UGI UTILITIES, INC.
AND SUBSIDIARIES

CONSOLIDATED FINANCIAL STATEMENTS

for the years ended September 30, 2019 and 2018

UGI UTILITIES, INC. AND SUBSIDIARIES

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

GLOSSARY OF TERMS AND ABBREVIATIONS

Terms and abbreviations used are defined below:

UGI Utilities, Inc. and Related Entities

Company - UGI Utilities or collectively UGI Utilities and its subsidiaries

CPG - UGI Central Penn Gas, Inc., a wholly owned subsidiary of UGI Utilities, prior to the Utility Merger

Electric Utility - UGI Utilities' regulated electric distribution utility

Energy Services - UGI Energy Services, LLC, a wholly owned subsidiary of UGI and affiliate of UGI Utilities

Gas Utility - UGI Utilities' regulated natural gas distribution businesses, comprising the natural gas utility businesses owned and operated by UGI Utilities and, prior to the Utility Merger, PNG and CPG

PNG - UGI Penn Natural Gas, Inc., a wholly owned subsidiary of UGI Utilities prior to the Utility Merger

UGI - UGI Corporation, parent company of UGI Utilities

UGI Central - The natural gas rate district of CPG subsequent to the Utility Merger

UGI Gas - UGI Utilities' natural gas utility

UGI North - The natural gas rate district of PNG subsequent to the Utility Merger

UGI South - The natural gas rate district of UGI Gas subsequent to the Utility Merger

UGI Storage - UGI Storage Company, a wholly owned subsidiary of Energy Services and affiliate of UGI Utilities

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

Other Terms and Abbreviations

2013 OICP - UGI Corporation 2013 Omnibus Incentive Compensation Plan

4.55% Senior Notes - A private placement of $150 million principal amount of senior notes issued by UGI Utilities due February 2049

ABO - Accumulated benefit obligations

AFUDC - Allowance for funds used during construction

AOCI - Accumulated other comprehensive income (loss)

ASC - Accounting Standards Codification

ASC 605 - ASC 605, "Revenue Recognition"

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

ASC 740 - ASC 740, "Income Taxes"

ASU - Accounting Standards Update

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

COA - Consent order and agreement

Core market **-** Comprises (1) firm residential, commercial and industrial customers to whom UGI Utilities has a statutory obligation to provide service who purchase their natural gas or electricity from UGI Utilities; and (2) residential, commercial and industrial customers to whom UGI Utilities has a statutory obligation to provide service who purchase their natural gas or electricity from others

DS **-** Default service

EDFIT **-** Excess deferred federal income taxes

ERISA **-** Employee Retirement Income Security Act of 1974

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

GAAP **-** U.S. generally accepted accounting principles

IT **-** Information technology

LIBOR **-** London Inter-bank Offered Rate

MDPSC **-** Maryland Public Service Commission

MGP **-** Manufactured gas plant

NAV **-** Net asset value

NPNS **-** Normal purchase and normal sale

NTSB **-** National Transportation Safety Board

NYMEX **-** New York Mercantile Exchange

PADEP **-** Pennsylvania Department of Environmental Protection

PAPUC **-** Pennsylvania Public Utility Commission

PBO **-** Projected benefit obligations

Pension Plan **-** Defined benefit pension plan for employees hired prior to January 1, 2009 of UGI, UGI Utilities, CPG, PNG and certain of UGI's other domestic wholly owned subsidiaries

PGC **-** Purchased gas costs

PJM **-** PJM Interconnection, LLC

Retail core-market **-** Comprises firm residential, commercial and industrial customers to whom UGI Utilities has a statutory obligation to provide service that purchase their natural gas from Gas Utility

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 - Tax Cuts and Jobs Act

Temporary Rates Order - Order issued by the PAPUC on March 15, 2018, that converted PAPUC approved rates of a defined group of large Pennsylvania public utilities into temporary rates for a period of not more than 12 months while the PAPUC reviewed effects of the TCJA

TSR - Total Shareholder Return

UGI comparator group - The Russell Midcap Utility Index, excluding telecommunications companies

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

UGI Units - UGI Corporation stock options and grants of UGI Corporation stock-based equity instruments

UGI Utilities 2019 Credit Agreement - An unsecured revolving credit agreement entered into by UGI Utilities in June 2019 providing for borrowings up to $350 million, including a letter of credit subfacility of up to $100 million

Utilities Savings Plan - A 401(k) savings plan for eligible employees

Utilities Term Loan - A $125 million unsecured variable-rate term loan agreement entered into in September 2018 by UGI Utilities with a group of banks

Utility Merger - The merger, effective October 1, 2018, of CPG and PNG with and into UGI Utilities

VEBA - Voluntary Employees' Beneficiary Association

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

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

Building a better working world

Report of Independent Auditors

To the Stockholder and the Board of Directors of UGI Utilities, Inc.

We have audited the accompanying consolidated financial statements of UGI Utilities, Inc. and subsidiaries, which comprise the consolidated balance sheets as of September 30, 2019 and 2018, and the related consolidated statements of income, comprehensive income, stockholder's equity and cash flows 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 Utilities, Inc. and subsidiaries at September 30, 2019 and 2018, and the consolidated results of its operations and its cash flows for the years then ended in conformity with U.S. generally accepted accounting principles.

Ernst & Young LLP

November 26, 2019

UGI UTILITIES, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(Thousands of dollars)

	September 30, 2019	September 30, 2018
ASSETS		
Current assets:		
Cash and cash equivalents	$ 984	$ 10,314
Restricted cash	5,902	1,190
Accounts receivable (less allowances for doubtful accounts of $8,112 and $9,760, respectively)	69,341	71,507
Accounts receivable — related parties	1,213	2,273
Accrued utility revenues	14,602	13,977
Inventories	42,812	52,413
Regulatory assets	9,137	7,475
Derivative instruments	1,195	3,004
Other current assets	26,925	70,866
Total current assets	172,111	233,019
Property, plant and equipment	3,938,127	3,616,289
Less accumulated depreciation	(1,129,534)	(1,074,521)
Net property, plant and equipment	2,808,593	2,541,768
Goodwill	182,145	182,145
Regulatory assets	386,495	293,527
Other assets	10,185	16,117
Total assets	$ 3,559,529	$ 3,266,576
LIABILITIES AND STOCKHOLDER'S EQUITY		
Current liabilities:		
Current maturities of long-term debt	$ 8,374	$ 9,001
Short-term borrowings	166,000	189,500
Accounts payable — trade	78,694	87,861
Accounts payable — related parties	3,773	9,585
Employee compensation and benefits accrued	20,502	19,081
Interest accrued	9,817	15,716
Customer deposits and advances	38,608	36,363
Derivative instruments	3,500	—
Regulatory liabilities	39,819	40,131
Other current liabilities	33,091	43,096
Total current liabilities	402,178	450,334
Long-term debt	970,819	828,995
Deferred income taxes	426,977	400,939
Pension and other postretirement benefit obligations	176,617	81,590
Regulatory liabilities	318,966	350,044
Other noncurrent liabilities	70,114	61,386
Total liabilities	2,365,671	2,173,288
Commitments and contingencies (Note 12)		
Common stockholder's equity:		
Common Stock	60,259	60,259
Additional paid-in capital	473,580	473,580
Retained earnings	694,481	579,778
Accumulated other comprehensive loss	(34,462)	(20,329)
Total common stockholder's equity	1,193,858	1,093,288
Total liabilities and stockholder's equity	$ 3,559,529	$ 3,266,576

See accompanying Notes to Consolidated Financial Statements.

UGI UTILITIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF INCOME
(Thousands of dollars)

	Year Ended September 30,	
	2019	2018
Revenues	$ 1,048,620	$ 1,092,381
Costs and expenses:		
Cost of sales — gas and purchased power (excluding depreciation shown below)	481,284	522,911
Operating and administrative expenses	235,266	232,880
Operating and administrative expenses — related parties	13,734	14,234
Depreciation	92,772	84,644
Other operating expense (income), net	1,352	(2,264)
	824,408	852,405
Operating income	224,212	239,976
Pension and other postretirement plans non-service income (expense)	1,506	(2,454)
Interest expense	(49,602)	(42,890)
Income before income taxes	176,116	194,632
Income tax expense	(42,938)	(45,711)
Net income	$ 133,178	$ 148,921

See accompanying Notes to Consolidated Financial Statements.

UGI UTILITIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(Thousands of dollars)

	Year Ended September 30,	
	2019	2018
Net income	$ 133,178	$ 148,921
Net (losses) gains on derivative instruments (net of tax of $1,335 and $(10), respectively)	(3,285)	20
Reclassifications of net losses on derivative instruments (net of tax of $(1,006) and $(1,118), respectively)	2,479	2,367
Benefit plans, principally actuarial (losses) gains (net of tax of $3,414 and $(1,512), respectively)	(8,402)	3,203
Reclassifications of benefit plans actuarial losses and net prior services benefits (net of tax of $(214) and $(411), respectively)	526	872
Other comprehensive (loss) income	(8,682)	6,462
Comprehensive income	$ 124,496	$ 155,383

See accompanying Notes to Consolidated Financial Statements.

UGI UTILITIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Thousands of dollars)

	Year Ended September 30,	
	2019	2018
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net income	$ 133,178	$ 148,921
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation	92,772	84,644
Deferred income tax expense, net	22,404	61,934
Pension contributions, net of pension cost	(6,142)	(3,408)
Provision for uncollectible accounts	14,335	17,970
Regulatory liability resulting from tax reform	—	24,430
Other, net	14,479	(3,778)
Net change in:		
Accounts receivable and accrued utility revenues	(11,734)	(35,903)
Inventories	9,601	896
Deferred fuel and power costs, net of changes in unsettled derivatives	(29,477)	31,077
Accounts payable	602	3,987
Prepaid income taxes	45,273	(46,146)
Other current assets	931	5,402
Other current liabilities	(11,996)	(1,409)
Net cash provided by operating activities	274,226	288,617
CASH FLOWS FROM INVESTING ACTIVITIES:		
Expenditures for property, plant and equipment	(370,096)	(323,538)
Net costs of property, plant and equipment disposals	(4,604)	(10,061)
Net cash used by investing activities	(374,700)	(333,599)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Payment of dividends	(20,000)	(50,000)
(Decrease) increase in short-term borrowings	(23,500)	19,500
Issuances of long-term debt, net of issuance costs	149,211	124,404
Repayments of long-term debt	(9,123)	(45,667)
Other	(732)	—
Net cash provided by financing activities	95,856	48,237
Cash, cash equivalents and restricted cash (decrease) increase	$ (4,618)	$ 3,255
CASH, CASH EQUIVALENTS AND RESTRICTED CASH		
Cash, cash equivalents and restricted cash at end of period	$ 6,886	$ 11,504
Cash, cash equivalents and restricted cash at beginning of period	11,504	8,249
Cash, cash equivalents and restricted cash (decrease) increase	$ (4,618)	$ 3,255
SUPPLEMENTAL CASH FLOW INFORMATION:		
Cash paid (received) for:		
Interest	$ 55,407	$ 42,343
Income taxes	$ (18,148)	$ 24,306

See accompanying Notes to Consolidated Financial Statements.

UGI UTILITIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDER'S EQUITY
(Thousands of dollars)

	Year Ended September 30,	
	2019	2018
Common stock, without par value		
Balance, beginning of year	$ 60,259	$ 60,259
Balance, end of year	$ 60,259	$ 60,259
Retained earnings		
Balance, beginning of year	$ 579,778	$ 480,857
Net income	133,178	148,921
Cash dividends — Common Stock	(20,000)	(50,000)
Cumulative effect of change in accounting principle - ASC 606	(3,926)	—
Reclassification of stranded income tax effects related to TCJA	5,451	—
Balance, end of year	$ 694,481	$ 579,778
Additional paid-in capital		
Balance, beginning of year	$ 473,580	$ 473,580
Balance, end of year	$ 473,580	$ 473,580
Accumulated other comprehensive income (loss)		
Balance, beginning of year	$ (20,329)	$ (26,791)
Reclassification of stranded income tax effects related to TCJA	(5,451)	—
Net (losses) gains on derivative instruments	(3,285)	20
Reclassifications of net losses on derivative instruments	2,479	2,367
Benefit plans, principally actuarial (losses) gains	(8,402)	3,203
Reclassifications of benefit plans actuarial losses and net prior service benefits	526	872
Balance, end of year	$ (34,462)	$ (20,329)
Total UGI Utilities, Inc. stockholder's equity	$ 1,193,858	$ 1,093,288

See accompanying Notes to Consolidated Financial Statements.

1. NATURE OF OPERATIONS

UGI Utilities directly owns and operates Gas Utility, a natural gas distribution utility business in eastern and central Pennsylvania and in a portion of one Maryland county. Prior to the Utility merger on October 1, 2018, Gas Utility also conducted operations through PNG and CPG. UGI Utilities also owns and operates Electric Utility, an electric distribution utility located in northeastern Pennsylvania. Gas Utility is subject to regulation by the PAPUC and, with respect to a small service territory in one Maryland county, the MDPSC. Electric Utility is subject to regulation by the PAPUC and the FERC.

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

Principles of Consolidation

The consolidated financial statements include the accounts of UGI Utilities and its subsidiaries. We eliminate intercompany accounts and transactions when we consolidate.

Effects of Regulation

UGI Utilities 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 through 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. Regulatory assets and liabilities are classified as current if, upon initial recognition, the entire amount related to that item will be recovered or refunded within a year of the balance sheet date. Generally, regulatory assets and regulatory liabilities are amortized into expense and income over the periods authorized by the regulator. For additional information regarding the effects of rate regulation on our utility operations, see Note 5.

Fair Value Measurements

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

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

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

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

- Level 2 — Inputs other than quoted prices included within Level 1 that are either directly or indirectly observable for the asset or liability, including quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable for the asset or liability, and inputs that are derived from observable market data by correlation or other means.

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

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

Derivative Instruments

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

Gains and losses on substantially all of the derivative instruments used by UGI Utilities to hedge commodity prices (for which NPNS has not been elected) are included in regulatory assets and liabilities because it is probable such gains or losses will be recoverable from or refundable to customers. From time to time, we enter into derivative instruments that 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. Certain other commodity derivative financial instruments, although generally effective as hedges, do not qualify for hedge accounting treatment. Changes in the fair values of these derivative instruments are reflected in net income. Cash flows from derivative financial 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 14.

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 $3,926 reduction to opening retained earnings as of October 1, 2018, to reflect the cumulative effect of ASC 606 on certain contracts not complete as of the date of adoption. Although 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, beginning October 1, 2018, certain performance obligations primarily associated with the release of capacity contracts are reflected on a gross, rather than net, basis and revenues from certain other negotiated rate contracts are reflected on a straight-line basis over the length of the contract, rather than as invoiced. The amount of revenues reflected on a gross, rather than net, basis for Fiscal 2019, was approximately $46,000 with no impact on net income.

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, if any, 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. Electric Utility's 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 as such amounts are generally not material.

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

Accounts Receivable

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

Accounts receivable includes amounts due pursuant to regulations of the PAPUC which allow qualifying customers to enter into a Payment Arrangement. A Payment Arrangement allows the account balance to be paid in installments over a period generally exceeding one year, without interest, by negotiating mutually acceptable payment terms that comply with PAPUC regulations. Under PAPUC regulations, a utility company generally must continue to serve a customer who cannot pay an account balance in full if the customer (i) pays a reasonable portion of the account balance; (ii) agrees to pay the balance in installments; and (iii) agrees to pay future bills within thirty days until the amount subject to the Payment Arrangement is paid in full. Failure to make payments on a Payment Arrangement results in the full amount of the receivable under being due. These amounts due under Payment Arrangements are considered part of our regular operating cycle and are classified as current on the Consolidated Balance Sheets.

Income Taxes

We record deferred income taxes in the Consolidated Statements of Income resulting from the use of accelerated tax depreciation methods based upon amounts recognized for ratemaking purposes. We also record a deferred income tax liability for tax benefits, principally the result of accelerated tax depreciation for state income tax purposes, that are flowed through to ratepayers when temporary differences originate and record a regulatory income tax asset for the probable increase in future revenues that will result when the temporary differences reverse.

We amortize deferred investment tax credits related to plant additions over the service lives of the related property. We reduce our deferred income tax liability for the future tax benefits that will occur when the deferred investment tax credits, which are not taxable, are amortized. We also reduce the regulatory income tax asset for the probable reduction in future revenues that will result when such deferred investment tax credits amortize.

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. The result of this allocation is consistent with income taxes calculated on a separate return basis. We record interest on tax deficiencies and income tax penalties in “Income tax expense” on the Consolidated Statements of Income. Such amounts were not material in Fiscal 2019 or Fiscal 2018.

The TCJA was enacted on December 22, 2017, and included a broad range of tax reform provisions affecting the Company, including, among other things, changes in the U.S. corporate income tax rate and the elimination of bonus depreciation on regulated utility property beginning in Fiscal 2019. The TCJA reduced 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, including deferred income taxes related to items included in AOCI, were remeasured based upon the new corporate income tax rate. For further information regarding the impact of the TCJA, including the impact on our regulatory assets and liabilities, see Notes 5 and 8.

Cash and Cash Equivalents

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

Restricted cash principally represents those cash balances in our commodity futures brokerage accounts that are restricted from withdrawal. Upon adoption of revised accounting guidance in October 2018 (see Note 3), changes in restricted cash are no longer reflected as a separate investing activity but included in cash, cash equivalents and restricted cash when reconciling the beginning and end of period total amounts in the Company’s Consolidated Statements of Cash Flows. The guidance required retrospective application, which resulted in adjustments to the previously reported cash flows from investing activities for Fiscal 2018, increasing net cash used by investing activities by $1,856.

(Thousands of dollars, except where indicated otherwise)

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

	Cash, Cash Equivalents and Restricted Cash		
	September 30, 2019	September 30, 2018	September 30, 2017
Cash and cash equivalents	$ 984	$ 10,314	$ 5,203
Restricted cash	5,902	1,190	3,046
Cash, cash equivalents and restricted cash	$ 6,886	$ 11,504	$ 8,249

Inventories

Our inventories are stated at the lower of cost or net realizable value. We determine cost using an average cost method for substantially all of our inventory.

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 AFUDC. The amounts assigned to property, plant and equipment of acquired businesses are based upon estimated fair value at date of acquisition.

We record depreciation expense for plant and equipment on a straight-line basis based upon projected service lives of the various classes of its depreciable property. The estimated useful lives of the classes of depreciable property are reviewed by a third party and adjusted, if necessary, as part of periodic service life studies required by the PAPUC. The average composite depreciation rates at our Gas Utility and Electric Utility for Fiscal 2019 and 2018 were as follows:

	2019	2018
Gas Utility	2.2%	2.3%
Electric Utility	2.1%	2.2%

We include in property, plant and equipment costs associated with computer software we develop or obtain for use in our business. IT costs associated with major system installations, conversions and improvements, such as software training, data conversion, business process reengineering costs, preliminary project stage costs and cloud computing are deferred as a regulatory asset and included as a component of property, plant and equipment. As of September 30, 2019 and 2018, such costs deferred as a regulatory asset and not yet requested in a rate proceeding totaled approximately $3,700 and $6,300, respectively. We amortize computer software and related IT system installation costs on a straight-line basis over expected periods of benefit not exceeding 15 years once the installed software is ready for its intended use.

We classify amortization of computer software costs and IT regulatory assets included in property, plant and equipment as depreciation expense in the Consolidated Statements of Income.

When we retire depreciable utility plant and equipment, we charge the original cost to accumulated depreciation for financial accounting purposes. Costs incurred to retire utility plant and equipment, net of salvage, are recorded in regulatory assets and amortized over five years, consistent with prior ratemaking treatment (See Note 5).

No depreciation expense is included in cost of sales in the Consolidated Statements of Income.

Goodwill

Our goodwill is the result of Gas Utility business acquisitions. 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.

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. From time to time, 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 required to be recognized under GAAP in an amount equal to such excess but not to exceed the total amount of the goodwill of the reporting unit.

No provisions for goodwill impairments were recorded during Fiscal 2019 and Fiscal 2018.

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. No provisions for impairments of long-lived assets were recorded during Fiscal 2019 or Fiscal 2018.

Employee Retirement Plans

We use a market-related value of plan assets and an expected long-term rate of return to determine the expected return on assets of our pension and other postretirement plans. The market-related value of plan assets, other than equity investments, is based upon fair values. The market-related value of equity investments is calculated by rolling forward the prior-year's market-related value with contributions, disbursements and the expected return on plan assets. One third of the difference between the expected and the actual value is then added to or subtracted from the expected value to determine the new market-related value (see Note 9).

Equity-Based Compensation

All of our equity-based compensation, principally comprising UGI Units, is measured at fair value on the grant date, date of modification or end of the period, as applicable. Compensation expense is recognized on a straight-line basis over the requisite service period. Depending upon the settlement terms of the awards, equity-based compensation costs are measured based upon the fair value of the award on the date of grant or the fair value of the award as of the end of each reporting period. We account for forfeitures of equity-based payments when they occur.

For additional information on our equity-based compensation plans and related disclosures, see Note 11.

Environmental Matters

We are subject to environmental laws and regulations intended to mitigate or remove the effects of past operations and improve or maintain the quality of the environment. These laws and regulations require the removal or remedy of the effect on the environment of the disposal or release of certain specified hazardous substances at current or former operating sites.

Environmental reserves are accrued when assessments indicate that it is probable that a liability has been incurred and an amount can be reasonably estimated. Amounts recorded as environmental liabilities on the Consolidated Balance Sheets represent our best estimate of costs expected to be incurred or, if no best estimate can be made, the minimum liability associated with a range of expected environmental investigation and remediation costs. Our estimated liability for environmental contamination is reduced to reflect anticipated participation of other responsible parties but is not reduced for possible recovery from insurance carriers. Under GAAP, if the amount and timing of cash payments associated with environmental investigation and cleanup are reliably determinable, such liabilities are discounted to reflect the time value of money. We intend to pursue recovery of incurred costs through all appropriate means, including regulatory relief. We receive ratemaking recognition of environmental investigation and remediation costs associated with in-state environmental sites. This ratemaking recognition balances the accumulated difference between historical costs and rate recoveries with an estimate of future costs associated with the sites. For further information, see Note 12.

Subsequent Events

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

3. ACCOUNTING CHANGES

New Accounting Standards Adopted in Fiscal 2019

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

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

Stranded Tax Effects in Accumulated Other Comprehensive Income. In February 2018, the FASB issued ASU No. 2018-02, "Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income." This ASU provides that the stranded tax effects in AOCI resulting from the remeasurement of deferred income taxes associated with items included in AOCI due to the enactment of the TCJA may be reclassified to retained earnings, at the election of the entity, in the period the ASU is adopted. We adopted this ASU effective October 1, 2018. In connection with the adoption of this guidance, we reclassified a benefit of $5,451 from AOCI to opening retained earnings as of October 1, 2018, to reflect the reduction in the federal income tax rate, and the federal benefit of state income taxes, on the components of AOCI.

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 costs 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. For entities subject to rate regulation, including UGI Utilities, the ASU recognized that in the event a regulator continues to require capitalization of all net periodic benefit costs prospectively, the difference would result in the recognition of a regulatory asset or liability.

The guidance became effective for the Company beginning October 1, 2018, with retrospective adoption for the presentation of pension and postretirement expense on the income statement and a prospective adoption for capitalization. The Company's Consolidated Statement of Income for Fiscal 2018 has been recast to reflect the retrospective adoption for the presentation of the non-service cost component of net periodic pension and other postretirement benefit costs, net of estimated amounts capitalized, as "Pension and other postretirement plans non-service income (expense)." Previously, the non-service cost components were reflected in "Operating and administrative expenses."

The amount of income (expense) comprising the non-service cost components of our pension and postretirement benefit plans, net of amounts capitalized, presented in "Pension and other postretirement plans non-service income (expense)" on the Consolidated Statements of Income, totaled $1,506 and $(2,454) for Fiscal 2019 and Fiscal 2018, respectively.

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

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

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

New Accounting Standards Adopted Effective October 1, 2019

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

Accounting Standard Not Yet Adopted

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

4. REVENUE FROM CONTRACTS WITH CUSTOMERS

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

We do not have significant financing terms in our contracts because we generally 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 Company has elected to apply the significant financing component practical expedient and no amount of consideration has been allocated as a financing component.

UGI Utilities supplies natural gas and electricity and provides distribution services of natural gas and electricity to residential, commercial, and industrial customers who are generally billed at standard regulated tariff rates approved by the PAPUC through the 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, and a component that provides for the recovery, subject to reasonableness reviews, of PGC and DS costs.

Customers may choose to purchase their natural gas and electricity from Gas Utility or Electric Utility, or, alternatively, may contract separately with alternate suppliers. Accordingly, our contracts with customers comprise two promised goods or services: (1) delivery service of natural gas and electricity through the Company's utility distribution systems and (2) the natural gas or electricity commodity itself for those customers who choose to purchase the natural gas or electricity directly from the Company. Revenue is not recorded for the sale of natural gas or electricity to customers who have contracted separately with alternate suppliers. For those customers who choose to purchase their natural gas or electricity from the Company, the performance obligation includes both the supply of the commodity and the delivery service.

The terms of our core market customer contracts are generally considered day-to-day as customers can discontinue service at any time without penalty. Performance obligations are generally satisfied over time as the natural gas or electricity is delivered to customers, at which point the customers simultaneously receive and consume the benefits provided by the delivery service and, when applicable, the commodity. Amounts are billed to customers based upon the reading of a customer's meter which occurs on a cycle basis throughout each reporting period. An unbilled amount is recorded at the end of each reporting period based upon estimated amounts of natural gas or electricity delivered to customers since the date of the last meter reading. These unbilled estimates consider various factors such as historical customer usage patterns, customer rates and weather.

UGI Utilities has certain fixed-term contracts with large commercial and industrial customers to provide natural gas delivery services at contracted rates and at volumes generally based on the customer's needs. The performance obligation to provide the contracted delivery service for these large commercial and industrial customers is satisfied over time and revenue is generally recognized on a straight-line basis.

UGI Utilities makes off-system sales whereby natural gas delivered to our system in excess of amounts needed to fulfill our distribution system needs is sold to other customers, primarily other distributors of natural gas, based on an agreed-upon price and volume between the Company and the counterparty. Gas Utility also sells excess capacity whereby interstate pipeline capacity in excess of amounts needed to meet our customer obligations is sold to other distributors of natural gas based upon an agreed-upon rate. Off-system sales and capacity releases are generally entered into one month at a time and comprise the sale of a specific volume of gas or pipeline capacity at a specific delivery point or points over a specific time. As such, performance obligations associated with off-system sales and capacity release customers are satisfied, and associated revenue is recorded, when the agreed upon volume of natural gas is delivered or capacity is provided, and title is transferred, in accordance with the contract terms.

(Thousands of dollars, except where indicated otherwise)

Electric Utility provides transmission services to PJM by allowing PJM to access Electric Utility's electricity transmission facilities. In exchange for providing access, PJM pays Electric Utility consideration determined by a formula-based rate approved by FERC. The formula-based rate, which is updated annually, allows recovery of costs incurred to provide transmissions services and return on transmission-related net investment. We recognize revenue over time as we provide transmission service.

Other revenues represent revenues from other ancillary services provided to customers and are generally recorded as the service is provided to 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. Contract assets were not material at September 30, 2019. All of our receivables are unconditional rights to consideration and are included in "Accounts receivable" and "Accrued utility revenues" on the Consolidated Balance Sheets. Amounts billed are generally due within the following month.

Contract liabilities arise when payment from a customer is received before the performance obligations have been satisfied and represent the Company's obligations to transfer goods or services to a customer for which we have received consideration. The balances of contract liabilities were $7,194 and $5,897 at September 30, 2019 and October 1, 2018, respectively, and are included in "Other current liabilities" and "Other noncurrent liabilities" on the Consolidated Balance Sheets. Revenue recognized during Fiscal 2019 from the amount included in contract liabilities at October 1, 2018 was not material.

Revenue Disaggregation

The following table presents our disaggregated revenues by reportable segment during Fiscal 2019:

	2019		
	Total	Gas Utility	Electric Utility
Revenues from contracts with customers:			
Core Market:			
Residential	$ 552,721	$ 490,111	$ 62,610
Commercial & industrial	226,348	202,266	24,082
Large delivery service	138,009	138,009	—
Off-system sales and capacity releases	111,238	111,238	—
Other (a)	18,006	9,202	8,804
Total revenues from contracts with customers	1,046,322	950,826	95,496
Other revenues (b)	2,298	2,298	—
Total revenues	$ 1,048,620	$ 953,124	$ 95,496

(a) Gas Utility includes an unallocated negative surcharge revenue reduction of $(5,547) during Fiscal 2019 as a result of a PAPUC Order issued May 17, 2018, related to the TCJA (see Note 5).
(b) Represents certain revenues not from contracts with customers. These revenues are outside the scope of ASC 606 and are accounted for in accordance with other GAAP.

Remaining Performance Obligations

The Company 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 the performance obligations that are unsatisfied for core market customers and off-system sales and capacity releases as of the end of the reporting period because these contracts have an initial expected term of one year or less. Certain contracts with large delivery service customers contain minimum future performance obligations through 2053. At September 30, 2019, the Company expects to record approximately $191,000 of revenues related to the minimum future performance obligations over the remaining terms of the related contracts.

(Thousands of dollars, except where indicated otherwise)

5. REGULATORY ASSETS AND LIABILITIES AND REGULATORY MATTERS

The following regulatory assets and liabilities are included in our Consolidated Balance Sheets at September 30:

	2019	2018
Regulatory assets:		
Income taxes recoverable	$ 115,221	$ 110,129
Underfunded pension and postretirement plans	178,606	87,106
Environmental costs	59,477	58,836
Removal costs, net	28,358	32,025
Other	13,970	12,906
Total regulatory assets	$ 395,632	$ 301,002
Regulatory liabilities:		
Postretirement benefits overcollections	$ 14,473	$ 17,781
Deferred fuel and power refunds	6,072	36,723
State income tax benefits — distribution system repairs	24,967	22,611
PAPUC Temporary Rates Order	31,277	24,430
Excess federal deferred income taxes	279,525	285,221
Other	2,471	3,409
Total regulatory liabilities	$ 358,785	$ 390,175

Other than removal costs, UGI Utilities currently does not recover a rate of return on the regulatory assets included in the table above.

Income taxes recoverable. This regulatory asset is the result of recording deferred tax liabilities pertaining to temporary tax differences principally as a result of the pass through to ratepayers of the tax benefit on accelerated tax depreciation for state income tax purposes, and the flow through of accelerated tax depreciation for federal income tax purposes for certain years prior to 1981. These deferred taxes have been reduced by deferred tax assets pertaining to utility deferred investment tax credits. UGI Utilities has recorded regulatory income tax assets related to these deferred tax liabilities representing future revenues recoverable through the ratemaking process over the average remaining depreciable lives of the associated property ranging from 1 to approximately 65 years.

Underfunded pension and other postretirement plans. This regulatory asset represents the portion of net actuarial losses and prior service costs (credits) associated with pension and other postretirement benefits which are probable of being recovered through future rates based upon established regulatory practices. These regulatory assets are adjusted annually or more frequently under certain circumstances when the funded status of the plans is recorded in accordance with GAAP. These costs are amortized over the average remaining future service lives of plan participants.

Environmental costs. Environmental costs principally represent estimated probable future environmental remediation and investigation costs that Gas Utility expects to incur, primarily at MGP sites in Pennsylvania, in conjunction with remediation COAs with the PADEP. Pursuant to base rate orders, Gas Utility receives ratemaking recognition of its estimated environmental investigation and remediation costs associated with their environmental sites. This ratemaking recognition balances the accumulated difference between historical costs and rate recoveries with an estimate of future costs associated with the sites. At September 30, 2019, the period over which Gas Utility expects to recover these costs will depend upon future remediation activity. For additional information on environmental costs, see Note 12.

Removal costs, net. This regulatory asset represents costs incurred, net of salvage, associated with the retirement of depreciable utility plant. As required by PAPUC ratemaking, removal costs include actual costs incurred associated with asset retirement obligations. Consistent with prior ratemaking treatment, Gas Utility expects to recover these costs over five years.

Postretirement benefit overcollections. This regulatory liability represents the difference between amounts recovered through rates by Gas Utility and Electric Utility and actual costs incurred in accordance with accounting for postretirement benefits. With respect to Gas Utility, postretirement benefit overcollections are generally being refunded to customers over a ten-year period beginning October 19, 2016. With respect to Electric Utility, the overcollections are being refunded to ratepayers over a 20-year period effective October 27, 2018.

Deferred fuel and power refunds. Gas Utility's and Electric Utility's tariffs contain clauses that permit recovery of all prudently incurred purchased gas and power costs through the application of PGC rates in the case of Gas Utility and DS tariffs in the case of Electric Utility. These clauses provide for periodic adjustments to PGC and DS rates for differences between the total amount of purchased gas and electric generation supply costs collected from customers and recoverable costs incurred. Net undercollected costs are classified as a regulatory asset and net overcollections are classified as a regulatory liability.

Gas Utility uses derivative instruments to reduce volatility in the cost of gas it purchases for retail core-market customers. Realized and unrealized gains or losses on natural gas derivative instruments are included in deferred fuel and power costs or refunds. Net unrealized gains and (losses) on such contracts at September 30, 2019 and 2018, were $(2,242) and $2,856, respectively.

State income tax benefits — distribution system repairs. This regulatory liability represents Pennsylvania state income tax benefits, net of federal benefit, resulting from the deduction for income tax purposes of repair and maintenance costs associated with Gas Utility or Electric Utility assets that are capitalized for regulatory and GAAP reporting. The tax benefits associated with these repair and maintenance deductions will be reflected as a reduction to income tax expense over the remaining tax lives of the related book assets.

PAPUC Temporary Rates Order. On May 17, 2018, the PAPUC ordered each regulated utility currently not in a general base rate case proceeding, including UGI Gas, PNG and CPG, to reduce their rates to credit customers any tax savings as a result of the TCJA through the establishment of a negative surcharge applied to bills rendered on or after July 1, 2018. In accordance with the terms of the Temporary Rates Order, the initial temporary negative surcharge was reconciled at the end of Fiscal 2018 to reflect the difference in the amount of bill credit received by customers and the amount of benefits received by the Company through the fiscal year end period and updated negative surcharges were placed in effect on January 1, 2019 at rates of 4.71%, 2.87% and 6.34%, respectively, for the UGI South, UGI North and UGI Central rate districts (as described below). These negative surcharges remained in effect until October 11, 2019, the effective date of Gas Utility's new base rates.

In its May 17, 2018 Order, the PAPUC also required Pennsylvania utilities to establish a regulatory liability for tax benefits that accrued during the period January 1, 2018 through June 30, 2018, resulting from the reduced federal tax rate. The rate treatment of this regulatory liability is addressed in Gas Utility's base rate proceeding filed January 28, 2019 (see "Base Rate Filings" below).

For Pennsylvania utilities that were in a general base rate proceeding, including Electric Utility, no negative surcharge applied. The tax benefits that accrued during the period January 1, 2018 through October 26, 2018, the date before Electric Utility's base rate case became effective (see below), were refunded to Electric Utility ratepayers through a one-time bill credit.

Excess federal deferred income taxes. This regulatory liability is the result of remeasuring UGI Utilities' federal deferred income tax liabilities on utility plant due to the enactment of the TCJA on December 22, 2017 (see Note 8). In order for our utility assets to continue to be eligible for accelerated tax depreciation, current law requires that excess federal deferred income taxes resulting from the remeasurement be amortized no more rapidly than over the remaining lives of the assets that gave rise to the excess federal deferred income taxes, ranging from 1 year to approximately 65 years. This regulatory liability has been increased to reflect the tax benefit generated by the amortization of the excess deferred federal income taxes and is being amortized and credited to tax expense.

Other. Other regulatory assets and liabilities comprise a number of deferred items including, among others, over or under refunds of tax benefits related to the TCJA for periods after June 30, 2018, certain information technology costs, energy efficiency conservation costs and rate case expenses.

Other Regulatory Matters

Utility Merger. On March 8, 2018 and March 13, 2018, UGI Utilities filed merger authorization requests with the PAPUC and MDPSC, respectively, to merge PNG and CPG into UGI Utilities. After receiving all necessary FERC, MDPSC, and PAPUC approvals, CPG and PNG were merged with and into UGI Utilities effective October 1, 2018. Consistent with the MDPSC Order issued July 25, 2018, and the PAPUC Order issued September 26, 2018, the former CPG, PNG and UGI Utilities, Inc. Gas Division service territories became the UGI Central, UGI North and UGI South rate districts of the UGI Utilities, Inc. Gas Division, respectively, without any ratemaking change. UGI Utilities' obligations under the settlement approved by the PAPUC include various non-monetary conditions requiring UGI Utilities to maintain separate accounting-type schedules for limited future ratemaking purposes.

(Thousands of dollars, except where indicated otherwise)

Base Rate Filings. On January 28, 2019, the merged Gas Utility filed a rate request with the PAPUC to increase the base operating revenues for residential, commercial, and industrial customers throughout its Pennsylvania service territory by an aggregate $71,090. As part of this rate request, Gas Utility also proposed to create uniform class rates under a single tariff such that all members of each customer class, throughout a consolidated UGI Gas service territory, would be charged the same base distribution and purchased gas cost rates, and other surcharges, eliminating the need to maintain the former North, South, and Central rate districts formed as part of the earlier merger. In its initial filing, Gas Utility proposed a 4.5% negative surcharge applicable to all customer distribution service bills to return to ratepayers $24,029 of tax benefits experienced by UGI Utilities over the period January 1, 2018 to June 30, 2018, plus applicable interest, thereby satisfying a requirement to make a proposal for distributing those benefits within three years of the May 17, 2018 PAPUC Order. On October 4, 2019, the PAPUC issued a final Order approving a settlement that permits Gas Utility, effective October 11, 2019, to increase its base distribution revenues by $30,000 under a single tariff, approved a plan for uniform class rates, and permits the Company to extend its Energy Efficiency and Conservation and Growth Extension Tariff programs by an additional term of five years. The PAPUC's final Order approved the negative surcharge, mentioned above, which became effective for a twelve-month period beginning on October 11, 2019.

On January 26, 2018, Electric Utility filed a rate request with the PAPUC to increase its annual base distribution revenues by $9,200, which was later reduced by Electric Utility to $7,700 to reflect the impact of the TCJA and other adjustments. The increased revenues would fund ongoing system improvements and operations necessary to maintain safe and reliable electric service. On October 25, 2018, the PAPUC approved a final Order providing for a $3,201 annual base distribution rate increase for Electric Utility, effective October 27, 2018. As part of the final PAPUC Order, Electric Utility provided customers with a one-time $210 billing credit associated with 2018 TCJA tax benefits. On November 26, 2018, the Pennsylvania Office of Consumer Advocate filed an appeal to the Pennsylvania Commonwealth Court challenging the PAPUC's acceptance of Electric Utility's use of a fully projected future test year and handling of consolidated federal income tax benefits. UGI Utilities cannot predict the ultimate outcome of this appeal.

On August 31, 2017, the PAPUC approved a previously filed Joint Petition for Approval of Settlement of all issues providing for an $11,250 base distribution rate increase for PNG (now part of the consolidated UGI Gas service territory). The increase became effective on October 20, 2017.

6. PROPERTY, PLANT AND EQUIPMENT

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

	2019	2018
Distribution	$ 3,366,204	$ 3,106,599
Transmission	105,968	97,075
Computer equipment and software	195,520	127,201
General and other	193,824	154,521
Construction in process	76,611	130,893
Total property, plant and equipment	$ 3,938,127	$ 3,616,289

7. DEBT

Significant Financing Activities

On June 27, 2019, UGI Utilities entered into the UGI Utilities 2019 Credit Agreement with a group of banks providing for borrowings up to $350,000 (including a $100,000 sublimit for letters of credit). The Company may request an increase in the amount of loan commitments under the UGI Utilities 2019 Credit Agreement to a maximum aggregate amount of $150,000. Concurrently with entering into the UGI Utilities 2019 Credit Agreement, the Company terminated its existing $450,000 revolving credit agreement dated March 27, 2015. Under the UGI Utilities 2019 Credit Agreement, UGI Utilities may borrow at various prevailing market interest rates, including LIBOR and the banks' prime rate, plus a margin. The margin on such borrowings ranges from 0.0% to 1.75% and is based upon the credit ratings of certain indebtedness of UGI Utilities. The UGI Utilities 2019 Credit Agreement is currently scheduled to expire in June 2024.

(Thousands of dollars, except where indicated otherwise)

On February 1, 2019, UGI Utilities issued in a private placement $150,000 of 4.55% Senior Notes due February 1, 2049. The 4.55% Senior Notes were issued pursuant to a Note Purchase Agreement dated December 21, 2018, between UGI Utilities and certain note purchasers. The 4.55% Senior Notes are unsecured and rank equally with UGI Utilities' existing outstanding senior debt. The net proceeds from the sale of the 4.55% Senior Notes were used to reduce revolving credit agreement borrowings and for general corporate purposes.

In October 2017, UGI Utilities entered into the Utilities Term Loan, a $125,000 unsecured variable-rate term loan agreement with a group of banks. The Utilities Term Loan is payable in equal quarterly installments of $1,563, commencing in March 2018, with the balance of the principal being due and payable in full on October 30, 2022. Proceeds from the Utilities Term Loan were used to repay revolving credit agreement borrowings and for general corporate purposes. Under the Utilities Term Loan, UGI Utilities may borrow at various prevailing market interest rates, including LIBOR and the banks' prime rate, plus a margin. The margin on such borrowings ranges from 0.0% to 1.875% and is based upon the credit ratings of certain indebtedness of UGI Utilities. In July 2018, UGI Utilities entered into forward-starting pay-fixed, receive-variable interest rate swap that generally fixes the underlying prevailing market interest rates on Utilities Term Loan borrowings at approximately 3.00% through July 2022. This forward-starting interest rate swap commenced on September 30, 2019. We have designated this forward-starting interest rate swap as a cash flow hedge. At September 30, 2019 and September 30, 2018, the effective interest rate on this term loan was 3.05% and 2.76%, respectively.

Long-term Debt

Long-term debt comprises the following at September 30:

	2019	2018
Senior Notes:		
4.12%, due September 2046	$ 200,000	$ 200,000
4.98%, due March 2044	175,000	175,000
4.55%, due February 2049	150,000	—
4.12%, due October 2046	100,000	100,000
6.21%, due September 2036	100,000	100,000
2.95%, due June 2026	100,000	100,000
Medium-Term Notes:		
6.50%, due August 2033	20,000	20,000
6.13%, due October 2034	20,000	20,000
Variable-rate term loan, due through October 2022	114,063	120,313
Capital lease obligations	4,708	6,817
Total long-term debt	983,771	842,130
Less: unamortized debt issuance costs	(4,578)	(4,134)
Less: current maturities	(8,374)	(9,001)
Total long-term debt due after one year	$ 970,819	$ 828,995

Scheduled principal repayments of long-term debt for each of the next five fiscal years ending September 30 are as follows: $8,374 is due in Fiscal 2020; $7,995 is due in Fiscal 2021; $6,909 is due in Fiscal 2022; and $95,493 is due in Fiscal 2023. There are no scheduled principal repayments of long-term debt due in Fiscal 2024.

Credit Facilities

At September 30, 2019 and 2018, there were $166,000 and $189,500, respectively, of borrowings outstanding under credit agreements, which amounts are reflected as "Short-term borrowings" on the Consolidated Balance Sheets. The weighted-average interest rates on borrowings under the credit agreements at September 30, 2019 and 2018, were 3.00% and 3.03%, respectively. Issued and outstanding letters of credit, which reduce available borrowings under the credit agreements, totaled $2,000 at September 30, 2018. At September 30, 2019, there were no issued and outstanding letters of credit.

Restrictive Covenants. Certain of UGI Utilities' Senior Notes include the usual and customary covenants for similar type notes including, among others, maintenance of existence, payment of taxes when due, compliance with laws and maintenance of insurance. The UGI Utilities 2019 Credit Agreement, UGI Utilities' Senior Notes and its variable-rate term loan require UGI Utilities not to exceed a ratio of consolidated debt to consolidated total capital, as defined, of 0.65 to 1.00.

(Thousands of dollars, except where indicated otherwise)

8. INCOME TAXES

The provisions for income taxes consist of the following:

	2019	2018
Current expense (benefit):		
Federal	$ 15,351	$ (26,952)
State	5,183	10,729
Total current expense (benefit)	20,534	(16,223)
Deferred expense (benefit):		
Federal	17,142	60,766
State	5,580	1,486
Investment tax credit amortization	(318)	(318)
Total deferred expense	22,404	61,934
Total income tax expense	$ 42,938	$ 45,711

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

	2019	2018
U.S. federal statutory tax rate	21.0%	24.5%
Difference in tax rate due to:		
State income taxes, net of federal benefit	4.8	4.7
Effect of plant basis differences, including amortization of EDFIT	(1.4)	(1.0)
Effect of tax rate changes - TCJA	—	(3.8)
Excess tax benefits on share-based payments	(0.3)	(0.5)
Other, net	0.3	(0.4)
Effective tax rate	24.4%	23.5%

As a result of the TCJA, we reduced our net deferred income tax liabilities by $296,677 during Fiscal 2018 due to the remeasuring of our existing federal deferred income tax assets and liabilities from 35% to 21%. Because a significant amount of the reduction related to our regulated utility plant assets, most of the reduction to our deferred income taxes was not recognized immediately in income tax expense. For Fiscal 2018, the amount of the reduction in our net deferred income tax liabilities that reduced income tax expense, including adjustments to provisional amounts previously recorded, totaled $7,315.

In order for utility assets to continue to be eligible for accelerated tax depreciation, current law requires that excess deferred federal income taxes resulting from the measurement of deferred taxes on regulated utility plant be amortized no more rapidly than over the remaining lives of the assets that gave rise to the excess deferred income taxes. For Fiscal 2018, we initially recorded a net regulatory liability of $205,759 associated with the excess deferred federal income taxes related to our regulated utility plant assets. This regulatory liability was increased, and a federal deferred income tax asset recorded, in the amount of $83,603 to reflect the tax benefit generated by the amortization of the excess deferred federal income taxes. This regulatory liability is being amortized to income tax expense over the remaining lives of the assets that gave rise to the excess deferred income taxes. For further information on these regulatory assets and liabilities, see Note 5.

As further described in Note 5, on May 17, 2018, the PAPUC issued a Temporary Rates Order for all PAPUC-regulated utilities with regard to the TCJA. Among other things, the Temporary Rates Order required Pennsylvania utilities to establish a regulatory liability for tax benefits that accrued during the period January 1, 2018 through June 30, 2018, resulting from the change in the federal income tax rate from 35% to 21%. In order to reflect the effects of the tax savings from the change in the federal income tax rate for the period January 1, 2018 to June 30, 2018, during Fiscal 2018, UGI Utilities reduced its combined utility revenues by $24,098, and recorded a regulatory liability in an equal amount. The reduction reflects (1) $17,135 of tax benefits accrued during the period January 1, 2018, to June 30, 2018, plus (2) $6,963 to reflect tax benefits expected to be generated by the future amortization of the regulatory liability. Subsequently, this regulatory liability was adjusted to reflect the amount ultimately settled upon in the 2019 Gas Utility rate filing which was $24,029, plus applicable interest.

(Thousands of dollars, except where indicated otherwise)

Pennsylvania utility ratemaking practice permits the flow through to ratepayers of state tax benefits resulting from accelerated tax depreciation. For Fiscal 2019 and Fiscal 2018, the beneficial effects of state tax flow through of accelerated depreciation reduced tax expense by $7,440 and $4,211, respectively.

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

	2019	2018
Excess book basis over tax basis of property, plant and equipment	$ 459,719	$ 441,154
Goodwill	40,820	37,414
Regulatory assets	106,385	90,022
Other	2,343	3,954
Gross deferred tax liabilities	609,267	572,544
Pension plan liabilities	(49,770)	(19,831)
Deferred investment tax credits	(668)	(760)
Employee-related expenses	(4,050)	(4,581)
Regulatory liabilities	(96,718)	(118,506)
Environmental liabilities	(15,184)	(14,551)
Other	(15,914)	(13,391)
Gross deferred tax assets	(182,304)	(171,620)
Net deferred tax liabilities	$ 426,963	$ 400,924

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 income tax returns in various other 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.

As of September 30, 2019, we have unrecognized income tax benefits totaling $724 including related accrued interest of $23. If these unrecognized tax benefits were subsequently recognized, $724 would be recorded as a benefit to income taxes on the Consolidated Statement of Income and, therefore, would impact the reported effective tax rate. Generally, a net reduction in unrecognized tax benefits could occur because of the expiration of the statute of limitations in certain jurisdictions or as a result of settlements with tax authorities. There is no material change expected in unrecognized tax benefits and related interest in the next twelve months.

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

	2019	2018
Unrecognized tax benefits – beginning of year	$ 688	$ 1,829
Additions for tax positions taken in prior years	179	89
Settlements with tax authorities/statute lapses	(143)	(1,230)
Unrecognized tax benefits – end of year	$ 724	$ 688

9. EMPLOYEE RETIRMENT PLANS

Defined Benefit Pension and Other Postretirement Plans. We sponsor a defined benefit pension plan for employees hired prior to January 1, 2009, of UGI, UGI Utilities and certain of UGI's other domestic wholly owned subsidiaries. Pension Plan benefits are based on years of service, age and employee compensation. We also provide limited postretirement health care benefits to certain retirees and postretirement life insurance benefits to certain active and retired employees.

(Thousands of dollars, except where indicated otherwise)

The following table provides a reconciliation of the PBOs of the Pension Plan, the ABOs of the other postretirement plans, plan assets and the funded status of the Pension Plan and other postretirement plans as of September 30, 2019 and 2018. ABO is the present value of benefits earned to date with benefits based upon current compensation levels. PBO is ABO increased to reflect future compensation.

	Pension Benefits		Other Postretirement Benefits	
	2019	2018	2019	2018
Change in benefit obligations:				
Benefit obligations — beginning of year	$ 611,191	$ 639,245	$ 10,684	$ 11,904
Service cost	7,426	8,469	129	147
Interest cost	26,641	25,358	464	448
Actuarial loss (gain)	86,899	(36,050)	2,177	(1,348)
Benefits paid	(26,946)	(25,831)	(518)	(467)
Benefit obligations — end of year	$ 705,211	$ 611,191	$ 12,936	$ 10,684
Change in plan assets:				
Fair value of plan assets — beginning of year	$ 531,736	$ 498,080	$ 15,349	$ 14,771
Actual gain on assets	12,881	44,408	824	913
Employer contributions	11,467	15,079	—	—
Benefits paid	(26,946)	(25,831)	—	(335)
Fair value of plan assets — end of year	$ 529,138	$ 531,736	$ 16,173	$ 15,349
Funded status of the plans — end of year	$ (176,073)	$ (79,455)	$ 3,237	$ 4,665
Assets (liabilities) recorded in the balance sheet:				
Assets in excess of liabilities – included in other noncurrent assets	$ —	$ —	$ 3,237	$ 6,729
Unfunded liabilities – included in other noncurrent liabilities	(176,073)	(79,455)	—	(2,064)
Net amount recognized	$ (176,073)	$ (79,455)	$ 3,237	$ 4,665
Amounts recorded in stockholder's equity (pre-tax):				
Prior service cost (benefit)	$ 56	$ 80	$ (5)	$ (12)
Net actuarial loss (gain)	20,045	9,490	169	(368)
Total	$ 20,101	$ 9,570	$ 164	$ (380)
Amounts recorded in regulatory assets and liabilities (pre-tax):				
Prior service cost (benefit)	$ 497	$ 720	$ (721)	$ (1,163)
Net actuarial loss (gain)	177,449	85,746	1,381	(135)
Total	$ 177,946	$ 86,466	$ 660	$ (1,298)

In Fiscal 2019 and Fiscal 2018, the change in the pension plan's PBO due to actuarial gains and losses is principally the result of changes in discount rates. In Fiscal 2020, we estimate that we will amortize approximately $15,000 of net actuarial losses, primarily associated with Pension Plan, and $200 of net prior service cost from stockholder's equity and regulatory assets.

Actuarial assumptions are described below. The discount rate assumption was determined by selecting a hypothetical portfolio of high quality corporate bonds appropriate to provide for the projected benefit payments of the Company's postretirement plans. The discount rate was then developed as the single rate that equates the market value of the bonds purchased to the discounted value of the benefit payments. The expected rate of return on assets assumption is based on current and expected asset allocations as well as historical and expected returns on various categories of plan assets (as further described below).

(Thousands of dollars, except where indicated otherwise)

	Pension Benefits		Other Postretirement Benefits	
Weighted-average assumptions:	2019	2018	2019	2018
Discount rate – benefit obligations	3.30%	4.40%	3.30%	4.40%
Discount rate – benefit cost	4.40%	4.00%	4.40%	4.00%
Expected return on plan assets	7.30%	7.40%	5.00%	5.00%
Rate of increase in salary levels	3.25%	3.25%	3.25%	3.25%

The ABOs for the Pension Plan were $658,507 and $572,801 as of September 30, 2019 and 2018, respectively. Included in the end of year Pension Plan PBOs above are $71,576 at September 30, 2019, and $60,904 at September 30, 2018, relating to employees of UGI and certain of its other subsidiaries. Included in the end of year other postretirement plans ABOs above are $1,080 at September 30, 2019, and $880 at September 30, 2018, relating to employees of UGI and certain of its other subsidiaries.

The service cost component of our pension and other postretirement plans, net of amounts capitalized, are reflected in "Operating and administrative expenses" on the Consolidated Statements of Income. The non-service cost component, net of amounts capitalized as a regulatory asset, are reflected in "Pension and other postretirement plans non-service income (expense)" on the Consolidated Statements of Income. Net periodic pension and other postretirement benefit costs relating to the Company's employees include the following components:

	Pension Benefits		Other Postretirement Benefits	
	2019	2018	2019	2018
Service cost	$ 6,550	$ 7,525	$ 126	$ 267
Interest cost	24,202	23,067	436	447
Expected return on assets	(32,560)	(31,107)	(739)	(709)
Amortization of:				
Prior service cost (benefit)	251	250	(436)	(440)
Actuarial loss	6,882	11,936	67	94
Net benefit cost (benefit)	5,325	11,671	(546)	(341)
Change in associated regulatory liabilities	—	—	(1,370)	(490)
Net benefit cost (benefit) after change in regulatory liabilities	$ 5,325	$ 11,671	$ (1,916)	$ (831)

Pension Plan assets are held in trust and consist principally of publicly traded, diversified equity and fixed income mutual funds and, to a much lesser extent, UGI Common Stock. It is our general policy to fund amounts for Pension Plan benefits equal to at least the minimum contribution required by ERISA. From time to time we may, at our discretion, contribute additional amounts. During Fiscal 2019 and Fiscal 2018, we made contributions to the Pension Plan of $11,467 and $15,079, respectively. The minimum required contributions in Fiscal 2020 are not expected to be material.

UGI Utilities has established a VEBA trust to pay retiree health care and life insurance benefits by depositing into the VEBA the annual amount of postretirement benefits costs, if any, determined under GAAP. We do not expect to be required to make any contributions to the VEBA during Fiscal 2020.

(Thousands of dollars, except where indicated otherwise)

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

	Pension Benefits	Other Postretirement Benefits
Fiscal 2020	$ 29,383	$ 556
Fiscal 2021	30,761	540
Fiscal 2022	32,095	541
Fiscal 2023	33,488	528
Fiscal 2024	34,838	529
Fiscal 2025 - 2029	189,226	2,783

We also sponsor unfunded and non-qualified supplemental executive defined benefit retirement income plans. At September 30, 2019 and 2018, the PBOs of these plans were $5,559 and $3,803, respectively. We recorded expense for these plans of $443 in Fiscal 2019 and $355 in Fiscal 2018.

Pension Plan and VEBA Assets. The assets of the Pension Plan and the VEBA are held in trust. The investment policies and asset allocation strategies for the assets in these trusts are determined by an investment committee comprising officers of UGI and UGI Utilities. The overall investment objective of the Pension Plan and the VEBA is to achieve the best long-term rates of return within prudent and reasonable levels of risk. To achieve the stated objective, investments are made principally in publicly traded, diversified equity and fixed income index mutual funds and UGI Common Stock.

The targets, target ranges and actual allocations for the Pension Plan and VEBA trust assets at September 30 are as follows:

	Actual		Target Asset	Permitted
Pension Plan:	2019	2018	Allocation	Range
Equity investments:				
Domestic	54.8%	58.2%	52.5%	40.0% – 65.0%
International	11.8%	11.8%	12.5%	7.5% – 17.5%
Total	66.6%	70.0%	65.0%	60.0% – 70.0%
Fixed income funds & cash equivalents	33.4%	30.0%	35.0%	30.0% – 40.0%
Total	100.0%	100.0%	100.0%	

	Actual		Target Asset	Permitted
VEBA:	2019	2018	Allocation	Range
Domestic equity investments	64.9%	65.6%	65.0%	60.0% – 70.0%
Fixed income funds & cash equivalents	35.1%	34.4%	35.0%	30.0% – 40.0%
Total	100.0%	100.0%	100.0%	

Domestic equity investments include investments in large-cap mutual funds indexed to the S&P 500 and mid- and small-cap index mutual funds. Investments in international equity mutual funds seek to track performance of companies primarily in developed markets. The fixed income investments comprise investments designed to match the performance and duration of the Barclays U.S. Aggregate Index. According to statute, the aggregate holdings of all qualifying employer securities may not exceed 10% of the fair value of trust assets at the time of purchase. UGI Common Stock represented 7.7% and 8.5% of Pension Plan assets at September 30, 2019 and 2018, respectively.

(Thousands of dollars, except where indicated otherwise)

The fair values of the Pension Plan and VEBA trust assets are derived from quoted market prices as substantially all of these instruments have active markets. Cash equivalents are valued at the fund's unit net asset value as reported by the trustee. The fair values of the Pension Plan and VEBA trust assets by asset class and level within the fair value hierarchy, as described in Note 2, as of September 30, 2019 and 2018 are as follows:

	Pension Plan				
	Level 1	Level 2	Level 3	Other[(a)]	Total
September 30, 2019:					
Domestic equity investments:					
S&P 500 Index equity mutual funds	$ 176,384	$ —	$ —	$ —	$ 176,384
Small and midcap equity mutual funds	72,813	—	—	—	72,813
UGI Corporation Common Stock	40,912	—	—	—	40,912
Total domestic equity investments	290,109	—	—	—	290,109
International index equity mutual funds	62,097	—	—	—	62,097
Fixed income investments:					
Bond index mutual funds	170,488	—	—	—	170,488
Cash equivalents	—	—	—	6,444	6,444
Total fixed income investments	170,488	—	—	6,444	176,932
Total	$ 522,694	$ —	$ —	$ 6,444	$ 529,138
September 30, 2018:					
Equity investments:					
S&P 500 Index equity mutual funds	$ 188,437	$ —	$ —	$ —	$ 188,437
Small and midcap equity mutual funds	75,675	—	—	—	75,675
UGI Corporation Common Stock	45,152	—	—	—	45,152
Total domestic equity investments	309,264	—	—	—	309,264
International index equity mutual funds	62,907	—	—	—	62,907
Fixed income investments:					
Bond index mutual funds	154,345	—	—	—	154,345
Cash equivalents	—	—	—	5,198	5,198
Total fixed income investments	154,345	—	—	5,198	159,543
Total	$ 526,516	$ —	$ —	$ 5,198	$ 531,714

	VEBA				
	Level 1	Level 2	Level 3	Other[(a)]	Total
September 30, 2019:					
S&P 500 Index equity mutual fund	$ 10,500	$ —	$ —	$ —	$ 10,500
Bond index mutual fund	5,474	—	—	—	5,474
Cash equivalents	—	—	—	199	199
Total	$ 15,974	$ —	$ —	$ 199	$ 16,173
September 30, 2018:					
S&P 500 Index equity mutual fund	$ 10,074	$ —	$ —	$ —	$ 10,074
Bond index mutual fund	4,973	—	—	—	4,973
Cash equivalents	—	—	—	301	301
Total	$ 15,047	$ —	$ —	$ 301	$ 15,348

(a) Assets measured at NAV and therefore excluded from the fair value hierarchy.

The expected long-term rates of return on Pension Plan and VEBA trust assets have been developed using a best estimate of expected returns, volatilities and correlations for each asset class. The estimates are based on historical capital market performance data and future expectations provided by independent consultants. Future expectations are determined by using simulations that provide a wide range of scenarios of future market performance. The market conditions in these simulations consider the long-term relationships between equities and fixed income as well as current market conditions at the start of the simulation. The expected rate begins with a risk-free rate of return with other factors being added such as inflation, duration, credit spreads and equity risk premiums. The rates of return derived from this process are applied to our target asset allocation to develop a reasonable return assumption.

Defined Contribution Plan. We sponsor the Utilities Savings Plan. Generally, participants in the Utilities Savings Plan may contribute a portion of their compensation on a before-tax and after-tax basis. The Utilities Savings Plan provides for employer matching contributions. Those employees hired after December 31, 2008, who are not eligible to participate in the Pension Plan, receive employer matching contributions at a higher rate. The cost of benefits under the Utilities Savings Plan totaled $4,483 in Fiscal 2019 and $3,391 in Fiscal 2018. We also sponsor a nonqualified supplemental defined contribution executive retirement plan. This plan generally provides supplemental benefits to certain executives that would otherwise be provided under retirement plans but are prohibited due to limitations imposed by the Internal Revenue Code. Costs associated with this plan were not material in Fiscal 2019 and Fiscal 2018.

10. SERIES PREFERRED STOCK

The Company has 2,000,000 shares of Series Preferred Stock authorized for issuance, including both series subject to and series not subject to mandatory redemption. The Company had no shares of Series Preferred Stock outstanding at September 30, 2019 or 2018.

11. EQUITY-BASED COMPENSATION

Under UGI Corporation's 2013 OICP, certain key employees of UGI Utilities 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 UGI 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 UGI comparator group. 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 $1,218 ($866 after-tax) during Fiscal 2019 and $2,259 ($1,534 after-tax) during Fiscal 2018.

As of September 30, 2019, there was $1,015 of unrecognized compensation cost related to non-vested UGI stock options that is expected to be recognized over a weighted-average period of 1.9 years. As of September 30, 2019, there was a total of $755 of unrecognized compensation expense associated with 38,575 UGI Unit awards that is expected to be recognized over a weighted average period of 1.9 years. At September 30, 2019 and 2018, total liabilities of $115 and $1,200, respectively, associated with UGI Unit awards are reflected in "Other current liabilities" and "Other noncurrent liabilities" on the Consolidated Balance Sheets.

(Thousands of dollars, except where indicated otherwise)

The following table summarizes UGI Unit award activity for Fiscal 2019:

	UGI Units	Weighted-Average Grant-Date Fair Value (per Unit)
Total UGI Units at September 30, 2018 (a)	52,441	$ 45.69
Granted	13,000	$ 55.59
Transfers	(12,900)	$ 45.02
Forfeitures	(650)	$ 44.24
UGI Unit awards paid	(13,316)	$ 32.97
Total UGI Units at September 30, 2019 (a)	38,575	$ 53.67

(a) Total UGI Units includes UGI Performance Units and UGI Stock Units issued to retirement-eligible employees that vest on an accelerated basis. Total vested restricted units at September 30, 2019 and September 30, 2018 were 6,543 and 9,056, respectively.

12. COMMITMENTS AND CONTINGENCIES

Commitments

We lease various buildings and vehicles, computer and office equipment and other facilities 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 $2,284 in Fiscal 2019 and $6,702 in Fiscal 2018.

Minimum future payments under operating leases that have initial or remaining noncancelable terms in excess of one year for the fiscal years ending September 30 are as follows: 2020— $1,211; 2021 — $509; 2022 — $397; 2023 — $304; 2024 — $264. There are no minimum future payments under operating leases due after September 30, 2024.

Contingencies

Environmental Matters

From the late 1800s through the mid-1900s, UGI Utilities and its former subsidiaries owned and operated a number of MGPs prior to the general availability of natural gas. Some constituents of coal tars and other residues of the manufactured gas process are today considered hazardous substances under the Superfund Law and may be present on the sites of former MGPs. Between 1882 and 1953, UGI Utilities owned the stock of subsidiary gas companies in Pennsylvania and elsewhere and also operated the businesses of some gas companies under agreement. By the early 1950s, UGI Utilities divested all of its utility operations other than certain gas and electric operations. Beginning in 2006 and 2008, UGI Utilities also owned and operated two acquired subsidiaries (CPG and PNG), with similar histories of owning, and in some cases operating, MGPs in Pennsylvania. CPG and PNG merged into UGI Utilities effective October 1, 2018.

Prior to the Utility Merger, each of UGI Utilities and its subsidiaries, CPG and PNG, were subject to COAs with the PADEP to address the remediation of specified former MGP sites in Pennsylvania. In accordance with the COAs, as amended to recognize the Utility Merger, UGI Utilities, as the successor to CPG and PNG, is required to either obtain a certain number of points per calendar year based on defined eligible environmental investigatory and/or remedial activities at the MGPs and in the case of one COA, an additional obligation to plug specific natural gas wells, or make expenditures for such activities in an amount equal to an annual environmental cost cap (i.e. minimum expenditure threshold). The cost cap of the three COAs, in the aggregate, is $5,350. The three COAs are currently scheduled to terminate at the end of 2031, 2020 and 2020. At September 30, 2019 and 2018, our aggregate estimated accrued liabilities for environmental investigation and remediation costs related to the COAs totaled $50,441 and $50,970, respectively. UGI Utilities has recorded an associated regulatory asset for these costs because recovery of these costs from customers is probable. (See Note 5).

UGI Utilities does not expect the costs for investigation and remediation of hazardous substances at Pennsylvania MGP sites to be material to its results of operations because UGI Utilities receives ratemaking recovery of actual environmental investigation and remediation costs associated with the sites covered by the COAs. This ratemaking recognition reconciles the accumulated difference between historical costs and rate recoveries with an estimate of future costs associated with the sites.

(Thousands of dollars, except where indicated otherwise)

From time to time, UGI Utilities is notified of sites outside Pennsylvania on which private parties allege MGPs were formerly owned or operated by UGI Utilities or owned or operated by a former subsidiary. Such parties generally investigate the extent of environmental contamination or perform environmental remediation. Management believes that, under applicable law, UGI Utilities should not be liable in those instances in which a former subsidiary owned or operated an MGP. There could be, however, significant future costs of an uncertain amount associated with environmental damage caused by MGPs outside Pennsylvania that UGI Utilities directly operated, or that were owned or operated by a former subsidiary of UGI Utilities if a court were to conclude that (1) the subsidiary's separate corporate form should be disregarded, or (2) UGI Utilities should be considered to have been an operator because of its conduct with respect to its subsidiary's MGP. At September 30, 2019 and 2018, neither the undiscounted nor the accrued liability for environmental investigation and cleanup costs for UGI Utilities' MGP sites outside Pennsylvania was material.

13. FAIR VALUE MEASUREMENTS

Derivative Instruments

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

	Asset (Liability)			
	Level 1	Level 2	Level 3	Total
September 30, 2019				
Derivative instruments:				
Assets:				
Commodity contracts	$ 1,357	$ —	$ —	$ 1,357
Liabilities:				
Commodity contracts	$ (3,693)	$ —	$ —	$ (3,693)
Interest rate contracts	$ —	$ (4,589)	$ —	$ (4,589)
September 30, 2018				
Derivative instruments:				
Assets:				
Commodity contracts	$ 3,154	$ —	$ —	$ 3,154
Interest rate contracts	$ —	$ 30	$ —	$ 30
Liabilities:				
Commodity contracts	$ (146)	$ —	$ —	$ (146)

The fair values of our Level 1 exchange-traded commodity futures and option derivative contracts are based upon actively-quoted market prices for identical assets and liabilities. The fair values of the remainder of our derivative financial instruments, which are designated as Level 2, are generally based upon recent market transactions and related market indicators.

Other Financial Instruments

The carrying amounts of other financial instruments included in current assets and current liabilities (except for current maturities of long-term debt) approximate their fair values because of their short-term nature. We estimate the fair value of long-term debt by using current market rates and by discounting future cash flows using rates available for similar types of debt (Level 2). The carrying amount and estimated fair value of our long-term debt (including current maturities but excluding unamortized debt issuance costs) were as follows:

	2019	2018
Carrying amount	$ 983,771	$ 842,130
Estimated fair value	$ 1,098,945	$ 826,470

14. DERIVATIVE INSTRUMENTS AND HEDGING ACTIVITIES

We are exposed to certain market risks related to our ongoing business operations. Management uses derivative financial and commodity instruments, among other things, to manage these risks. The primary risks managed by derivative instruments are (1) commodity price risk 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. Because most of our commodity derivative instruments are generally subject to regulatory ratemaking mechanisms, we have limited commodity price risk associated with our Gas Utility or Electric Utility operations. For more information on the accounting for our derivative instruments, see Note 2.

Commodity Price Risk

Gas Utility's tariffs contain clauses that permit recovery of all of the prudently incurred costs of natural gas it sells to retail core-market customers, including the cost of financial instruments used to hedge purchased gas costs. As permitted and agreed to by the PAPUC pursuant to Gas Utility's annual PGC filings, Gas Utility currently uses NYMEX natural gas futures and option contracts to reduce commodity price volatility associated with a portion of the natural gas it purchases for its retail core-market customers. At September 30, 2019 and 2018, the volumes of natural gas associated with Gas Utility's unsettled NYMEX natural gas futures and option contracts totaled 23.4 million dekatherms and 23.2 million dekatherms, respectively. At September 30, 2019, the maximum period over which Gas Utility is economically hedging natural gas market price risk is 13 months. Gains and losses on natural gas futures contracts and natural gas option contracts are recorded in regulatory assets or liabilities on the Consolidated Balance Sheets because it is probable such gains or losses will be recoverable from, or refundable to, customers through the PGC recovery mechanism (see Note 5).

Electric Utility's DS tariffs permit the recovery of all prudently incurred costs of electricity it sells to DS customers, including the cost of financial instruments used to hedge electricity costs. Electric Utility enters into forward electricity purchase contracts to meet a substantial portion of its electricity supply needs. At September 30, 2019 and 2018, all Electric Utility forward electricity purchase contracts were subject to the NPNS exception.

In order to reduce operating expense volatility, UGI Utilities from time to time enters into NYMEX gasoline futures contracts for a portion of gasoline volumes expected to be used in the operation of its vehicles and equipment. At September 30, 2019 and 2018, the total volumes associated with gasoline futures contracts were not material.

Interest Rate Risk

UGI Utilities has a variable-rate term loan that is indexed to short-term market interest rates. UGI Utilities has entered into a forward starting, amortizing, pay-fixed, receive-variable interest rate swap that generally fixes the underlying prevailing market interest rates on borrowings at 3.00% beginning September 30, 2019 through July 2022. We have designated this forward-starting interest rate swap as a cash flow hedge. The initial notional amount of term loan debt subject to this interest rate swap agreement is $114,063.

Our long-term debt typically is issued at fixed rates of interest. As these long-term debt issuances mature, we typically refinance such debt with new debt having interest rates reflecting then-current market conditions. In order to reduce market rate risk on the underlying benchmark rate of interest associated with near- to medium-term forecasted issuances of fixed-rate debt, from time to time we enter into IRPAs. We account for IRPAs as cash flow hedges. At September 30, 2019 and 2018, we had no unsettled IRPAs. At September 30, 2019, the amount of net losses associated with interest rate hedges (excluding pay-fixed, receive-variable interest rate swaps) expected to be reclassified into earnings during the next twelve months is $3,485.

Derivative Instrument Credit Risk

Our commodity exchange-traded futures contracts generally require cash deposits in margin accounts. At September 30, 2019 and 2018, restricted cash in brokerage accounts totaled $5,902 and $1,190, respectively.

(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. 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, as well as the effects of offsetting:

	2019	2018
Derivative assets:		
Derivatives designated as hedging instruments:		
Interest rate contracts	$ —	$ 30
Derivatives subject to PGC and DS mechanisms:		
Commodity contracts	1,357	3,002
Derivatives not designated as hedging instruments:		
Commodity contracts	—	152
Total derivative assets – gross	1,357	3,184
Gross amounts offset in the balance sheet	(96)	(146)
Total derivative assets – net (a)	$ 1,261	$ 3,038
Derivative liabilities:		
Derivatives designated as hedging instruments:		
Interest rate contracts	$ (4,589)	$ —
Derivatives subject to PGC and DS mechanisms:		
Commodity contracts	(3,599)	(146)
Derivatives not designated as hedging instruments:		
Commodity contracts	(94)	—
Total derivative liabilities – gross	(8,282)	(146)
Gross amounts offset in the balance sheet	96	146
Total derivative liabilities – net (a)	$ (8,186)	$ —

(a) Derivative assets and liabilities with maturities greater than one year are recorded in "Other assets" and "Other noncurrent liabilities" on the Consolidated Balance Sheets.

(Thousands of dollars, except where indicated otherwise)

Effect of Derivative Instruments

The following table provides information on the effects of derivative instruments not subject to ratemaking mechanisms on the Consolidated Statements of Income and changes in AOCI for Fiscal 2019 and Fiscal 2018:

	Gain (Loss) Recognized in AOCI		Loss Reclassified from AOCI into Income		Location of Loss Reclassified from AOCI into Income
	2019	2018	2019	2018	
Cash Flow Hedges:					
Interest rate contracts	$ (4,620)	$ 30	$ (3,485)	$ (3,485)	Interest expense

	Gain (Loss) Recognized in Income		Location of Gain (Loss) Recognized in Income
	2019	2018	
Derivatives Not Subject to PGC and DS Mechanisms:			
Gasoline contracts	$ (347)	$ 319	Operating and administrative expenses

The amounts of derivative gains and losses on cash flow hedges representing ineffectiveness were not material for all periods presented.

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 which provide for the purchase and delivery of natural gas and electricity, and service contracts that require the counterparty to provide commodity storage, transportation or capacity service to meet our normal sales commitments. Although many of these contracts have the requisite elements of a derivative instrument, these contracts qualify for NPNS exception accounting because they provide for the delivery of products or services in quantities that are expected to be used in the normal course of operating our business and the price in the contract is based on an underlying that is directly associated with the price of the product or service being purchased or sold.

15. ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)

Other comprehensive income (loss) principally reflects losses on IRPAs and interest rate swaps qualifying as cash flow hedges and actuarial gains and losses on postretirement benefit plans, net of reclassifications to net income.

Changes in AOCI, net of tax, during Fiscal 2019 and Fiscal 2018 are as follows:

	Postretirement Benefit Plans	Derivative Instruments	Total
AOCI - September 30, 2017	$ (8,995)	$ (17,796)	$ (26,791)
Reclassifications of benefit plans actuarial losses and net prior service benefits	872	—	872
Reclassifications of net losses on IRPAs	—	2,367	2,367
Net gains on interest rate swaps	—	20	20
Benefit plans, principally actuarial gains	3,203	—	3,203
AOCI - September 30, 2018	$ (4,920)	$ (15,409)	$ (20,329)
Reclassifications of benefit plans actuarial losses and net prior service benefits	526	—	526
Reclassifications of net losses on IRPAs	—	2,479	2,479
Net losses on interest rate swaps	—	(3,285)	(3,285)
Benefit plans, principally actuarial losses	(8,402)	—	(8,402)
Reclassification of stranded income tax effects related to TCJA	(1,712)	(3,739)	(5,451)
AOCI - September 30, 2019	$ (14,508)	$ (19,954)	$ (34,462)

(Thousands of dollars, except where indicated otherwise)

Reclassifications of net losses on IRPAs are reflected in "Interest expense" on the Consolidated Statements of Income.

16. SEGMENT INFORMATION

We have determined that we have two reportable segments: (1) Gas Utility and (2) Electric Utility. Gas Utility revenues are derived principally from the sale and distribution of natural gas to customers in eastern and central Pennsylvania. Electric Utility derives its revenues principally from the sale and distribution of electricity in two northeastern Pennsylvania counties. The accounting policies of our reportable segments are the same as those described in Note 2.

No single customer represents more than ten percent of our consolidated revenues and there are no significant intersegment transactions. In addition, all of our reportable segments' revenues are derived from sources within the United States, and all of our reportable segments' long-lived assets are located in the United States. Financial information by business segment follows:

	Total	Gas Utility	Electric Utility
2019			
Revenues	$ 1,048,620	$ 953,124	$ 95,496
Cost of sales	$ 481,284	$ 430,468	$ 50,816
Depreciation	$ 92,772	$ 86,680	$ 6,092
Operating income	$ 224,212	$ 211,518	$ 12,694
Pension and other postretirement plans non-service income	$ 1,506	$ 1,422	$ 84
Earnings before interest expense and income taxes	$ 225,718	$ 212,940	$ 12,778
Interest expense	$ (49,602)	$ (46,888)	$ (2,714)
Income before income taxes	$ 176,116	$ 166,052	$ 10,064
Total assets	$ 3,559,529	$ 3,257,948	$ 301,581
Goodwill	$ 182,145	$ 182,145	$ —
Capital expenditures (including the effects of accruals)	$ 355,280	$ 333,247	$ 22,033
2018			
Revenues	$ 1,092,381	$ 994,814	$ 97,567
Cost of sales	$ 522,911	$ 467,528	$ 55,383
Depreciation	$ 84,644	$ 79,124	$ 5,520
Operating income	$ 239,976	$ 232,577	$ 7,399
Pension and other postretirement plans non-service (expense)	$ (2,454)	$ (2,147)	$ (307)
Earnings before interest expense and income taxes	$ 237,522	$ 230,430	$ 7,092
Interest expense	$ (42,890)	$ (41,414)	$ (1,476)
Income before income taxes	$ 194,632	$ 189,016	$ 5,616
Total assets	$ 3,266,576	$ 3,075,992	$ 190,584
Goodwill	$ 182,145	$ 182,145	$ —
Capital expenditures (including the effects of accruals)	$ 338,548	$ 320,018	$ 18,530

17. OTHER OPERATING INCOME (EXPENSE), NET

Other operating income (expense), net, comprises the following:

	2019	2018
Non-tariff service income	$ 708	$ 2,830
Net interest on PGC overcollections	(786)	(1,403)
Other, net	(1,274)	837
Total other operating (expense) income, net	$ (1,352)	$ 2,264

18. RELATED PARTY TRANSACTIONS

UGI provides certain financial and administrative services to UGI Utilities. UGI bills UGI Utilities monthly for all direct expenses incurred by UGI on behalf of UGI Utilities and an allocated share of indirect corporate expenses incurred or paid with respect to services provided to UGI Utilities. The allocation of indirect UGI corporate expenses to UGI Utilities utilizes a weighted, three-component formula comprising revenues, operating expenses and net assets employed and considers UGI Utilities' relative percentage of such items to the total of such items for all UGI operating subsidiaries for which general and administrative services are provided. Management believes that this allocation method is reasonable and equitable to UGI Utilities and this allocation method has been accepted by the PAPUC in past rate case proceedings and management audits as a reasonable method of allocating such expenses. UGI Utilities also engages in other services with various other affiliates pursuant to arrangements authorized by the PAPUC using similar allocation or market-based pricing methods. These billed expenses are classified as "Operating and administrative expenses — related parties" in the Condensed Consolidated Statements of Income. In addition, UGI Utilities provides limited administrative services to UGI and certain of UGI's subsidiaries under PAPUC affiliated interest agreements. Amounts billed to these entities by UGI Utilities during Fiscal 2019 and Fiscal 2018 totaled $5,041 and $5,305, respectively.

UGI Utilities is a party to SCAAs with Energy Services 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. UGI Utilities incurred costs associated with Energy Services' SCAAs during Fiscal 2019 and Fiscal 2018 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, UGI Utilities received security deposits from Energy Services. At September 30, 2019 and 2018, the amounts of such security deposits, which are included in "Other current liabilities" on the Consolidated Balance Sheets were $7,640 and $11,040, respectively.

UGI Utilities reflects the historical cost of the natural gas storage inventories and any exchange receivable from Energy Services (representing amounts of natural gas inventories used but not yet replenished by Energy Services) in "Inventories" on the Consolidated Balance Sheets. At September 30, 2019 and 2018, the carrying values of these gas storage inventories, comprising approximately 6.0 bcf and 6.7 bcf of natural gas, were $13,581 and $17,701, respectively

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

From time to time, UGI Utilities sells natural gas or pipeline capacity to Energy Services. During Fiscal 2019 and 2018, revenues associated with such sales to Energy Services totaled $64,784 and $103,667, respectively. Also from time to time, UGI Utilities purchases natural gas and pipeline capacity from Energy Services (in addition to those transactions already described above) and purchases a firm storage service from UGI Storage Company, a subsidiary of Energy Services, under one-year agreements. During Fiscal 2019 and 2018, such purchases totaled $118,014 and $156,794, respectively.