights

SCAA - Storage Contract Administrative Agreements

Stock Unit - Unit awards that entitle the grantee to shares of UGI Common Stock or cash subject to service conditions

TCJA - The Tax Cuts and Jobs Act

TSR - Total Shareholder Return

UGI Performance Units - Unit awards that entitle the grantee to shares of UGI Common Stock or cash subject to service and market performance conditions

VIE - Variable Interest Entity

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Report of Independent Auditors

To the Member and Management of UGI Energy Services, LLC:

We have audited the accompanying consolidated financial statements of UGI Energy Services, LLC and subsidiaries, which comprise the consolidated balance sheets as of September 30, 2019 and 2018, and the related consolidated statements of income and comprehensive income, cash flows and changes in member's equity for the years then ended, 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 Energy Services, LLC and subsidiaries at September

30, 2019 and 2018, and the consolidated results of their operations and their cash flows for the years then ended in conformity with U.S. generally accepted accounting principles.

Ernst & Young LLP

December 17, 2019

UGI ENERGY SERVICES, LLC AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

(Thousands of dollars)

	September 30, 2019	September 30, 2018
ASSETS		
Current assets:		
Cash and cash equivalents	$ 25,893	$ 39,989
Restricted cash	33,922	7,800
Accounts receivable (less allowances for doubtful accounts of $1,173 and $1,082, respectively)	88,969	91,961
Accounts receivable - related parties	4,545	9,267
Inventories	22,668	24,840
Derivative instruments	3,583	6,496
Prepaid expenses and other current assets	12,842	17,674
Total current assets	192,422	198,027
Property, plant and equipment:		
Gross property, plant and equipment	1,971,495	1,195,045
Accumulated depreciation	(255,992)	(209,075)
Net property, plant and equipment	1,715,503	985,970
Goodwill	335,554	5,583
Intangible assets, net	268,540	12,996
Derivative instruments	1,903	529
Investments in equity method investees	178,897	74,814
Other assets	25,677	25,899
Total assets	$ 2,718,496	$ 1,303,818
LIABILITIES AND MEMBER'S EQUITY		
Current liabilities:		
Current maturities of long-term debt including capital leases	$ 7,135	$ 129
Short-term borrowings	91,400	2,000
Accounts payable	67,775	86,964
Accounts payable - related parties	13,729	3,371
Accrued income taxes	16,284	22,923
Derivative instruments	30,148	6,233
Other current liabilities	21,716	13,755
Total current liabilities	248,187	135,375
Long-term debt including capital leases	679,473	336
Deferred income taxes	145,197	146,879
Derivative instruments	17,185	8,535
Other noncurrent liabilities	36,217	8,707
Total liabilities	1,126,259	299,832
Commitments and contingencies (Note 11)		
Member's equity	1,592,237	1,003,986
Total liabilities and member's equity	$ 2,718,496	$ 1,303,818

See accompanying notes to consolidated financial statements.

UGI ENERGY SERVICES, LLC AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF INCOME AND COMPREHENSIVE INCOME
(Thousands of dollars)

	Year Ended September 30, 2019	Year Ended September 30, 2018
Revenues	$ 1,471,486	$ 1,372,539
Costs and expenses:		
Cost of sales	1,249,020	1,064,285
Operating and administrative expenses	112,218	91,346
Depreciation and amortization	50,531	42,544
Other operating income, net	(1,440)	(429)
	1,410,329	1,197,746
Operating income	61,157	174,793
Income from equity method investees	9,056	4,874
Other non-operating income (expense)	32	(1,179)
Interest expense	(9,011)	(2,439)
Income before income taxes	61,234	176,049
Income tax (expense) benefit	(14,580)	19,760
Net income	$ 46,654	$ 195,809
Other comprehensive loss, net of tax:		
Net losses on derivative instruments (net of tax of $804 and $0, respectively)	$ (1,977)	$ —
Reclassifications of net gains on derivative instruments (net of tax of $101 and $0, respectively)	(248)	—
Other comprehensive loss, net of tax	(2,225)	—
Comprehensive income	$ 44,429	$ 195,809

See accompanying notes to consolidated financial statements.

UGI ENERGY SERVICES, LLC AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

(Thousands of dollars)

	Year Ended September 30, 2019	Year Ended September 30, 2018
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net income	$ 46,654	$ 195,809
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	50,531	42,544
Deferred income taxes, net	(637)	(46,499)
Changes in unrealized gains and losses on derivative instruments	30,995	1,444
Income from equity method investees	(9,056)	(4,874)
Other, net	675	(6,599)
Net change in:		
Accounts receivable	18,708	(31,746)
Inventories	2,172	(2,297)
Accounts payable	(5,644)	25,855
Prepaid or accrued income taxes	(4,968)	13,537
Other current assets	4,254	(1,743)
Other current liabilities	976	6,799
Net cash provided by operating activities	134,660	192,230
CASH FLOWS FROM INVESTING ACTIVITIES:		
Expenditures for property, plant and equipment	(121,095)	(35,292)
Acquisitions of businesses and assets, net of cash acquired	(1,319,420)	(70,265)
Increase in equity method investments	(4,868)	(16,712)
Other	501	288
Net cash used by investing activities	(1,444,882)	(121,981)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Receivables Facility net borrowings (repayments)	44,400	(37,000)
Increase in short-term borrowings	45,000	—
Distributions	(557,000)	(13,600)
Issuances of debt, net of discount and issuance costs	687,733	—
Capital contributions	1,104,000	—
Repayments of debt	(1,885)	(129)
Net cash provided (used) by financing activities	1,322,248	(50,729)
Cash, cash equivalents and restricted cash increase	$ 12,026	$ 19,520
CASH, CASH EQUIVALENTS AND RESTRICTED CASH:		
End of year	$ 59,815	$ 47,789
Beginning of year	47,789	28,269
Cash, cash equivalents, and restricted cash increase	$ 12,026	$ 19,520
SUPPLEMENTAL CASH FLOW INFORMATION:		
Cash paid for:		
Interest	$ 7,891	$ 2,449
Income taxes	$ 7,221	$ 13,255

See accompanying notes to consolidated financial statements.

UGI ENERGY SERVICES, LLC AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CHANGES IN MEMBER'S EQUITY

(Thousands of dollars)

	Member's Equity
Balance at September 30, 2017	$ 821,777
Net income	195,809
Cash distributions	(13,600)
Balance at September 30, 2018	$ 1,003,986
Net income	46,654
Capital contributions	1,104,000
Cash distributions	(557,000)
Cumulative effect of change in accounting principle - ASC 606	(3,178)
Changes in AOCI balance (Note 14)	(2,225)
Balance at September 30, 2019	$ 1,592,237

See accompanying notes to consolidated financial statements.

Note 1 — Nature of Operations

The consolidated financial statements reflect the consolidated financial position and results of operations of Energy Services and its subsidiaries. Energy Services is a Pennsylvania limited liability company and a wholly owned subsidiary of UGI Enterprises. Enterprises is a wholly owned subsidiary of UGI. Energy Services is a sole member limited liability company with Enterprises owning 100% of the membership interest.

Energy Services conducts, directly and through subsidiaries, energy marketing, midstream transmission, LNG, storage, natural gas gathering, natural gas production, electricity generation and energy services businesses primarily in the Mid-Atlantic region of the U.S. Energy Services' wholly owned subsidiary, UGID, owns all or a portion of electricity generation facilities principally located in Pennsylvania. Energy Services and its subsidiaries' storage, LNG and portions of its midstream transmission operations are subject to regulation by the FERC.

On August 1, 2019, Energy Services completed the CMG acquisition in which it acquired all of the equity interests in CMG and CMG's approximate 47% interest in Pennant. CMG and its direct and indirect subsidiaries provide natural gas gathering and processing services through five discrete gathering systems located in western Pennsylvania, eastern Ohio and the panhandle of West Virginia (see Note 5).

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 Consolidated Financial Statements have been reclassified to conform to the current year presentation and 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 Consolidated Financial Statements have been reclassified to conform to the Fiscal 2019 presentation.

Principles of Consolidation. The consolidated financial statements include all the accounts of Energy Services, its majority-owned subsidiaries and VIEs, if any, where it has concluded that it is the primary beneficiary. A VIE is defined as a legal entity that has equity investors that do not have sufficient equity at risk for the entity to support its activities without additional subordinated financial support or, as a group, the holders of the equity at risk lack (i) the power to direct the entity's activities or (ii) the obligation to absorb the expected losses or the right to receive the expected residual returns of the entity. A VIE is required to be consolidated by a company if that company is the primary beneficiary. The primary beneficiary is the entity that has a controlling financial interest in the VIE such that it has the power to direct the activities of the VIE that most significantly impact the VIE's financial performance.

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 (see Note 16). Energy Services' wholly owned, special purpose subsidiary, ESFC, is consolidated for financial statement purposes (see Note 6). Undivided interests in natural gas production assets and an electricity generation facility are consolidated on a proportionate basis.

Effects of Regulation. A subsidiary of the Company accounts for the financial effects of regulation in accordance with the FASB's guidance in ASC 980, "Regulated Operations." In accordance with this guidance, incurred costs and estimated future expenditures that would otherwise be charged to expense are capitalized and recorded as regulatory assets when it is probable that the incurred costs or estimated future expenditures will be recovered in rates in the future. Similarly, we recognize regulatory liabilities when it is probable that regulators will require customer refunds through future rates or when revenue is collected from customers for expenditures that have not yet been incurred. Generally, regulatory assets and liabilities are amortized into expense and income over the periods authorized by the regulator. At September 30, 2019 and 2018, regulatory assets of $2,089 and $2,173 were included in "Other assets" on the Consolidated Balance Sheets. There were no regulatory liabilities recorded at September 30, 2019 and 2018.

Fair Value Measurements. We apply 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 or if 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 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 are included in cash flows from operating 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 13.

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. The Company recorded a $3,178 reduction to opening Member's Equity as of October 1, 2018, to reflect the cumulative effect of ASC 606 on certain contracts not complete as of the date of adoption. 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.

(Thousands of dollars, except where indicated otherwise)

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, principally sales and use taxes, are not included in revenues. Gross receipts taxes are presented on a gross basis. The Company has elected to use the practical expedient to expense the costs to obtain contracts when incurred for contracts that have a term less than one year. The costs incurred to obtain contracts that have durations of longer than one year are 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.

Income Taxes. We join with UGI and its subsidiaries in filing a consolidated federal income tax return. In Fiscal 2019 and Fiscal 2018, we joined with UGI as disregarded entities in filing state tax returns. We are charged or credited for our share of current taxes resulting from the effects of our transactions in the UGI consolidated federal income tax return and combined state income tax returns including giving effect to intercompany transactions. The result of this allocation is consistent with income taxes calculated on a separate return basis. Accordingly, income tax-related payments and accrued income tax balances principally reflect transactions with UGI resulting from this allocation. We record interest on tax deficiencies and income tax penalties in "Income tax (expense) benefit" on the Consolidated Statements of Income and Comprehensive Income.

The TCJA was enacted on December 22, 2017, and includes a broad range of tax reform provisions affecting the Company, including, among other things, changes in the U.S. corporate income tax rate. The TCJA reduces the corporate income tax rate from 35% to 21% for tax years beginning after December 31, 2017. We were subject to a 24.5% blended U.S. federal income tax rate for Fiscal 2018 because our fiscal year contained the effective date of the rate change from 35% to 21%. In accordance with GAAP, at the date of enactment of the TCJA our federal deferred income taxes were remeasured based upon the new corporate income tax rate. Existing deferred income tax assets or liabilities were adjusted for the reduction in the corporate income tax rate and the adjustment recorded in the provision for income taxes. For additional information regarding the impact of the TCJA, see Note 7.

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.

The following table provides a reconciliation of the total cash, cash equivalents and restricted cash reported on the 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
Cash and cash equivalents	$ 25,893	$ 39,989	$ 21,843
Restricted cash	33,922	7,800	6,426
Cash, cash equivalents and restricted cash	$ 59,815	$ 47,789	$ 28,269

Inventories. Inventories principally comprise natural gas, liquefied natural gas and, to a lesser extent, propane. Our inventories are stated at the lower of cost or net realizable value. We determine cost using an average cost method, which has been consistently applied in Fiscal 2019 and Fiscal 2018.

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, and for certain operations subject to cost-of-service rate regulation, AFUDC. 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 non-utility 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 and Comprehensive Income.

(Thousands of dollars, except where indicated otherwise)

We record depreciation expense on plant and equipment on a straight-line basis over estimated economic useful lives. Our natural gas production assets are depreciated on the units of production method. 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	30	40
Natural gas and propane storage and distribution equipment	15	40
Electricity generation facilities	25	40
Pipeline and related assets	25	40
Transportation equipment and office furniture and fixtures	3	7
Computer software	3	7

We classify amortization of computer software and related IT system installation costs included in property, plant and equipment as depreciation expense. Depreciation expense totaled $46,778 and $40,316 in Fiscal 2019 and Fiscal 2018, respectively. No depreciation expense is included in Cost of sales on the Consolidated Statements of Income and Comprehensive Income.

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. Fair values of assets acquired and liabilities assumed are based upon available information. Estimating fair values is generally subject to significant judgment and assumptions and most commonly impacts property, plant and equipment and intangible assets, including those with indefinite lives. Generally, we have, under certain circumstances, up to one year from the acquisition date to obtain information and finalize the purchase price allocation.

Goodwill and Intangible Assets. We amortize intangible assets over their estimated useful lives unless we determine their lives to be indefinite. Estimated useful lives of definite-lived intangible assets, primarily consisting of customer relationships (other than customer relationships acquired in the CMG Acquisition), generally do not exceed 15 years. The estimated useful lives of customer relationships acquired in the CMG Acquisition are 35 years (see Note 5).

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. There were no such indicators identified in Fiscal 2019 or Fiscal 2018. Other than amortization of customer contract fair value, no amortization expense of intangible assets is included in "Cost of sales" on the Consolidated Statements of Income and Comprehensive Income (see Note 10).

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 may 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 may bypass the qualitative assessment and perform the quantitative assessment by comparing the fair values of the reporting units with their carrying amounts, 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 for each reporting unit. 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 a 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. For further information on our goodwill and intangible assets, see Note 10.

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 provisions for impairments of long-lived assets were recorded during Fiscal 2019 or Fiscal 2018.

Debt Issuance Costs. We defer and amortize debt issuance costs and debt premiums and discounts over the expected lives of the respective debt issues considering maturity dates. Deferred debt issuance costs associated with long-term debt are reflected as a direct deduction from the carrying amount of such debt. Deferred debt issuance costs associated with revolving credit facilities reflected as short-term borrowings are classified as "Other assets" on our Consolidated Balance Sheets. Amortization of debt issuance costs is reported as interest expense. Debt issuance costs associated with long-term debt were $12,267 at September 30, 2019. Debt issuance costs associated with revolving credit facilities at September 30, 2019 and 2018 were not material.

Equity-Based Compensation. Under UGI Corporation's 2013 Omnibus Incentive Compensation Plan (the "2013 OICP"), certain key employees of Energy Services may be granted stock options to acquire shares of UGI Common Stock, SARs, UGI Units (comprising "Stock Units" and "UGI Performance Units") and other equity-based awards. The exercise price for UGI stock options may not be less than the fair market value on the grant date. Awards granted under the 2013 OICP may vest immediately or ratably over a period of years (generally three-year periods), and stock options for UGI Common Stock can be exercised no later than ten years from the grant date. In addition, the 2013 OICP provides that awards of UGI Units may also provide for the crediting of dividend equivalents to participants' accounts. Except in the event of retirement, death or disability, each grant, unless paid, will terminate when the participant ceases to be employed. There are certain change of control and retirement eligibility conditions that, if met, generally result in accelerated vesting or elimination of further service requirements.

UGI Stock Unit and UGI Performance Unit awards entitle the grantee to shares of UGI Common Stock or cash once the service condition is met and, with respect to UGI Performance Unit awards, subject to market performance conditions. UGI Performance Unit grant recipients are awarded a target number of Performance Units. With respect to Performance Units awards, the actual number of UGI shares actually issued (or their cash equivalent) at the end of the performance period and the actual amount of dividend equivalents paid, may range from 0% to 200% of the target award based on UGI's TSR percentile rank relative to the Russell Midcap Utility Index, excluding telecommunication companies. Dividend equivalents are paid in cash only on UGI Performance Units that eventually vest.

We use a Black-Scholes option-pricing model to estimate the fair value of UGI stock options. We use a Monte Carlo valuation approach to estimate the fair value of UGI Performance Unit awards. We recorded total net pre-tax equity-based compensation expense associated with both UGI Units and UGI stock options of $1,138 ($815 after-tax) and $1,679 ($1,141 after-tax) during Fiscal 2019 and Fiscal 2018, respectively.

Asset Retirement Obligation. The Company accounts for AROs in accordance with GAAP which requires that an ARO be recorded when a legal obligation to retire an asset exists, and such obligation can be reasonably estimated. The Company has determined that it has legal obligations associated with certain of its property, plant and equipment primarily those associated with its natural gas gathering assets and its electric generation facilities, principally its interest in the Conemaugh coal-fired electricity generating facility. The obligations associated with its natural gas gathering assets relate primarily to purging and sealing pipelines if abandoned and, in certain instances, the removal of such facilities. The obligations associated with its electric generation facilities relate primarily to its share of the remediation and decommissioning of the Conemaugh Power Station in accordance with PADEP requirements. The Company's share of such liability was $3,779 and $3,568 at September 30, 2019 and 2018, respectively.

With respect to the Company's natural gas gathering and certain of its other assets, AROs were not recorded because the Company plans to operate and maintain these natural gas gathering and other facilities as long as supply and demand for natural gas and natural gas liquids exists, which the Company expects for the foreseeable future. Therefore, the Company believes that these assets have indeterminate lives, and no asset retirement obligation has been recorded as of September 30, 2019. The Company continues to evaluate its asset retirement obligations and future developments that could impact its AROs.

Subsequent Events. Management has evaluated the impact of subsequent events through December 17, 2019, the date these financial statements were issued, and the effects of such evaluation have been reflected in the financial statements and related disclosures.

Note 3 — Accounting Changes

New Accounting Standards Adopted Effective in Fiscal 2019

Revenue Recognition. Effective October 1, 2018, the Company adopted new accounting guidance regarding revenue recognition. See Note 2 and Note 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 after 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 will be 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.

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 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 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 $20,000 to $30,000 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, 2021 (Fiscal 2022). 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

Energy Services recognizes revenue when control of promised goods or services is transferred to its customers in an amount that reflects the consideration to which we expect to be entitled in exchange for those goods or services. Energy Services generally has the right to consideration from a customer in an amount that corresponds directly with the value to the customer for performance completed to date. As such, we have elected to recognize revenue in the amount to which we have a right to invoice except in the case of certain of our peaking contracts for which we recognize revenue on a straight-line basis over the term of the contract, consistent with when the performance obligations are satisfied by Energy Services.

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 generally one year or less, the Energy Services has elected to apply the significant financing component practical expedient and no amount of consideration has been allocated as a financing component.

The Energy Services revenues from contracts with customers are discussed below.

Energy Marketing. Energy Services operates energy marketing businesses that sell energy commodities, principally natural gas and electricity, to residential, commercial, industrial and wholesale customers.

Energy Services markets 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 is 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.

Midstream. Energy Services provides natural gas pipeline transportation, natural gas gathering and natural gas underground storage services, which generally contain a performance obligation for Energy Services to have availability to transport or store a product. Additionally, Energy Services provides stand-ready services to sell supplemental energy products and related services, primarily LNG and propane-air mixtures during periods of high demand that typically result from cold weather. Energy Services also sells LNG to end-user customers for use by trucks, drilling rigs and other motored vehicles and equipment, and facilities that are located off the natural gas grid.

Contracts for natural gas transportation and gathering services are typically long-term contracts with terms of up to 30 years, while contracts for storage are typically for one-year or multiple storage season periods. Contracts to provide natural gas during periods of high demand have terms of up to 15 years. Contracts to sell LNG for trucks, drilling rigs and other motor vehicles and facilities are typically short-term (less than one year). Depending on the type of services provided or goods sold, midstream revenues may consist of demand rates, commodity rates, and transportation rates and may include other fees for ancillary services. Pipeline transportation, natural gas gathering and storage services provided and services to stand ready to sell supplemental energy products and services each are considered to have a single performance obligation satisfied through the passage of time ratably based upon providing a stand-ready service on a monthly basis. Contracts to sell LNG to end-user customers contain performance obligations to deliver LNG over the term of the contract and revenue is recognized at a point in time when the control of the energy products is transferred to the customer. The price in the contract corresponds to our efforts to satisfy the performance obligation and reflects the consideration we expect to receive for the satisfied performance obligation, and, therefore, the revenue is recognized based on the volume delivered and the price within the contract. In cases where shipping and handling occurs prior to the LNG being delivered to the customer's storage vessel, we have elected to treat this as a cost of fulfillment and not a separate performance obligation. Revenues are typically billed and payment received monthly. Advance fees received from customers for stand-ready services are deferred as contract liabilities and revenue is recognized ratably over time as the performance obligation is satisfied over a period less than one year.

A subsidiary of Energy Services provides natural gas transportation services to customers who are generally billed at standard regulated tariff rates approved by FERC through a ratemaking process. Tariff rates include a component that provides for a reasonable opportunity to recover operating costs and expenses and to earn a return on net investment.

Electricity Generation. UGID sells power generated from electricity generation assets in the wholesale electricity markets administered by PJM regional transmission organization. Power contracts with PJM consist of the sale of power, capacity and ancillary services, all of which are considered a bundle of various services. Performance obligations are satisfied over time, generally on a daily basis, as electricity is delivered to and simultaneously consumed by the customer. As such, UGID has elected to recognize revenue in the amount to which we have a right to invoice which is based on market prices at the time of the delivery of the electricity to the customers.

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. There were no contract assets at September 30, 2019. Substantially all of our receivables are unconditional rights to consideration and are included in “Accounts receivable.” Amounts billed are generally due within the following month.

(Thousands of dollars, except where indicated otherwise)

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 $4,879 and $5,003 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 $5,003.

Revenue Disaggregation

The following table presents our disaggregated revenues during Fiscal 2019:

	2019
Revenues from contracts with customers:	
Energy Marketing	$ 1,206,643
Midstream:	
Pipeline	87,946
Peaking	114,364
Other	8,426
Electricity Generation	43,244
Total revenues from contracts with customers	1,460,623
Other revenues (a)	10,863
Total revenues	$ 1,471,486

(a) Represents revenues from certain gathering assets and gains and losses on commodity derivative instruments not associated with current-period transactions that are not within the scope of ASC 606 and are accounted for in accordance with other GAAP.

Remaining Performance Obligations

Energy Services has elected to use practical expedients as allowed in ASC 606 to exclude disclosures related to the aggregate amount of the transaction price allocated to certain 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. Certain contracts with customers at Energy Services contain minimum future performance obligations through 2047. At September 30, 2019, Energy Services expects to record approximately $2.0 billion of revenues, related to the minimum future performance obligations over the remaining terms of the related contracts.

Note 5 — Acquisitions

CMG Acquisition

On August 1, 2019, Energy Services completed the CMG Acquisition in which Energy Services acquired all of the equity interests in CMG and CMG’s approximate 47% interest in Pennant, for total cash consideration of $1,284,391, subject to final working capital and other adjustments. The CMG Acquisition was consummated pursuant to the CMG Acquisition Agreements. CMG and Pennant provide natural gas gathering and processing services through five discrete systems located in western Pennsylvania, eastern Ohio and the panhandle of West Virginia. The CMG Acquisition is consistent with our growth strategies, including expanding our midstream natural gas gathering and processing assets within the Marcellus and Utica production regions. The CMG Acquisition was funded with cash from borrowings under the Energy Services Term Loan (See Note 6), capital contributions and cash on hand.

The Company has accounted for the CMG Acquisition using the acquisition method. At September 30, 2019, the allocation of the purchase price is substantially complete but remains preliminary pending the completion of our third-party valuation report and with regard to the identification and resolution of certain pre-acquisition contingencies and disputes. These amounts are preliminary pending the receipt of additional information. The purchase price allocation will be finalized once these items have been resolved.

(Thousands of dollars, except where indicated otherwise)

Accordingly, the fair value estimates presented below relating to these items are subject to change within the measurement period not to exceed one year from the date of acquisition.

The components of the preliminary CMG purchase price allocations are as follows:

Assets acquired:		
Cash	$	258
Accounts receivable		11,314
Prepaid expenses and other current assets		1,095
Property, plant and equipment		613,212
Investment in Pennant		88,000
Intangible assets (a)		250,000
Total assets acquired	$	963,879
Liabilities assumed:		
Accounts payable	$	3,275
Other noncurrent liabilities		133
Total liabilities assumed	$	3,408
Goodwill		323,920
Net consideration transferred (including preliminary working capital adjustments)	$	1,284,391

(a) Represents customer relationships having an average amortization period of 35 years.

We allocated the purchase price of the acquisition to identifiable intangible assets and property, plant and equipment based on estimated fair values 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; and

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

The excess of the purchase price for the CMG Acquisition over the preliminary fair values of the assets acquired and liabilities assumed has been reflected as goodwill and results principally from anticipated future capital investment opportunities and value creation resulting from new natural gas processing assets in the Marcellus and Utica production regions. The goodwill recognized from the CMG Acquisition is deductible for income tax purposes.

Energy Services recognized $15,295 of direct transaction-related costs associated with the CMG Acquisition during Fiscal 2019, which costs are reflected in "Operating and administrative expenses" on the Consolidated Statements of Income and Comprehensive Income.

Acquisitions of Assets and Other Businesses

During Fiscal 2019, Energy Services acquired 21 miles of natural gas gathering lines and related dehydration and compression equipment located in northern Pennsylvania in an asset acquisition for cash consideration of $20,000. Also during Fiscal 2019, Energy Services acquired all rights, title and interests in the retail natural gas marketing business of South Jersey Energy Company including its wholly owned subsidiary, Open Flow Energy, in a business combination for $15,000. This was accounted for under the acquisition method and the assets acquired and liabilities assumed were recognized and measured at the acquisition date at fair value.

During Fiscal 2018, Energy Services acquired (1) 60 miles of natural gas gathering lines and related dehydration and compression equipment, and a smaller natural gas gathering system, both located in northern Pennsylvania and (2) a 44-megawatt, natural gasfired peaking turbine located on its Hunlock Station site in northeast Pennsylvania, for total cash consideration of $70,265. These transactions were accounted for as asset acquisitions.

Note 6 — Debt

Energy Services Term Loan. On August 13, 2019, Energy Services entered into a seven-year $700,000 variable-rate senior secured term loan agreement with a group of lenders. The Energy Services Term Loan is payable in equal quarterly installments of $1,750, commencing in September 2019, with the balance of the principal being due and payable in full at maturity. Under certain circumstances, Energy Services is required to make additional principal payments if the consolidated total leverage ratio, as defined, is greater than defined thresholds. Borrowings under the Energy Services Term Loan bear interest at rates per annum comprising the aggregate of the applicable margin and, subject to our election, either (1) the associated prime rate or (2) an adjusted LIBOR rate. The initial margin on term loan borrowings is 3.75%. In August 2019, Energy Services entered into a pay-fixed, receive-variable interest rate swap agreement to fix the underlying LIBOR rate on a significant portion of the outstanding principal on Energy Services Term Loan borrowings at 1.55% through July 2024. The effective interest rate on the Energy Services Term Loan at September 30, 2019, was 5.79%. The Energy Services Term Loan is collateralized by substantially all of the assets of Energy Services, subject to certain exceptions and carveouts including, but not limited to, accounts receivable and certain real property. Proceeds from borrowings under the Energy Services Term Loan, net of discount and debt issuance cost of $12,267, were used to finance a portion of the CMG Acquisition and for general corporate purposes.

Scheduled principal repayments of long-term debt and capital leases for each of the next five fiscal years ending September 30 are as follows: Fiscal 2020 - $7,135; Fiscal 2021 - $7,141; Fiscal 2022 - $7,060; Fiscal 2023 - $7,000; Fiscal 2024 - $7,000.

Energy Services Credit Agreement. The Energy Services Credit Agreement, as amended on August 13, 2019, provides for borrowings up to $200,000, including a $50,000 sublimit for letters of credit and expires in March 2021. The Energy Services Credit Agreement can be used for general corporate purposes of Energy Services and its subsidiaries. On August 13, 2019, the Energy Services Credit Agreement was amended to decrease its borrowing capacity from $240,000 to $200,000.

Borrowings bear interest at either (i) the Alternate Base Rate plus a margin or (ii) Adjusted LIBOR plus a margin. The Alternate Base Rate, as defined, is the highest of (a) the prime rate, (b) the federal funds rate plus 0.50%, and (c) Adjusted LIBOR plus 1.00%. The margin on such borrowings ranges from 0.75% to 2.25%. There were $45,000 in borrowings outstanding and the weighted average interest rate was 6.25% as of September 30, 2019. There were no borrowings outstanding under the Energy Services Credit Agreement at September 30, 2018. The Energy Services Credit Agreement is guaranteed by certain subsidiaries of Energy Services. This credit agreement is collateralized by substantially all of the assets of Energy Services, subject to certain exceptions and carveouts including, but not limited to, accounts receivable and certain real property.

Restrictive Covenants. The Energy Services Term Loan requires that Energy Services and subsidiaries maintain a minimum ratio of consolidated EBITDA to debt service, as defined, of 1.10 to 1.00, and not exceed a ratio of total indebtedness to EBITDA, as defined, of 3.50 to 1.00. During an Acquisition Period, as defined in the agreement, the maximum ratio of total indebtedness to EBITDA is increased to 4.00 to 1.00. As of September 30, 2019, Energy Services was within an Acquisition Period as defined in the agreement.

The Energy Services Credit Agreement requires that Energy Services, LLC and subsidiaries not exceed a ratio of total indebtedness to EBITDA, as defined, of 3.50 to 1.00, and maintain a minimum ratio of EBITDA to interest expense, as defined, of 3.50 to 1.00. During an Acquisition Period, as defined in the agreement, the maximum ratio of total indebtedness to EBITDA is increased to 4.00 to 1.00. As of September 30, 2019, Energy Services was within an Acquisition Period as defined in the agreement.

Accounts Receivable Securitization Facility. Energy Services has a Receivables Facility with an issuer of receivables-backed commercial paper currently scheduled to expire in October 2020. The Receivables Facility, as amended, provides Energy Services with the ability to borrow up to $150,000 of eligible receivables during the period November to April, and up to $75,000 of eligible receivables during the period May to October. Energy Services uses the Receivables Facility to fund working capital, margin calls under commodity futures contracts, capital expenditures, dividends and for general corporate purposes.

Under the Receivables Facility, Energy Services transfers, on an ongoing basis and without recourse, its trade accounts receivable to its wholly owned, special purpose subsidiary, ESFC, which is consolidated for financial statement purposes. ESFC, in turn, has sold and, subject to certain conditions, may from time to time sell, an undivided interest in some or all of the receivables to a major bank. Amounts sold to the bank are reflected as "Short-term borrowings" on the Consolidated Balance Sheets. ESFC was created and has been structured to isolate its assets from creditors of Energy Services and its affiliates, including UGI. Trade receivables sold to the bank remain on the Company's balance sheet and the Company reflects a liability equal to the amount advanced by the bank. The Company records interest expense on amounts owed to the bank. Energy Services continues to service, administer and collect trade receivables on behalf of the bank, as applicable. Losses on sales of receivables to the bank during Fiscal 2019 and Fiscal 2018, which amounts are included in "Interest expense" on the Consolidated Statements of Income and Comprehensive Income, were not material.

(Thousands of dollars, except where indicated otherwise)

Information regarding the amounts of trade receivables transferred to ESFC and the amounts sold to the bank during Fiscal 2019 and Fiscal 2018, as well as the balance of ESFC trade receivables at September 30, 2019 and 2018 are as follows:

	2019	2018
Trade receivables transferred to ESFC during the year	$ 1,372,652	$ 1,279,543
ESFC trade receivables sold to the bank during the year	$ 179,000	$ 193,000
ESFC trade receivables - end of year (a)	$ 54,479	$ 64,963

(a) At September 30, 2019 and 2018, the amounts of ESFC trade receivables sold to the bank were $46,400 and $2,000, respectively, and are reflected as "Short-term borrowings" on the Consolidated Balance Sheets.

Note 7 — Income Taxes

The provisions for income taxes consist of the following:

	2019	2018
Current expense:		
Federal	$ 12,642	$ 12,973
State	2,575	13,766
Total current expense	15,217	26,739
Deferred expense (benefit):		
Federal	(1,299)	(49,191)
State	662	2,692
Total deferred benefit	(637)	(46,499)
Total income tax expense (benefit)	$ 14,580	$ (19,760)

A reconciliation from the statutory federal tax rate to our effective tax rate is as follows:

	2019	2018
Statutory federal tax rate	21.0%	24.5 %
Difference in tax rate due to:		
Effect of tax rate changes - TCJA	—	(41.5)
State income taxes, net of federal benefit	4.2	7.0
Allowance for funds used during construction	(1.5)	(0.4)
Other, net	0.1	(0.8)
Effective tax rate	23.8%	(11.2)%

On December 22, 2017, the TCJA was signed into law. The most significant change impacting the Company resulting from the law was the reduction of the U.S. federal income tax rate from 35% to 21% effective January 1, 2018. 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. As a result of the TCJA, we reduced our net deferred income tax liabilities by $69,393 due to the remeasuring of our existing federal deferred income tax assets and liabilities as of the date of the enactment.

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 Fiscal 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 future accounting guidance if and when issued. We adjusted provisional amounts as further information became available and as we refined our calculations. As permitted by SEC Staff Bulletin No. 118, these adjustments occurred during the reasonable "measurement period" defined as twelve months from the date of enactment. During Fiscal 2019, adjustments to provisional amounts recorded in prior periods were not material.

(Thousands of dollars, except where indicated otherwise)

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

	2019	2018
Gross deferred tax liabilities:		
Excess book basis over tax basis of property, plant and equipment	$ 162,567	$ 153,945
Allowance for funds used during construction	5,980	4,311
Other	489	702
Total gross deferred tax liabilities	169,036	158,958
Gross deferred tax assets:		
Deferred revenue	(2,627)	(1,532)
Employee-related benefits	(1,017)	(1,023)
State net operating loss carryforwards	(3,164)	(3,043)
Inventory capitalization	(4,378)	(2,923)
Derivative financial instruments	(11,889)	(2,047)
Other	(882)	(1,620)
Total gross deferred tax assets	(23,957)	(12,188)
Net deferred tax liabilities	$ 145,079	$ 146,770

We join with UGI and its subsidiaries in filing a consolidated federal income tax return. We are charged or credited for our share of current taxes resulting from the effects of our transactions in the UGI consolidated federal income tax return including giving effect to intercompany transactions. UGI's federal income tax returns are settled through the tax year 2015.

We file separate company income tax returns in a number of states but are subject to state income tax principally in Pennsylvania. Pennsylvania income tax returns are generally subject to examination for a period of three years after the filing of the respective returns.

At September 30, 2019, certain wholly-owned subsidiaries have Pennsylvania net operating losses of $40,091, with associated deferred tax assets recorded of $3,164, which expire through 2039.

For Fiscal 2019 and 2018, interest income or expense recognized in "Income tax (expense) benefit" on the Consolidated Statements of Income and Comprehensive Income was not material.

At September 30, 2019 and 2018, unrecognized income tax benefits were not material.

Note 8 — Employee Retirement Plans

Defined Contribution Plan. UGI Utilities sponsors a 401(k) savings plan for eligible employees of UGI and certain of UGI's domestic subsidiaries including Energy Services and its subsidiaries. Generally, participants in the plan may contribute a portion of their compensation on either a before-tax basis, or on both a before-tax and after-tax basis. The savings plan also provides for employer matching contributions at various rates. The cost of benefits under the savings plan during Fiscal 2019 and Fiscal 2018 totaled $1,900 and $1,451, respectively.

Defined Benefit Pension Plan. Certain employees of the Company participate in a defined benefit pension plan sponsored by UGI Utilities. Benefits are generally based upon final average pay and years of service. Total costs associated with benefits for the Company's employees that participate in this plan during Fiscal 2019 and Fiscal 2018 were not material.

(Thousands of dollars, except where indicated otherwise)

Note 9 — Property, Plant and Equipment

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

	2019	2018
Land	$ 20,362	$ 14,306
Buildings and improvements	68,216	13,256
Natural gas and propane storage and distribution facilities	397,471	294,189
Electricity generation assets	306,508	320,068
Pipeline and related assets	1,033,664	473,507
Other	50,323	61,243
Construction in process	94,951	18,476
Gross property, plant and equipment	$ 1,971,495	$ 1,195,045

The increase in the gross carrying amount of property, plant and equipment in Fiscal 2019 is principally due to acquisitions (See Note 5).

Note 10 — Goodwill and Intangible Assets

Changes in the carrying amount of goodwill are as follows:

Balance at September 30, 2017	$ 5,583
Balance at September 30, 2018	$ 5,583
Acquisitions (Note 5)	329,971
Balance at September 30, 2019	$ 335,554

Intangible assets comprise the following at September 30:

	2019	2018
Land development rights	$ 13,401	$ 13,401
Customer relationships	269,867	11,203
Accumulated amortization	(14,744)	(11,754)
	268,524	12,850
Customer contracts	16	146
Intangible assets, net	$ 268,540	$ 12,996

The increase in the gross carrying amount of intangible assets in Fiscal 2019 is due to acquisitions as further described in Note 5. We are amortizing land development rights associated with our landfill gas electricity generation facility over a period of approximately 16 years and customer relationship intangibles (other than customer relationships acquired in the CMG Acquisition) over a period not to exceed 15 years. Customer relationship intangibles acquired in the CMG Acquisition are amortized over 35 years. Amortization expense of land development rights and customer relationship intangible assets for Fiscal 2019 and Fiscal 2018 was $2,990 and $1,583, respectively. Estimated amortization of these intangible assets is approximately $9,300 during each of the next five fiscal years.

Note 11 — Commitments and Contingencies

We lease various buildings and computer and office equipment under operating leases. Certain of our leases contain renewal and purchase options and also contain escalation clauses. Our aggregate rental expense for such leases was $3,797 and $1,272 during Fiscal 2019 and Fiscal 2018, respectively.

(Thousands of dollars, except where indicated otherwise)

Minimum future payments under operating leases that have initial or remaining noncancelable terms in excess of one year are as follows: Fiscal 2020 - $3,249; Fiscal 2021 - $3,150; Fiscal 2022 - $3,005; Fiscal 2023 - $2,987; Fiscal 2024 - $2,954; and $37,905 thereafter.

There are currently no pending claims or legal actions that could have a material adverse effect on our financial position or results of operations.

Note 12 — Fair Value Measurements

Derivative 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, as of September 30, 2019 and 2018:

	Asset (Liability)			
	Level 1	Level 2	Level 3	Total
September 30, 2019				
Derivative instruments:				
Assets:				
Commodity contracts	$ 20,007	$ 9,958	$ —	$ 29,965
Liabilities:				
Commodity contracts	$ (56,725)	$ (11,957)	$ —	$ (68,682)
Interest rate contracts	$ —	$ (3,130)	$ —	$ (3,130)
September 30, 2018				
Derivative instruments:				
Assets:				
Commodity contracts	$ 20,868	$ 10,169	$ —	$ 31,037
Liabilities:				
Commodity contracts	$ (29,489)	$ (9,291)	$ —	$ (38,780)

The fair values of our Level 1 exchange-traded commodity futures and 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 certain non-exchange traded 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.

Note 13 — Derivative Instruments & 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; and (2) interest 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 relating to fixed-price sales contracts for natural gas and electricity, the Company enters into NYMEX and over-the-counter natural gas futures and options contracts, ICE natural gas basis swap contracts, and electricity futures and forward physical contracts. The Company also uses NYMEX and over the counter electricity futures contracts to economically hedge the price of a portion of its anticipated future sales of electricity from its electric generation facilities. In addition, the Company uses NYMEX futures and options contracts to economically hedge the gross margin associated with the purchase and anticipated later near-term sale of natural gas or propane.

Interest Rate Risk

As more fully described in Note 6, during Fiscal 2019 Energy Services entered into a $700,000 variable-rate, long-term debt agreement and also entered into associated pay-fixed, receive-variable interest rate swap agreement for all of Energy Services Term Loan's outstanding principal balance, and a significant portion of the loan's tenor.

Quantitative Disclosures Related to Derivative Instruments

The following table summarizes by derivative type the gross notional amounts related to open derivative contracts at September 30, 2019 and 2018 and the final settlement date of the Company's open derivative transactions as of September 30, 2019, excluding those derivatives that qualified for the NPNS exception:

			Notional Amounts (in thousands)	
			September 30,	
Type	Units	Settlements Extending Through	2019	2018
Commodity Price Risk:				
Natural gas futures, forward and pipeline contracts	Dekatherms	December 2024	189,930	148,910
Natural gas basis swap contracts	Dekatherms	December 2024	131,059	54,419
NYMEX natural gas storage futures contracts	Dekatherms	March 2020	312	1,785
NYMEX natural gas option contracts	Dekatherms	March 2020	2,450	—
NYMEX propane storage futures contracts	Gallons	April 2020	504	588
Electricity long forward and futures contracts	Kilowatt hours	May 2022	883	705
Electricity short forward and futures contracts	Kilowatt hours	May 2022	629	359
Interest Rate Risk:				
Interest rate swaps	USD	July 2024	$ 698,250	$ —

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 forms of letters of credit, parental guarantees or cash. Additionally, our natural gas and electricity exchange-traded futures contracts generally require cash deposits in margin accounts. At September 30, 2019 and 2018, restricted cash in brokerage accounts totaled $33,922 and $7,800 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. We generally do not have credit-risk-related contingent features in our derivative contracts.

(Thousands of dollars, except where indicated otherwise)

Offsetting Derivative Assets and Liabilities

Derivative assets and liabilities are presented net by counterparty on the 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 include both those that are executed on an exchange through brokers and centrally cleared and over-the-counter transactions. Exchange contracts utilize a financial intermediary, exchange, or clearinghouse to enter, execute, or clear the transactions. Over-the-counter contracts are bilateral contracts that are transacted directly with a third party. Certain over-the-counter and exchange 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 and all exchange contracts are subject to collateral requirements. Types of collateral generally include cash or letters of credit. Cash collateral paid by us to our over-the-counter 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 the Consolidated Balance Sheets 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.

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 and 2018:

	2019	2018
Derivative assets:		
Derivatives not designated as hedging instruments:		
Commodity contracts	$ 29,965	$ 31,037
Total derivative assets - gross	29,965	31,037
Gross amounts offset in balance sheet	(24,479)	(24,012)
Total derivative assets - net	$ 5,486	$ 7,025
Derivative liabilities:		
Derivatives designated as hedging instruments:		
Interest rate contracts	$ (3,130)	$ —
Derivatives not designated as hedging instruments:		
Commodity contracts	(68,682)	(38,780)
Total derivative liabilities - gross	(71,812)	(38,780)
Gross amounts offset in balance sheet	24,479	24,012
Total derivative liabilities - net	$ (47,333)	$ (14,768)

(Thousands of dollars, 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 Comprehensive Income for Fiscal 2019 and Fiscal 2018:

	Gain (Loss) Recognized in AOCI		Gain (Loss) Reclassified from AOCI into Income		Location of Gain (Loss) Reclassified from AOCI into Income
	2019	2018	2019	2018	
Cash Flow Hedges:					
Interest rate contracts	$ (2,781)	$ —	$ 349	$ —	Interest expense

	Gain (Loss) Recognized in Income		Location of Gain (Loss) Recognized in Income
	2019	2018	
Derivatives Not Designated As Hedging Instruments:			
Commodity contracts	$ 7,230	$ (5,854)	Revenues
Commodity contracts	(32,805)	(17,333)	Cost of sales
Total	$ (25,575)	$ (23,187)	

Included in "Total - Gain (Loss) Recognized in Income" in the table above are the following unrealized gains (losses) from changes in fair value of derivative instruments for Fiscal 2019 and Fiscal 2018:

Gain (Loss):	2019	2018
Revenue	$ 4,342	$ (3,696)
Cost of sales	(35,337)	2,252
Total	$ (30,995)	$ (1,444)

For Fiscal 2019, the amounts of derivative gains and 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, contracts that provide for the purchase and delivery, or sale, of energy products, and service contracts that require the counterparty to provide commodity storage, transportation or capacity service to meet our normal sales commitments. Although certain of these contracts have the requisite elements of a derivative instrument, these contracts qualify for NPNS exception accounting under GAAP 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.

(Thousands of dollars, except where indicated otherwise)

Note 14 — Accumulated Other Comprehensive Income

Changes in AOCI during Fiscal 2019 are as follows:

	Derivative Instruments
AOCI - September 30, 2018	$ —
Other comprehensive loss before reclassification adjustments (after-tax)	(1,977)
Amounts reclassified from AOCI:	
Reclassification adjustments (pre-tax)	(349)
Reclassification adjustments tax expense	101
Reclassification adjustments (after-tax)	(248)
Other comprehensive loss attributable to the Company	(2,225)
AOCI - September 30, 2019	$ (2,225)

Activity in AOCI during Fiscal 2019 relate to an interest rate swap agreement used to fix the variable rate on the Energy Services Term Loan (see Note 6).

Note 15 — Related Party Transactions

Enterprises allocates a portion of its payroll and related benefit costs to Energy Services for employee services provided to the Company. Such allocated expenses, which are included in "Operating and administrative expenses" on the Consolidated Statements of Income and Comprehensive Income, totaled $1,135 during Fiscal 2018. There were no allocated expenses in Fiscal 2019.

UGI provides certain financial and administrative services to the Company. UGI bills the Company monthly for all direct expenses and for an allocated share of indirect corporate expenses incurred or paid on behalf of the Company. The allocation of indirect UGI corporate expenses to the Company utilizes 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 operating subsidiaries for which general and administrative services were provided. Management believes that this allocation method is reasonable and equitable to the Company. During Fiscal 2019 and Fiscal 2018, such corporate expenses, which are included in "Operating and administrative expenses" on the Consolidated Statements of Income and Comprehensive Income, totaled $8,798 and $8,649 respectively.

From time to time, Energy Services is a party to SCAAs with UGI Utilities which have terms of up to three years. At September 30, 2019, UGI Utilities was a party to four SCAAs with Energy Services, and, during the periods covered by the financial statements, was a party to other SCAAs with Energy Services. Under the SCAAs, UGI Utilities has, among other things, released certain natural gas storage and transportation contracts (subject to recall for operational purposes) to Energy Services for the terms of the SCAAs. UGI Utilities also transferred certain associated natural gas storage inventories upon the commencement of the SCAAs, receives a transfer of storage inventories at the end of the SCAAs, and makes payments associated with refilling storage inventories during the term of the SCAAs. During Fiscal 2019 and Fiscal 2018, Energy Services received payments from UGI Utilities for storage inventories and pipeline transportation and storage capacity charges associated with SCAAs, which are included in "Revenues" on the Consolidated Statements of Income and Comprehensive Income, totaling $16,151 and $19,854, respectively. Energy Services, in turn, provides a firm delivery service and makes certain payments to UGI Utilities for its various obligations under the SCAAs. During Fiscal 2019 and Fiscal 2018, these payments totaled $3,098 and $2,824, respectively. In conjunction with the SCAAs, Energy Services paid UGI Utilities security deposits. At September 30, 2019 and 2018, the amounts of such security deposits, which are included in "Prepaid expenses and other current assets "on the Consolidated Balance Sheets were $7,640 and $11,040, respectively.

Pursuant to gas supply and delivery service agreements with UGI Utilities, Energy Services provides certain gas supply and related delivery service to UGI Utilities primarily during the heating-season months of November through March. During Fiscal 2019 and Fiscal 2018, the aggregate amount of these transactions (exclusive of transactions pursuant to the SCAAs) totaled $96,801 and $93,577, respectively.

In addition, from time to time, Energy Services purchases natural gas or pipeline capacity from UGI Utilities. During Fiscal 2019 and Fiscal 2018, such purchases from UGI Utilities, which are included in "Cost of sales" on the Consolidated Statements of Income and Comprehensive Income, totaled $64,784 and $103,667, respectively. Also from time to time, Energy Services sells natural gas and pipeline capacity to UGI Utilities (in addition to those transactions already described above) and purchases a firm storage service from a subsidiary of Energy Services. During Fiscal 2019 and Fiscal 2018, such sales, which are included in "Revenues" on the Consolidated Statements of Income and Comprehensive Income, totaled $118,014 and $156,794, respectively.

From time to time, Energy Services sells propane on an as needed basis to AmeriGas. The sales price is generally based on market prices at the time of sale. There were no sales of propane by Energy Services to AmeriGas during Fiscal 2019. Sales of propane by Energy Services to AmeriGas during Fiscal 2018 were not material.

Note 16 — Equity Method Investments

Our investments noted below are accounted for under the equity method of accounting as we have the ability to exercise significant influence, but not control, over these entities. These are included in "Investments in equity method investees" on the Consolidated Balance Sheets. Equity method earnings are included in "Income from equity method investees" on the Consolidated Statements of Income and Comprehensive Income.

PennEast

An indirect wholly owned subsidiary of UGI, UGI PennEast, LLC, and four other members comprising wholly owned subsidiaries of Southern Company, New Jersey Resources, South Jersey Industries, and Enbridge, Inc., each hold a 20% membership interest in PennEast. PennEast was formed to construct an approximate 120-mile natural gas pipeline from Luzerne County, Pennsylvania to the Trenton-Woodbury interconnection in New Jersey. Affiliates of all members plan to be customers of the pipeline under 15-year contracts. PennEast is considered to be an equity method investment as we have the ability to exercise significant influence, but not control, over PennEast. We are obligated to provide capital contributions based upon our ownership percentage. Our investment in PennEast at September 30, 2019 and 2018 totaled $84,653 and $72,585, respectively.

There is no external debt at PennEast at September 30, 2019 with all activities having been fully funded by its members. We make contributions to PennEast as required pursuant to the terms of the Limited Liability Company Agreement and we are committed to contribute up to $225,000 in capital contributions.

The Company signed a Project Management Agreement with PennEast on September 10, 2014. Pursuant with the terms of this agreement, the Company provides services to PennEast related to management, marketing, development, administration and construction of the pipeline. The Company is paid a project management fee throughout the term of the agreement, which will expire 90 days after the project in-service date. The amount of the project management fees recognized by the Company with respect to PennEast was $1,872 each year during Fiscal 2019 and Fiscal 2018.

In September 2019, a panel of the U.S. Court of Appeals for the Third Circuit ruled that New Jersey's Eleventh Amendment immunity barred PennEast from bringing an eminent domain lawsuit in federal court, under the Natural Gas Act, against New Jersey or its agencies. The Third Circuit subsequently denied PennEast's petition for rehearing en banc. In addition, in October 2019, in reliance on the Third Circuit ruling, the New Jersey Department of Environmental Protection rejected PennEast's application for certain project permits. PennEast has filed a petition for declaratory order with the FERC regarding interpretation of the Natural Gas Act. PennEast also expects to file a petition for a writ of certiorari to seek U.S. Supreme Court review of the Third Circuit decision. The ultimate outcome of these matters cannot be determined at this time, and could result in delays, additional costs, or the inability to move forward with the project, resulting in an impairment of all or a portion of our investment in PennEast.

Pennant

On August 1, 2019, Energy Services completed the CMG Acquisition including CMG's approximate 47% interest in Pennant Midstream, LLC for $88,000 (see Note 5). Pennant pursues and operates various natural gas midstream assets in Western Pennsylvania and Eastern Ohio. Pennant is considered to be an equity method investment as we have the ability to exercise significant influence, but not control, over Pennant.

Our investment in Pennant at September 30, 2019 totaled $90,752. As of September 30, 2019, the carrying amount of our investment in Pennant exceeded our share of Pennant's underlying equity in net assets by $98,000. At September 30, 2019, this difference is comprised of basis differences associated with property, plant and equipment of natural gas gathering and natural gas processing assets. This difference is being amortized over 25 to 40 years which represents the useful lives of the underlying assets within Pennant.

The Company assumed a Project Management Agreement with the acquisition of Pennant on August 1, 2019. Pursuant with the terms of this agreement, the Company provides services to Pennant related to management, development, administration and construction of fixed assets. The Company is paid a project management fee throughout the term of the agreement. The amount of the project management fees recognized by the Company with respect to Pennant was $94 during Fiscal 2019.

Executive Overview

Energy Services' net income as determined in accordance with GAAP was $46.7 million in Fiscal 2019 compared to $195.8 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 $22.0 million compared to $1.0 million in Fiscal 2018. The significantly higher after-tax losses on commodity derivative instruments in Fiscal 2019 principally reflect decreases in forward prices for natural gas. Our GAAP results in Fiscal 2019 also reflect after-tax acquisition and integration expenses associated with CMG of $11.2 million. Our Fiscal 2018 net income also reflects remeasurement adjustments to deferred tax assets and liabilities resulting from the enactment of the TCJA which decreased income tax expense and increased Fiscal 2018 net income by $69.4 million. 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.

Excluding the impacts of the losses on derivative commodity instruments not associated with current-period transactions, the CMG acquisition and integration expenses and the impact of the TCJA in the prior year, adjusted net income in Fiscal 2019 was $47.5 million lower than in Fiscal 2018. The lower adjusted net income reflects substantially lower prices for pipeline capacity principally due to the absence of cold and volatile temperatures that occurred in late December and January of Fiscal 2018, increased pipeline restrictions experienced during Fiscal 2019 and the effects on capacity values of new pipeline capacity. Fiscal 2019 adjusted net income also reflects lower electric generation total margin and lower average natural gas marketing unit margins. These decreases were partially offset by the benefits of higher natural gas gathering and peaking total margin.

Fiscal 2018 Impact of Tax Law Changes

Net income for Fiscal 2018 was affected by the TCJA in the U.S. 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. We were subject to a blended U.S. federal income tax rate of 24.5% for Fiscal 2018 because our fiscal year contained the effective date of the rate change from 35% to 21%. We were subject to a U.S. federal income tax rate of 21% in Fiscal 2019.

As previously mentioned, 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 date the TCJA was enacted. The remeasurement adjustments recorded in Fiscal 2018 have been excluded from adjusted net income, 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, 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 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 interest expense and income taxes and adjusted net income 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	$ 1,471.5	$ 1,372.5
Cost of sales	(1,249.0)	(1,064.3)
Total margin	222.5	308.2
Net losses on commodity derivative instruments not associated with current-period transactions	31.0	1.4
Adjusted total margin	$ 253.5	$ 309.6
Adjusted operating income:		
Operating income	$ 61.1	$ 174.8
Net losses on commodity derivative instruments not associated with current-period transactions	31.0	1.4
CMG acquisition and integration expenses	15.7	—
Adjusted operating income	$ 107.8	$ 176.2
Adjusted income before interest expense and income taxes:		
Income before interest expense and income taxes	$ 70.2	$ 178.5
Net losses on commodity derivative instruments not associated with current-period transactions	31.0	1.4
CMG acquisition and integration expenses	15.7	—
Adjusted income before income taxes	$ 116.9	$ 179.9
Adjusted net income:		
Net income	$ 46.7	$ 195.8
Net losses on commodity derivative instruments not associated with current-period transactions	22.0	1.0
CMG acquisition and integration expenses	11.2	—
Remeasurement impact from TCJA	—	(69.4)
Adjusted net income	$ 79.9	$ 127.4

Analysis of Results of Operations

The following analysis compares Energy Services results of operations for Fiscal 2019 with Fiscal 2018.

Energy Services	2019	2018	Increase (Decrease)	
(Dollars in millions)				
Revenues	$ 1,471.5	$ 1,372.5	$ 99.0	7.2 %
Total margin (a)	$ 222.5	$ 308.2	$ (85.7)	(27.8)%
Operating and administrative expenses (b)	$ 112.2	$ 91.3	$ 20.9	22.9 %
Operating income	$ 61.1	$ 174.8	$ (113.7)	(65.0)%
Income before interest expense and income taxes	$ 70.2	$ 178.5	$ (108.3)	(60.7)%
Non-GAAP financial measures (c):				
Adjusted total margin	$ 253.5	$ 309.6	$ (56.1)	(18.1)%
Adjusted operating income	$ 107.8	$ 176.2	$ (68.4)	(38.8)%
Adjusted income before interest expense and income taxes	$ 116.9	$ 179.9	$ (63.0)	(35.0)%
Adjusted net income	$ 79.9	$ 127.4	$ (47.5)	(37.3)%

(a) Total margin represents total revenues less total cost of sales.
(b) Fiscal 2019 includes $15.7 million of acquisition and integration expenses associated with CMG.

(c) 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.

Average temperatures across Energy Service's energy marketing territory during Fiscal 2019 were approximately 1.6% warmer than normal and slightly warmer than the prior year. Although average temperatures in Fiscal 2019 were only slightly warmer than the prior year, the prior year experienced extremely cold and volatile weather in late December 2017 and early January 2018.

Fiscal 2019 revenues were $99.0 million higher than in Fiscal 2018 principally reflecting higher natural gas revenues ($143.9 million) and higher natural gas gathering revenues ($29.8 million) including incremental revenues from CMG acquired on August 1, 2019. These increases in revenues were partially offset by lower capacity revenues ($68.5 million) and, to a much lesser extent, lower electric generation revenues. The significant increase in natural gas revenues principally reflects the effects of higher natural gas volumes principally resulting from customer growth including customers obtained through the acquisition of South Jersey Energy Company's natural gas marketing business on December 1, 2018, and slightly higher average natural gas prices. The decrease in capacity management revenues reflects significantly lower capacity values during Fiscal 2019. The lower electric generation revenues reflect lower off-peak volumes at the Hunlock Station generating facility due to a decline in economic dispatch opportunities and, to a much lesser extent, lower volumes at the Conemaugh Station. Cost of sales was $1,249.0 million in Fiscal 2019 compared to $1,064.3 million in the prior year, an increase of $184.7 million, principally reflecting the higher natural gas volumes and higher natural gas costs offset in part by lower electricity generation cost of sales on lower volumes produced.

Total margin decreased $85.7 million in Fiscal 2019. Adjusted total margin decreased $56.1 million principally reflecting lower capacity management total margin ($68.5 million), lower electric generation total margin ($9.6 million) and lower margin from natural gas marketing reflecting lower average unit margins. These decreases were partially offset by higher natural gas gathering total margin including incremental margin from CMG. The decrease in capacity management total margin reflects significantly lower baseload capacity values, and higher prior-year pricing spreads between Marcellus and non-Marcellus delivery points. The lower capacity pricing spreads during Fiscal 2019 are principally the result of the absence of extremely cold and volatile weather experienced in late December and early January of Fiscal 2018, the effects of increased pipeline restrictions during the Fiscal 2019 heating season, and the effects on capacity values from new pipeline capacity. The lower total margin from electric generation principally reflects lower electric generation volumes from our Hunlock Station generating facility due to a decline in off-peak economic dispatch opportunities.

Operating income and income before interest expense and income taxes decreased $113.7 million and $108.3 million, respectively. Adjusted operating income and adjusted income before interest expense and income taxes decreased $68.4 million and $63.0 million, respectively. The decreases in adjusted operating income principally reflects the previously mentioned decrease in adjusted total margin ($56.1 million), higher depreciation and amortization expense ($8.0 million), and higher operating and administrative expenses ($5.3 million, after excluding the acquisition and integration expenses associated with CMG). The increase in depreciation and amortization expense principally reflects incremental depreciation from the expansion of our natural gas gathering assets including CMG and, to a much lesser extent, our peaking and LNG assets. The $5.3 million increase in operating and administrative expenses (after excluding the acquisition and integration expenses associated with CMG) principally reflects higher expenses associated with greater natural gas gathering, LNG and peaking activities including incremental operating and administrative expenses associated with CMG, slightly higher compensation and benefits expense and higher operation and maintenance expenses associated with a planned outage at the Conemaugh generating unit. The decrease in adjusted income before interest expense and income taxes principally reflects the $68.4 million decrease in adjusted operating income, partially offset by higher AFUDC income associated with the PennEast pipeline and equity income from a natural gas gathering and processing joint venture acquired as part of the CMG Acquisition.

Interest Expense and Income Taxes

Interest expense in Fiscal 2019 was $9.0 million compared to interest expense in Fiscal 2018 of $2.4 million. The higher interest expense principally reflects interest in long-term debt issued in August 2019 to fund a portion of the CMG Acquisition.

As previously mentioned, our consolidated income taxes for Fiscal 2018 were impacted by the enactment of the TCJA. Our effective tax rate for Fiscal 2018 reflects the effects of deferred income tax asset and liability remeasurement adjustments resulting from the TCJA which remeasurement adjustments reduced Fiscal 2018 income tax expense by $69.4 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 are generally satisfied with borrowings under our Receivables Facility and borrowings under the Energy Services Credit Agreement. Long-term cash requirements are generally met through the issuance of long-term debt. 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 and Receivables Facility borrowings; and the ability to obtain long-term financing to meet anticipated contractual and projected cash commitments. Issuances of debt securities in the capital markets and additional credit facilities may not, however, be available to us on acceptable terms.

Our cash and cash equivalents totaled $25.9 million at September 30, 2019 and $40.0 million at September 30, 2018. Our restricted cash balances at September 30, 2019 and September 30, 2018, principally comprising cash in brokerage accounts that are restricted from withdrawal, totaled $33.9 million and $7.8 million, respectively.

Significant financing activities

On August 13, 2019, Energy Services entered into a seven-year $700 million variable-rate senior secured term loan agreement with a group of lenders. Borrowings under the Energy Services Term Loan bear interest at rates per annum, comprising the aggregate of the applicable margin (as defined in the agreement) and, subject to our election, either (1) the associated prime rate or (2) an adjusted LIBOR rate. Energy Services has entered into a pay-fixed, receive-variable interest rate swap agreement to fix the underlying LIBOR rate on all or substantially all of the term loan borrowings at 1.55% through July 2024. Proceeds from borrowings under the Energy Services Term Loan were used to finance a portion of the CMG Acquisition and for general corporate purposes.

Also on August 13, 2019, Energy Services amended the Energy Services Credit Agreement to, among other things, decrease the borrowing capacity from $240 million to $200 million. Additionally, the amendment granted credit agreement lenders a security interest in the collateral of the Energy Services Term Loan. All other material terms of the Energy Services Credit Agreement remained unchanged.

Credit Facilities

Energy Services also has a Receivables Facility with an issuer of receivables-backed commercial paper. On October 25, 2019, the expiration date of the Receivables Facility was extended to October 23, 2020. The Receivables Facility provides Energy Services with the ability to borrow up to $150 million of eligible receivables during the period November through April, and up to $75 million of eligible receivables during the period May through October. Energy Services uses the Receivables Facility to fund working capital, margin calls under commodity futures contracts, capital expenditures, dividends and for general corporate purposes.

At September 30, 2019, the outstanding balance of trade receivables was $54.5 million of which $46.4 million was sold to the bank. At September 30, 2018, the outstanding balance of trade receivables was $65.0 million of which $2.0 million was sold to the bank. Amounts sold to the bank are reflected as “Short-term borrowings” on the Consolidated Balance Sheets. During both Fiscal 2019 and Fiscal 2018, peak sales of receivables were $68.0 million. During Fiscal 2019 and 2018, average daily amounts sold were $20.7 million and $11.3 million, respectively.

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 natural gas, electricity and 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 energy commodity prices, principally changes in prices for natural gas. Cash flow from investing activity is principally affected by cash expenditures for property, plant and equipment and cash paid for acquisitions of businesses and assets. 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 $134.7 million in Fiscal 2019 compared to $192.2 million in Fiscal 2018. Cash flow from operating activities before changes in operating working capital were $119.2 million in Fiscal 2019 compared to $181.8 million in Fiscal 2018. The year-over-year decrease in cash flows from operating activities before changes in operating working capital principally reflects the lower Fiscal 2019 operating results (excluding the effects of unrealized gains and losses on commodity derivative instruments). Changes in operating working capital provided operating cash flow of $15.5 million in Fiscal 2019 compared to $10.4 million in Fiscal 2018. Cash flow from changes in operating working capital in Fiscal 2019 principally reflects the impact of decreases in natural gas prices on cash flow from changes in accounts receivable and inventories while the prior year cash flow from changes in operating working cash flow reflects, in large part, the timing of payments on cash flow from changes in accounts payable.

Investing Activities:

Cash flow used by investing activities was $1,444.9 million in Fiscal 2019 compared to $122.0 million in Fiscal 2018. The significantly higher cash used for investing activities in Fiscal 2019 principally reflects the $1.284 billion CMG Acquisition. Cash capital expenditures for property, plant and equipment totaled $121.1 million in Fiscal 2019 compared to $35.3 million in Fiscal 2018 reflecting higher capital expenditures associated with midstream assets.

Financing Activities:

Cash flow provided (used) by financing activities was $1,322.2 million in Fiscal 2019 and $(50.7) million in Fiscal 2018. In Fiscal 2019, immediately prior to the CMG Acquisition, UGI Corporation contributed $1.1 billion in cash to finance a significant portion of the CMG Acquisition. Subsequently, on August 13, 2019, Energy Services entered into a seven-year $700 million variable-rate senior secured term loan agreement with a group of lenders. A significant portion of the proceeds from borrowings under the Energy Services Term Loan were used to return a portion of the contribution previously made by UGI in conjunction with the CMG Acquisition.

Capital Expenditures

Our capital expenditures include continued investments in midstream assets at Energy Services. During Fiscal 2019, our capital expenditures totaled $137.7 million. We expect capital expenditures of approximately $136.0 million in Fiscal 2020. Capital expenditures estimated for Fiscal 2020 principally reflect natural gas infrastructure expansion projects at Energy Services.

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)	$ 698.6	$ 7.1	$ 14.2	$ 14.0	$ 663.3
Interest on long-term-fixed rate debt (a)(b)(c)	247.9	39.9	72.4	70.7	64.9
Operating leases	53.2	3.2	6.2	5.9	37.9
Supply contracts	845.4	337.6	366.8	111.4	29.6
Derivative instruments (d)	44.2	29.5	13.6	1.1	—
Total	$ 1,889.3	$ 417.3	$ 473.2	$ 203.1	$ 795.7

(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) Calculated using applicable interest rates or forward interest rate curves and leverage ratios, as of 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).

Related Party Transactions

See Note 15 to Consolidated Financial Statements for a discussion of related party transactions.

Recently Issued Accounting Pronouncements

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