Aqua North Carolina, Inc.
NCUC Form W-1 – Rate Case Information Report
Water and Sewer Companies
Docket No. W-218, Sub 573

ITEM 16. The three (3) most recent annual reports to stockholders and subsequent quarterly reports to stockholders.

Please see the attached reports.

Response provided by:

Dean R. Gearhart
Rates and Planning Manager
Aqua North Carolina
202 Mackenan Drive
Cary, NC 27511

Item 16
W-218 Sub 573



RELIABLE FOR LIFE

Essential™
Providing natural resources for life.

Essential Utilities, Inc
2021 Annual Report

NYSE: WTRG

Essential

2021 YEAR IN REVIEW

OUR MILESTONES

135 YEARS
as a company

1 YEAR
as Essential Utilities

50 YEARS
on the NYSE

OUR IMPACT

10
states

ESTIMATED
5.4 MILLION
people served

3,200
employees

OUR INVESTMENT

MORE THAN
$1 BILLION
invested in infrastructure

470 MILES
of pipeline retired or replaced

2
water and wastewater acquisitions

SIGNED ACQUISITION AGREEMENTS

6
water and wastewater systems

25,800+
total customer equivalents

$141.5M
total purchase price

A WORD FROM OUR CHAIRMAN & CEO

Dear Shareholder,

On the heels of a pandemic that has transformed our country and amid the changes we continue to navigate as a result, our purpose remains steadfast. We recognize that Essential Utilities provides some of the most basic comforts to human beings, which is why we remain so committed to our important mission of safely and reliably delivering Earth's most essential resources to our customers and communities.

While the pandemic sharpened the world's image of "essential workers", we have always known that the dedicated and passionate team who ensure that water, wastewater and natural gas services are provided to our customers are Essential workers. Despite the challenges COVID presented, we continued to deliver for our customers. We kept our customers comfortable and productive in their homes and businesses, our employees safe, our financial performance on track and our commitment to our communities strong. At no point did any customer lose service due to the impact of the pandemic, and I compliment our incredible team for their role in making this happen.

When you think of water, wastewater and natural gas, you think essential. These words are intrinsically suited to each other because they underscore the fact that our infrastructure is critical to sustaining everyday life. We invested a record of more than $1 billion last year to strengthen our water, wastewater and natural gas infrastructure, and enhance customer experience across our operations.

While 2021 marked our first full year under the name Essential Utilities, our water and natural gas companies have long histories that span more than 135 years each. In 2021, we celebrated 50 years as a listed company on the New York Stock Exchange, and we provided our shareholders with more than 77 years of consecutive quarterly cash dividends.

In addition to our strong financial performance, we continue to think broadly about the environmental and social impact of our company. Environmental, Social and Governance (ESG) are more than just recent corporate buzz words. Our ESG work has always been part of the fabric of our company and plays an important role in our corporate strategy.

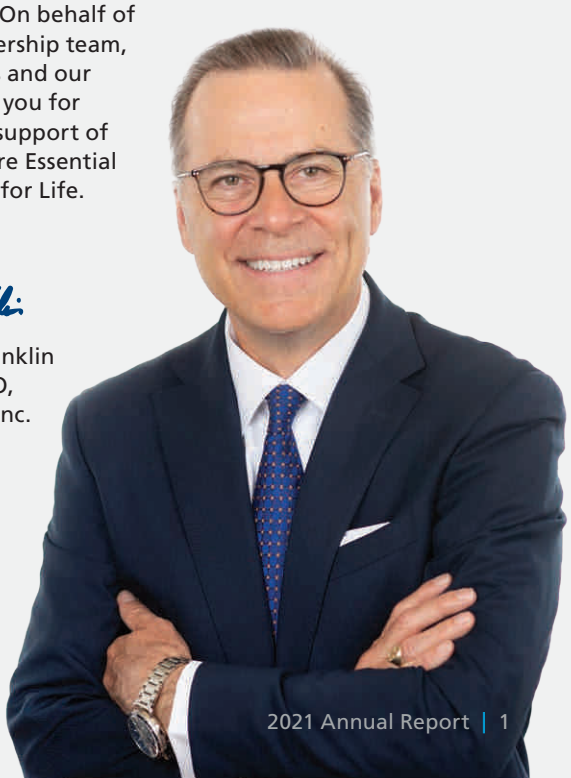
Our ESG work includes the protection of the health of our customers. We've committed to treat any of our finished water that exceeds 13 parts per trillion of PFAS, PFOA or PFNA despite the lack of a formal federal health standard. We also completed and opened our 14,700 square-foot state-of-the-art environmental laboratory in July, and we remain committed and on track to achieve our goal to reduce Scope 1 and 2 greenhouse gas emissions by 60% by 2035 from our 2019 baseline.

We made the important decision to reflect the demographic of our customer base within our employee population and actively pursue diversity among our vendor and supplier base, as we believe these fundamental changes are core to the long-term success of our company and its strategy. To accomplish this, we developed a multiyear plan to ensure at least 17% of our employees will be diverse and at least 15% of our controllable spending will be with diverse suppliers. At year end, 15% of Essential's employees were people of color and nearly 11% of our controllable spending was with diverse suppliers. Further, we have been named a Champion of Board Diversity by the Forum of Executive Women in recognition that one-third of our board of directors is comprised of women.

We are also proud to be a reliable and committed corporate partner, focusing on reforesting stream corridors with a goal to plant more than 170,000 trees and shrubs over the next 15 years, and empowering our employees to make a difference in their own communities by cultivating a corporate culture of volunteerism and philanthropy. In 2021, the Essential Foundation contributed more than $4.6 million to organizations that support our customers and communities.

2021 was a challenging year, but we persevered and lived up to the legacy that has been created over our long history. In 2022, we look forward to continuing to deliver our Essential Value Proposition: operational excellence for customers, strong financial performance for shareholders and important ESG advances for our communities.

Our promise is to deliver natural resources for life. On behalf of the Essential leadership team, board of directors and our employees, thank you for your unwavering support of our mission. We are Essential Utilities - Reliable for Life.



Christopher H. Franklin
Chairman and CEO,
Essential Utilities Inc.

FINANCIAL HIGHLIGHTS

In thousands, except per-share amounts	2021	2020	% Change
Operating Revenues [b]	$1,878,144	$1,462,698	28.4%
Regulated Segments:			
Regulated Water Segment Revenues	$980,203	$938,540	4.4%
Regulated Natural Gas Segment Revenues [b]	$859,902	$506,564	69.8%
Operations and Maintenance Expense [b]	$550,580	$528,611	4.2%
Net income [b]	$431,612	$284,849	51.5%
Capital Expenditures [b]	$1,020,519	$835,642	22.1%
Diluted net income per common share [b]	$1.67	$1.12	49.1%
Exclude:			
Transaction-related rate credits issued to utility customers	-	$23,004	-
Transaction expenses for acquisition of Peoples	-	$25,573	-
Income tax effect of Non-GAAP adjustments	-	($11,295)	-
Adjusted income [a] [b] (Non-GAAP financial measure)	$431,612	$322,131	34.0%
Adjusted income per common share [a] [b] (Non-GAAP financial measure)	$1.67	$1.27	31.5%
Annualized dividend rate per common share (12/31)	$1.0728	$1.0028	7.0%
Total Assets	$14,658,278	$13,705,277	7.0%
Number of utility customers served (12/31)	1,820,049	1,798,803	1.2%

(a) The GAAP financial measures are net income and net income per share.

(b) Includes Peoples' operating results as of the closing date of the Peoples acquisition on March 16, 2020.

Please see the investor relations page of Essential.co for a reconciliation of GAAP to non-GAAP financial measures.

2021
TWO ACQUISITIONS

7,700
Total Customers

$36.3M
Total Rate Base

1



Bourbonnais, IL
Aug. 31, 2021

Wastewater

6,700
Customers

$32.3M
Rate Base

2



Commons Water, TX
Aug. 2, 2021

Water

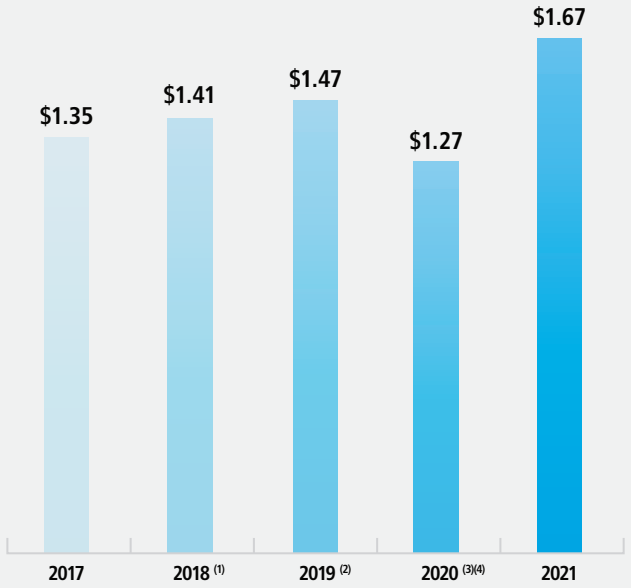
1,000
Customers

$4.0M
Rate Base

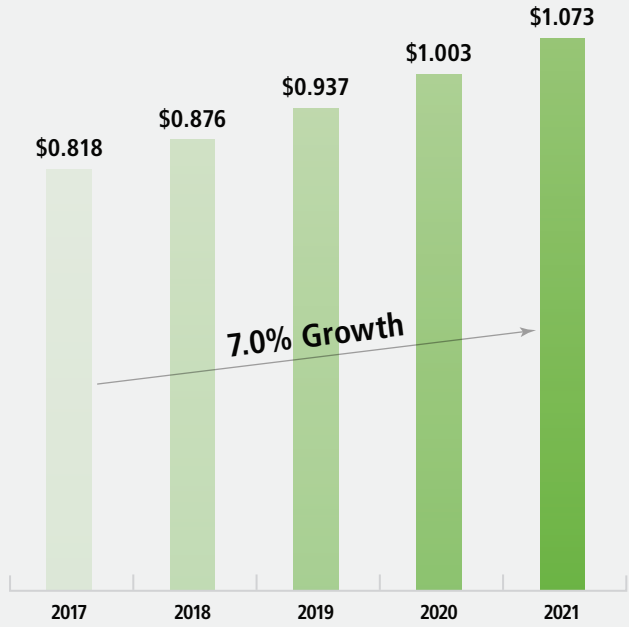
SPOTLIGHT ON TEXAS

In August 2021, Aqua Texas acquired the water treatment and distribution system in The Commons of Lake Houston community, which serves approximately 1,000 customers, in a milestone transaction for Essential. This was the first transaction under the new Texas fair market value legislation, which allows regulated water companies to pay a fair market value for the purchase of water and wastewater systems and include this fair value in rate base. Prior to the new legislation enacted in 2019, a system's value previously was determined by its depreciated original cost, which generally did not reflect a reasonable market value for those assets.

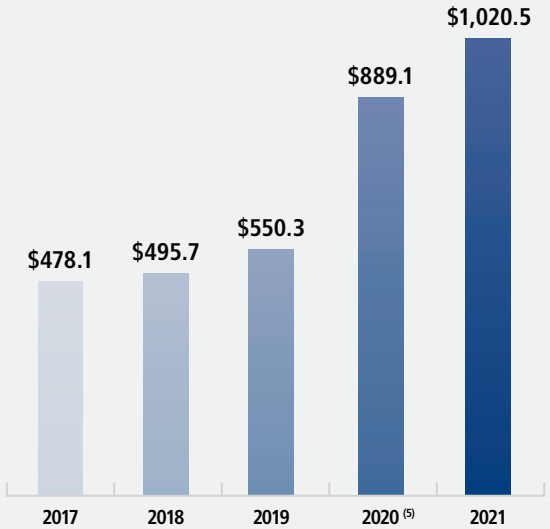
Diluted Adjusted Income per Common Share



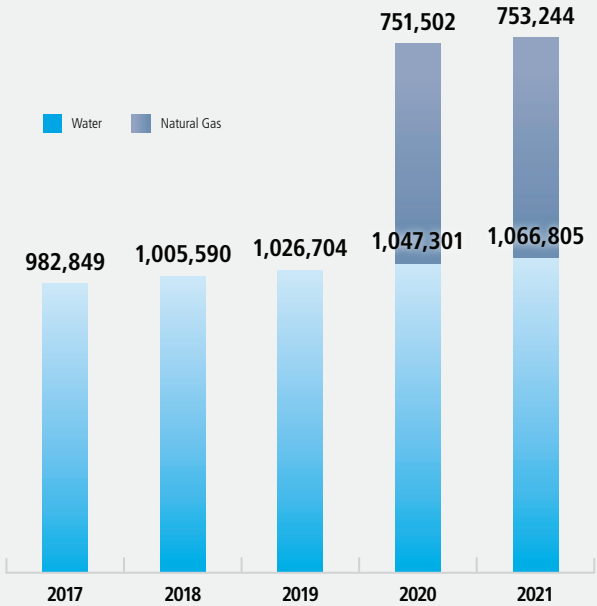
Dividends per Share (annualized)



Capital Investment (in millions of dollars)



Utility Customer Connections



(1) 2018 Net income per share was $1.08 (GAAP). 2018 adjusted for transaction costs and other items related to the Peoples transaction (Non-GAAP).
(2) 2019 Net income per share was $1.04 (GAAP). 2019 adjusted for transaction costs and other items related to the Peoples transaction (Non-GAAP).
(3) 2020 Net income per share was $1.12 (GAAP). 2020 adjusted for transaction costs and other items related to the Peoples transaction (Non-GAAP).
(4) Includes Peoples' operating results as of the closing date of the Peoples acquisition on March 16, 2020.
(5) 2020 Capital investment includes $53.5 million of capital invested by Peoples prior to closing.
Please see the investor relations page of Essential.co for a reconciliation of GAAP to non-GAAP financial measures.

RELIABLE ESG MOMENTUM



INDUSTRY LEADER IN ENVIRONMENTAL, SOCIAL AND GOVERNANCE PROGRESS

Essential continues to be an industry leader setting and achieving ambitious environmental, social and governance (ESG) targets. Our dependable track record and ambitious goals ensure we are positioned to play a critical role in solving our nation's infrastructure challenges and protecting our environment.

In January 2021, Essential announced an enterprise-wide commitment to substantially reduce its Scope 1 and 2 greenhouse gas (GHG) emissions. By 2035, we will reduce our emissions by 60% from our 2019 baseline. Our regulated water and gas segments will each be achieving roughly 60% reduced emissions in support of the enterprise-wide 60% reduction target. This science-based commitment is consistent with the rate of reduction necessary, through 2035, to keep on track with the Paris Agreement, which aims to limit the global temperature increase to well below two degrees Celsius.

We have already achieved an estimated 7% reduction from baseline, based mainly on pipeline replacement.

In 2021, Essential published a redesigned ESG microsite that featured more extensive and expanded reporting inclusive of our gas operations. Our ESG reporting was regarded by the League of American Communications Professionals to be among the top 30 in the world and top 15 in the United States. We were also named among 3BL Media's Top 100 Best Corporate Citizens. We are proud that ESG rating agencies such as ISS, MSCI, and Sustainalytics have each recognized the progress we have made by upgrading our scores, and we are eager to continue this momentum and expand upon our impressive ESG program.

Visit esg.essential.co to learn more about our extensive commitment to ESG.

MEASURING PROGRESS TOWARD OUR TARGETS

Scope 1 and 2 Greenhouse Gas Emissions

2019 Baseline



Diversity, Equity and Inclusion

Employees of Color



Controllable Spend with Diverse Suppliers



SUSTAINABILITY IN SOLAR

In 2020, Essential announced it would be sourcing nearly 100% of its electric power from renewables by 2022 for its water and wastewater operations in Illinois, New Jersey, Ohio and Pennsylvania. We also entered into a purchase power agreement to source 25% of our electricity from solar power for our Texas operations. One project at a time, we continue to work toward our goal of reducing our carbon footprint.

In Danville, Illinois, we completed construction and brought our brand-new 8,000-panel solar farm online in July 2021. The electricity generated from the solar panels goes straight to our Illinois water company's water treatment plant and is estimated to save approximately $4 million over the next 25 years, directly leading to ratepayer savings.

We are also committed to using solar power to better the environment and overcome operational challenges in our gas business. Solar technology is used to power remote telemetry equipment in the field to feed critical information to data systems. Solar powered equipment is utilized on remote automated valve actuators, allowing for remote operations of valves in the field. These solar solutions are low maintenance and cost less than other alternative sources of power.



New
8,000-panel
solar farm

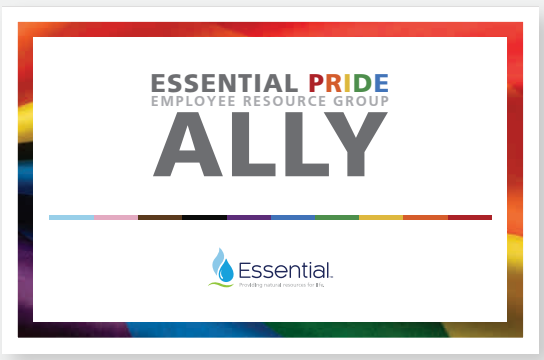
Saves
$4 million
over 25 years which directly benefits our customers' utility rates

COMMITMENT TO DIVERSITY, EQUITY & INCLUSION

Essential reaffirms our dedication to diversity, equity and inclusion by setting ambitious targets to transition toward a more diverse and inclusive company, as we recognize that diverse perspectives and experiences strengthen the fabric of Essential.

As of year-end 2021, we reached 15% employees of color towards our multi-year 17% target, established to more accurately reflect the composition of the communities we serve. In addition, nearly 11% of our controllable spending was with diverse suppliers, towards our multi-year target of 15%.

Essential is proud to support our employee resource groups to foster a diverse and inclusive workplace, and we continue to explore the ways in which we can recruit diverse talent and ensure that our commitment to diversity hiring is carried out at every level, up through our management team and board of directors.



In October 2021, Essential was proud to be recognized as a Champion of Board Diversity by The Forum of Executive Women for having one-third of our board comprised of women. This is a testament to our commitment and a great steppingstone toward our overarching ESG goals.

The Forum of Executive Women

RELIABLE INFRASTRUCTURE INVESTMENT

RECORD INFRASTRUCTURE INVESTMENT

Essential is committed to renewing and improving our nation's water, wastewater and natural gas infrastructure through thoughtful and continuous capital investment, enabling us to deliver on our mission of safely and reliably providing Earth's most essential resources.

In 2021, we invested a record of more than $1 billion to improve water and natural gas infrastructure systems and replaced or retired 470 miles of aging gas and water mains. We remain committed to ongoing record levels of infrastructure replacement and anticipate investing approximately $3 billion through 2024 towards this commitment.

We are proud to play a leading role in providing solutions that enable us to enhance customer service and environmental impact across our operations.

More than
$1 billion
invested in infrastructure

470 MILES
of pipeline retired or replaced







INVESTING IN THE COMMUNITIES WE SERVE

GOODWIN AND TOMBAUGH SYSTEM

In 2020, Peoples Gas began a 7-year effort in southwestern Pennsylvania to replace more than 300 miles of antiquated bare steel pipelines, known as the Goodwin and Tombaugh System. This system had originally been created to serve a remote, rural population of nearly 1,700 customers.

Rural populations are among the most underserved in our nation. Rural topography makes ongoing repairs to infrastructure difficult. Our decision was made to replace the aging bare steel with modern plastic pipe, rather than continue to make temporary repairs. This transformation protects the environment by reducing methane emissions and provides a new level of customer service that this population this population never previously experienced. It further promotes economic development by attracting new businesses to the area and supports future job creation.

> We're not just in the business of replacing pipes, we're in the business of serving our customers. What we're doing in this entire corner of Southwestern Pennsylvania will serve these customers and promote the entire region for decades.



Paul Becker, Peoples Vice President of Construction & Engineering



Damage sustained at Pickering West Water Treatment Plant during Hurricane Ida.

RESILIENCY DURING HURRICANE IDA

Essential's mission is protecting and providing Earth's most essential resources. While we are not immune to natural disasters, our planning and operational excellence ensure that service remains dependable and accessible for all.

Just before Labor Day 2021, our disaster response plan was put to the test when Hurricane Ida rolled through southeastern Pennsylvania, bringing record rainfall and severely damaging the Pickering West Water Treatment Plant, Aqua Pennsylvania's largest suburban Philadelphia water treatment facility. For perspective, 20% of the normal annual rain fell in a six-hour period. This historic and catastrophic flooding disabled operations for nine days and affected service to approximately 1 million customers' homes and businesses in four counties.

Immediately after floodwaters receded, a team of employees and contractors worked around the clock to optimize production at our other plants and ensure that service continued without disruption. Aqua Pennsylvania's robust distribution infrastructure improved over recent years, coupled with system redundancy, enabled us to reroute drinking water to compensate for the loss at Pickering West.

As we experienced first-hand with this storm, it is imperative to maintain, improve and protect the safety of our nation's infrastructure and have actionable natural disaster plans in place to provide reliable service to our customers. It is with this in mind that we plan for the future and remain steadfast in our mission to provide essential resources for life.

> "The operational excellence our team exhibited, in addition to our proactive disaster preparedness, facilitated this swift response and ensured we restored and continued to deliver reliable service for our customers."

Marc Lucca, Aqua Pennsylvania President





COMMUNITY RECOGNITION

Several preschool, elementary and middle school students from the Atwater community in Malvern, PA. were part of a group that expressed their appreciation for Aqua Pennsylvania employees in Schuylkill Township, Chester County. Students collected donations from neighbors to purchase Wawa gift cards and made handmade thank-you cards to show their appreciation for the Pickering Water Treatment Plant employees who maintained water service during the remnants of Hurricane Ida.

On the far right of this photo are members of the Atwater community with Todd Duerr, Aqua Pennsylvania vice president, production; Jeff Bickel, director, production; and Dave Marozzi, plant superintendent.

RELIABLE CUSTOMER COMMITMENT



EXCELLENCE IN WATER QUALITY

Our commitment to protecting public health and ensuring safe water remains at the center of all we do, which is why we are proud of our brand new, state-of-the-art environmental laboratory at our headquarters in Bryn Mawr.

The new lab, which began operations in March of 2021, is more than double the size of our previous lab that served our company for more than 60 years. It is one of only two utility laboratories accredited, and the only utility lab certified to test for Per- and polyfluoroalkyl substances (PFAS) contaminants in Pennsylvania. As part of our ongoing promise to ensure safe water for our customers, we committed to testing every one of our 1,500 water sources to understand where PFAS exists. We are proud that our new lab is equipped to continue this capability.

EXCEEDING INDUSTRY WATER QUALITY REQUIREMENTS

In 2020, we took the first step in necessary capital investment to install mitigation technology at water treatment facilities where source water exceeds 13 parts per trillion (ppt) for PFOA, PFAS and PFNA chemicals, which is significantly lower than the EPA health advisory level of 70 ppt.

> Our new 14,700 square-foot lab guarantees our ability to deliver safe water to our customers and return clean water to our streams. Aqua is at the forefront of water quality testing as part of our ongoing safety and reliability commitment to our communities.
>
> Christine Brisbin, Water Quality Director



COMMITMENT TO AFFORDABILITY & ACCESS



Essential passionately believes that every customer, regardless of income, deserves access to reliable water and gas services at an affordable rate. Through various customer support programs, we provide financial assistance to those who may need a helping hand, and we strive to ensure that this messaging is widely distributed to reach as many customers as possible.

The Low-Income Home Energy Assistance Program (LIHEAP) is a federally funded assistance program designed to financially support customers with their home heating needs. Similarly, the Customer Assistance Program (CAP) aims to provide affordable, monthly, long-term bill payment plans, based on income, to help Peoples' customers best manage their gas service.

We have similar programs in place for water and wastewater to ensure no customer is without water service in times of financial hardship. In October, we began promoting the rollout of the 2021 Low Income Household Water Assistance Program (LIHWAP), a national program established through the American Rescue Plan Act to help families experiencing financial challenges due to the ongoing COVID-19 pandemic. As the program launched in each state, Essential worked to publicize the availability of funding to water customers in Pennsylvania, Ohio, Illinois, Indiana and North Carolina.

> We are wholeheartedly committed to keeping rates as low as possible and working with our customers who are experiencing financial hardship, as we strive to ensure safe and reliable water, wastewater and natural gas service is both accessible and affordable.
>
> Rita Black, Director of Community Assistance Programs





CUSTOMER EDUCATION & OUTREACH

Part of our ongoing commitment to provide safe, reliable service is dependent on our public outreach to our customers. Year after year, Essential shares educational tools on conserving water and natural gas and avoiding service issues through customer mailers, social media and our website blog.

We provide proactive tips on how to avoid clogged pipes, best practices to prevent frozen pipes in cold weather, who to call before starting an excavation project and more. We also provide automatic notifications through Aqua's WaterSmart alerts and Peoples' outage map and alert system, designed to relay information quickly and reliably in times of emergencies or service disruption.

We continue to demonstrate our commitment to our communities to educate and equip our customers to join us as responsible stewards of these precious resources.





CARING ABOUT COMMUNITY

As a utility provider, Essential is committed to ensuring reliable and safe access to natural resources. As a mission-based organization, we are also driven to improve the quality of life and livelihood of our customers and communities within our company footprint. That is why we started the Essential Foundation, which provides grants to nonprofits working to improve the communities where we live and work. In 2021, Essential provided more than $4.6 million in charitable giving.

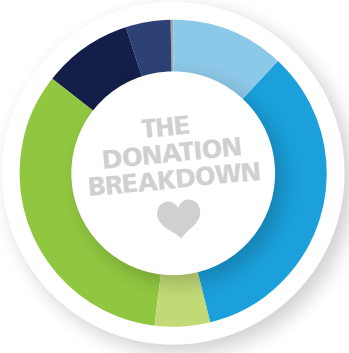
The company also encourages its employees to engage in philanthropy through its United Way campaign and matching gift program. Each year, we embark on a company-wide initiative with the United Way to fulfill a variety of needs across our 10-state footprint. Our 2021 campaign raised more than $800,000 in total contributions. In addition, the Essential Foundation matches employee donations to 501(c)3 charitable organizations.

We also work to cultivate a culture of volunteerism, recognizing that donating our time can be as meaningful to our employees as it is to our communities. We speak often of the ripple effect our volunteerism has by fostering an environment where everyone feels inspired to play an integral part.

While COVID-19 inhibited our public volunteer programs, our employees remained committed to our mission, supporting the United Way campaign and participating in volunteer efforts such as stream clean-ups, food banks and disaster relief.

The Essential Foundation provided $75,000 to the West Chester University Resource Pantry to help minimize food and basic need insecurities among college students.

2021 CHARITABLE DONATIONS: $4,619,050



$1,601,264
Direct Human Services

$549,486
Environment

$262,406
Diversity & Inclusion

$1,547,370
Community Support & Economic Growth

$435,150
Education

$210,820
Emergency Services

1,800+
Hours

$12,554
Matching Employee Gifts

> Through our community volunteer program, Essential team members serve their communities in meaningful ways, enriching their lives and making a positive impact on others.

Krista Scheirer, Lead Corporate Giving and Community Affairs



THE RIPPLE EFFECT OF A CULTURE OF VOLUNTEERISM

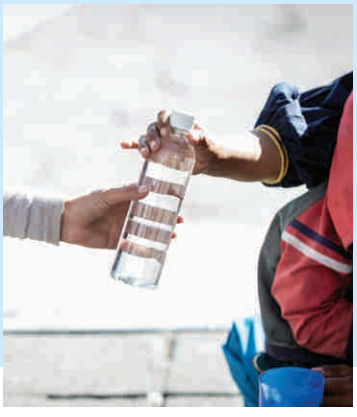
Essential operates in 10 states across the country, but our presence is felt locally throughout our service territory. We thrive when our communities thrive, and we proudly contribute time and resources to strengthen our communities. We aim to be a good corporate partner and model the gift of volunteerism across our company, but occasionally it's our employees who provide that gift to us.

Shawn Boyer Thanksgiving Drive

Shawn Boyer is the Security Lead at Aqua Pennsylvania and perfectly embodies our commitment to giving back. In November 2009, Shawn began an annual yearly tradition of delivering care packages to people experiencing homelessness throughout Philadelphia. He spends each Thanksgiving driving the city streets in a U-Haul, providing curated care packages containing basic necessities. In 2021, Shawn completed his 12th round of Thanksgiving deliveries, giving away nearly 400 bags. For many years, Shawn kept his tradition private. Word began to spread, however, and in recent years Shawn has been joined by Essential leadership, including Chris Franklin, Chris Luning and Chris Kelly, all of whom have helped to distribute care packages throughout the holiday.









Travis Leonard Sleep in Heavenly Peace

Travis Leonard is an Aqua Ohio employee who works in the Struthers, Ohio division and inspired his entire team to come together in a meaningful way. Travis is a volunteer with Sleep in Heavenly Peace, an organization dedicated to building, assembling and delivering fully outfitted beds to children and families in need. When he shared his involvement with the organization with his coworkers, they learned their local city council was fundraising for the cause but was short the funding needed to complete the project. Together with his area manager, they committed to help with the project. Aqua Ohio donated the remaining money needed to purchase all materials, and seven of his coworkers came together on a cold Saturday morning to help build the remaining beds needed for the project.

Shawn and Travis are just two examples of the generous, dedicated people we have behind the scenes, enabling us to provide essential resources while making a positive impact in our communities. These selfless acts are a humbling reminder of our commitment to strengthening our communities and making investments in the areas we serve. We are proud of the work we do as a company, and even more proud to employ people like Shawn and Travis who inspire us all to be better every day. When employees are passionate about giving back to their communities, Essential is thrilled to support them.

2021 FINANCIAL DATA



SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Certain statements in this Annual Report (the "Annual Report") are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 that are made based upon, among other things, our current assumptions, expectations, plans, and beliefs concerning future events and their potential effect on us. These forward-looking statements involve risks, uncertainties and other factors, many of which are outside our control that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by these forward-looking statements. In some cases you can identify forward-looking statements where statements are preceded by, followed by or include the words "believes," "expects," "estimates", "anticipates," "plans," "future," "potential," "probably," "predictions," "intends," "will," "continue," "in the event" or the negative of such terms or similar expressions.

Because forward-looking statements involve risks and uncertainties, there are important factors that could cause actual results to differ materially from those expressed or implied by these forward-looking statements, including but not limited to:

- impacts from the global outbreak of COVID-19, including on consumption, usage and collections.
- the success in the closing of, and the profitability of future acquisitions;
- changes in general economic, business, credit and financial market conditions;
- our ability to manage the expansion of our business, including our ability to manage our expanded operations resulting from the Peoples Gas Acquisition;
- changes in environmental conditions, including the effects of climate change;
- our ability to integrate and otherwise realize all of the anticipated benefits of businesses, technologies or services which we may acquire;
- the decisions of governmental and regulatory bodies, including decisions on regulatory filings, including rate increase requests and decisions regarding potential acquisitions;
- our ability to file rate cases on a timely basis to minimize regulatory lag;
- the impact of inflation on our business and on our customers;
- abnormal weather conditions, including those that result in water use restrictions;
- the seasonality of our business;
- our ability to treat and supply water or collect and treat wastewater;
- our ability to source sufficient natural gas to meet customer demand in a timely manner;
- the continuous and reliable operation of our information technology systems, including the impact of cyber security attacks or other cyber-related events;
- changes in governmental laws, regulations and policies, including those dealing with taxation, the environment, health and water quality, and public utility regulation;
- the extent to which we are able to develop and market new and improved services;
- the effect of the loss of major customers;
- our ability to retain the services of key personnel and to hire qualified personnel as we expand;
- labor disputes;
- increasing difficulties in obtaining insurance and increased cost of insurance;
- cost overruns relating to improvements to, or the expansion of, our operations;
- inflation in the costs of goods and services;
- the effect of natural gas price volatility;
- civil disturbance or terroristic threats or acts;
- changes to the rules or our assumptions underlying our determination of what qualifies for an income tax deduction for qualifying utility asset improvements;
- changes in, or unanticipated, capital requirements;
- changes in our credit rating or the market price of our common stock;
- changes in valuation of strategic ventures;
- changes in accounting pronouncements;

- litigation and claims; and
- restrictions on our subsidiaries' ability to make dividends and other distributions.

Given these risks and uncertainties, you should not place undue reliance on any forward-looking statements. You should read this Annual Report completely and with the understanding that our actual future results, performance and achievements may be materially different from what we expect. These forward-looking statements represent assumptions, expectations, plans, and beliefs only as of the date of this Annual Report. Except for our ongoing obligations to disclose certain information under the federal securities laws, we are not obligated, and assume no obligation, to update these forward-looking statements, even though our situation may change in the future. For further information or other factors which could affect our financial results and such forward-looking statements, see Item 1A – Risk Factors in our Annual Report on Form 10-K for the fiscal year ended December 31, 2021.

OVERVIEW

The following discussion and analysis of our financial condition and results of operations for 2021 compared to 2020 should be read together with our Consolidated Financial Statements and accompanying Notes included in this Annual Report. For discussion of our results of operations and cash flows for 2020 compared with 2019, refer to Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Annual Report on Form 10-K for our fiscal year ended December 31, 2020, filed with the SEC on March 1, 2021. This discussion contains forward-looking statements that are based on management's current expectations, estimates, and projections about our business, operations, and financial performance. All dollar amounts are in thousands of dollars, except per share amounts.

The Company

Essential Utilities, Inc., (Essential Utilities, the Company, we, us, or our), a Pennsylvania corporation, is the holding company for regulated utilities providing water, wastewater, or natural gas services to an estimated five million people in Pennsylvania, Ohio, Texas, Illinois, North Carolina, New Jersey, Indiana, Virginia, West Virginia, and Kentucky under the Aqua and Peoples brands. One of our largest operating subsidiaries, Aqua Pennsylvania, Inc. (Aqua Pennsylvania), provides water or wastewater services to approximately one-half of the total number of water or wastewater customers we serve. These customers are located in the suburban areas in counties north and west of the City of Philadelphia and in 27 other counties in Pennsylvania. Our other regulated water or wastewater utility subsidiaries provide similar services in seven additional states. Additionally, pursuant to the Company's growth strategy, commencing on March 16, 2020, with the completion of the Peoples Gas Acquisition, the Company began to provide natural gas distribution services to customers in western Pennsylvania, Kentucky, and West Virginia. Approximately 93% of the total number of natural gas utility customers we serve are in western Pennsylvania. Lastly, the Company's market-based activities are conducted through Aqua Infrastructure, LLC and Aqua Resources, Inc. and certain other non-regulated subsidiaries of Peoples. Prior to our October 30, 2020 sale of our investment in a joint venture, Aqua Infrastructure provided non-utility raw water supply services for firms in the natural gas drilling industry. Following the October 30, 2020 closing, Aqua Infrastructure does not provide any services to the natural gas drilling industry. Aqua Resources offers, through a third-party, water and sewer service line protection solutions and repair services to households. Other non-regulated subsidiaries of Peoples provide utility service line protection services to households and operate gas marketing and production businesses.

COVID-19 Pandemic

We provide a critical service to our customers, which means that it is paramount that we keep our employees who operate the business safe and informed while supporting our customers and assuring the continuity of our operations. We continue to monitor the COVID-19 pandemic and continue to take steps to mitigate the potential risks to our employees. We continue to implement strong physical and cyber security measures in an effort to ensure that our systems remain functional in order to both serve our operational needs with a hybrid workforce and maintain uninterrupted service to our customers. We continue to monitor developments affecting our business, workforce, and suppliers and take additional precautions as we believe are warranted. We are continuing with our capital investment program and continue to work with our suppliers to monitor and address the risks present in our supply chain. While we have experienced some delays in certain materials, we have been able to adjust our purchasing procedures to secure and stock the necessary materials without materially impacting our operations or capital investment program. We are actively monitoring our utility billings for changes in residential, commercial and industrial usage. In addition, we are monitoring collections of customer utility accounts as to potential impacts on cash flows, and increased expenses for costs associated with workforce-related expenses, security and cleaning of company offices and operating facilities, as well as other one-time expenses above the expense amounts included in general rates.

While the pandemic presents risks to the Company's business, as further described in Part I, Item 1A — Risk Factors in our Annual Report on Form 10-K for the fiscal year ended December 31, 2021, the Company has not experienced any material financial or operational impacts related to COVID-19. Despite our efforts, the potential for a material negative impact on the Company exists as the COVID-19 pandemic also depends on factors beyond our knowledge, control, or ability to predict, including the duration and severity of this pandemic, the emergence of new variants of the virus, the development and availability of effective treatments and vaccines, as well as third party actions taken to contain its spread and mitigate its public health effects.

Economic Regulation

Most of our utility operations are subject to regulation by their respective state utility commissions, which have broad administrative power and authority to regulate billing rates, determine franchise areas and conditions of service, approve acquisitions, and authorize the issuance of securities. The utility commissions also generally establish uniform systems of accounts and approve the terms of contracts with affiliates and customers, business combinations with other utility systems, and loans and other financings. The policies of the utility commissions often differ from state to state and may change over time. A small number of our operations are subject to rate regulation by county or city government. Over time, the regulatory party in a particular state may change. The profitability of our utility operations is influenced to a great extent by the timeliness and adequacy of rate allowances in the various states in which we operate. One consideration we may undertake in evaluating on which states to focus our growth and investment strategy is whether a state provides for consolidated rates, a surcharge for replacing and rehabilitating infrastructure, fair value treatment of acquired utility systems, and other regulatory policies that promote infrastructure investment and efficiency in processing rate cases.

Rate Case Management Capability – The mission of the regulated utility industry is to provide quality and reliable utility service at reasonable rates to customers, while earning a fair return for shareholders. We strive to achieve the industry's mission by effective planning, efficient investments, and productive use of our resources. We maintain a rate case management capability to pursue timely and adequate returns on the capital investments that we make in improving our distribution system, treatment plants, information technology systems, and other infrastructure. This capital investment creates assets that are used and useful in providing utility service and is commonly referred to as rate base. Timely and adequate rate relief is important to our continued profitability and in providing a fair return to our shareholders; thus, providing access to capital markets to help fund these investments. In pursuing our rate case strategy, we consider the amount of net utility plant additions and replacements made since the previous rate decision, the changes in the cost of capital, changes in our capital structure, and changes in operating and other costs. Based on these assessments, our utility operations periodically file rate increase requests with their respective state utility commissions or local regulatory authorities. In general, as a regulated enterprise, our utility rates are established to provide full recovery of utility

operating costs, taxes, interest on debt used to finance capital investments, and a return on equity used to finance capital investments. Our ability to recover our expenses in a timely manner and earn a return on equity employed in the business helps determine the profitability of the Company.

As of December 31, 2021, the Company's rate base is estimated to be $8,600,000, which is comprised of:

- $5,900,000 in the Regulated Water segment; and
- $2,700,000 in the Regulated Natural Gas segment.

As of December 31, 2021, the regulatory status of the Company's rate base is estimated to be as follows:

- $7,200,000 filed with respective state utility commissions or local regulatory authorities; and
- $1,400,000 not yet filed with respective state utility commissions or local regulatory authorities.

Our water and wastewater operations are composed of 45 rate divisions, and our natural gas operations are comprised of 4 rate divisions. Each of our utility rate divisions require a separate rate filing for the evaluation of the cost of service and recovery of investments in connection with the establishment of tariff rates for that rate division. When feasible and beneficial to our utility customers, we have sought approval from the applicable state utility commission to consolidate rate divisions to achieve a more even distribution of costs over a larger customer base. All of the eight states in which we operate water and wastewater utilities currently permit us to file a revenue requirement using some form of consolidated rates for some or all of the rate divisions in that state.

Our operating subsidiaries received rate increases representing estimated annualized revenues of $3,390 in 2021 resulting from six base rate decisions, $4,480 in 2020 resulting from five base rate decisions, and $52,974 in 2019 resulting from four base rate decisions. Revenues from these increases realized in the year of grant were $2,995 in 2021, $1,594 in 2020, and $32,287 in 2019.

Revenue Surcharges – Eight states in which we operate water and wastewater utilities, and three states in which we operate natural gas utilities permit us to add an infrastructure rehabilitation surcharge to their respective bills to offset the additional depreciation and capital costs associated with capital expenditures related to replacing and rehabilitating infrastructure systems. In our other states, utilities absorb all of the depreciation and capital costs of these projects between base rate increases without the benefit of additional revenues. The gap between the time that a capital project is completed and the recovery of its costs in rates is known as regulatory lag. This surcharge is intended to substantially reduce regulatory lag, which could act as a disincentive for utilities to rehabilitate their infrastructure. In addition, some states permit our subsidiaries to use a surcharge or credit on their bills to reflect allowable changes in costs, such as changes in state tax rates, other taxes and purchased water costs, until such time as the new costs are fully incorporated in base rates. Additional information regarding revenue surcharges is provided in Note 17 – *Rate Activity* in this Annual Report.

Inflation and Operating Costs – Most elements of operating costs are subject to the effects of inflation and changes in the number of customers served. Several elements are subject to the effects of changes in water or gas consumption, weather conditions, and the degree of water treatment required due to variations in the quality of the raw water. The principal elements of operating costs are purchased gas, labor and employee benefits, electricity, chemicals, transportation, maintenance expenses, insurance and claims costs, and costs to comply with environmental regulations. Electricity and chemical expenses vary in relationship to water or gas consumption, raw water quality, wastewater volumes, and price changes. Maintenance expenses are sensitive to extremely cold weather, which can cause utility mains to rupture and natural gas service lines to freeze, resulting in additional costs to repair the affected mains.

Materials and supplies, freight, and labor inflation resulted in increased costs in fiscal 2021, and we expect this trend will continue in fiscal 2022. Recovery of the effects of inflation through higher customer rates is dependent upon receiving adequate and timely rate increases. However, rate increases are not retroactive and often lag increases in costs caused by inflation. On occasion, our regulated utility companies may enter into rate settlement agreements, which require us to

wait for a period of time to file the next base rate increase request. These agreements may result in regulatory lag whereby inflationary increases in expenses may not be reflected in rates, and may not yet be requested, or a gap may exist between when a capital project is completed and the start of its recovery in rates. Even during periods of moderate inflation, the effects of inflation can have a negative impact on our operating results.

Our natural gas distribution operations are also affected by the cost of natural gas. We are able to generally pass the cost of gas to our customers without markup under purchase gas cost adjustment mechanisms; therefore, increases in the cost of gas are offset by a corresponding increase in revenues. However, higher gas costs may adversely impact our accounts receivable collections, resulting in higher bad debt expense. This risk is currently mitigated by rate design that allows us to collect from our customers a portion of our bad debt expense. Additionally, higher gas costs may require us to increase borrowings under our credit facilities, resulting in higher interest expense. A typical residential natural gas bill includes charges for the cost of gas, delivery, and other charges. As of January 1, 2022, the annual portion of a typical Peoples Natural Gas residential bill related to gas costs is approximately 49%. In periods when we experience market increases in natural gas costs, such as in 2021, customer affordability and usage may be reduced. Customer conservation measures may occur that can reduce natural gas revenues, either temporarily or over time.

Income Tax Accounting Change - On March 31, 2020, the Company changed the method of tax accounting for certain qualifying infrastructure investments at its Peoples Natural Gas subsidiary, its largest natural gas subsidiary in Pennsylvania. This change allows a tax deduction for qualifying utility asset improvement costs that were formerly capitalized for tax purposes. Consistent with the Company's accounting for differences between book and tax expenditures for its Aqua Pennsylvania subsidiary, the Company is utilizing the flow-through method to account for this timing difference. In addition, the Company calculated the income tax benefits for qualifying capital expenditures made prior to March 16, 2020 (catch-up adjustment) and has recorded a regulatory liability for $160,655 for these income tax benefits. In August 2020, the Company filed a petition with the Pennsylvania Public Utility Commission proposing treatment of the catch-up adjustment. On March 11, 2021, the Company and the statutory advocates filed a Joint Petition of Settlement (Settlement) representing a settlement of the parties, and, on May 6, 2021, it was approved by the Pennsylvania Public Utility Commission. The Settlement stipulates, among other points, that the catch-up adjustment be provided to utility customers over a five-year period, and the Company can continue to use flow-through accounting for the current tax repair benefit until its next base rate case. The five-year customer surcredit for the catch-up adjustment was initiated in August 2021. In addition, consistent with the Settlement, the Company contributed $500 to a customer-bill payment assistance program in July 2021 and in December 2021, provided $5,000 in customer rate credit relief for past-due accounts of natural gas customers impacted by the COVID-19 pandemic.

Growth-Through-Acquisition Strategy

Part of our strategy to meet the industry challenges is to actively explore opportunities to expand our utility operations through acquisitions of water, wastewater, and other utilities either in areas adjacent to our existing service areas or in new service areas, and to explore acquiring market-based businesses that are complementary to our regulated utility operations. To complement our growth strategy, we routinely evaluate the operating performance of our individual utility systems, and in instances where limited economic growth opportunities exist or where we are unable to achieve favorable operating results or a return on equity that we consider acceptable, we will seek to sell the utility system and reinvest the proceeds in other utility systems. Consistent with this strategy, we are focusing our acquisitions and resources in states where we have critical mass of operations in an effort to achieve economies of scale and increased efficiency. Our growth-through-acquisition strategy allows us to operate more efficiently by sharing operating expenses over more utility customers and provides new locations for future earnings growth through capital investment. Another element of our growth strategy is the consideration of opportunities to expand by acquiring other utilities, including those that may be in a new state if they provide promising economic growth opportunities and a return on equity that we consider acceptable. Our ability to successfully execute this strategy historically and to meet the industry challenges has largely been due to our core competencies, financial position, and our qualified and trained workforce, which we strive to retain by treating employees fairly and providing our employees with development and growth opportunities.

On March 16, 2020, we completed the acquisition of Peoples Natural Gas (the Peoples Gas Acquisition), which expanded the Company's regulated utility business to include natural gas distribution, serving approximately 750,000 natural gas utility customers in western Pennsylvania, West Virginia, and Kentucky.

During 2021, we completed two acquisitions of water and wastewater systems, which along with the organic growth in our existing systems, represents 21,364 new customers. During 2020, in addition to the Peoples Gas Acquisition, we completed six acquisitions of water and wastewater systems, which along with the organic growth in our existing systems, represents 24,169 new customers. During 2019, we completed eight acquisitions, which along with the organic growth in our existing systems, represents 21,613 new customers.

The Company currently has eight signed purchase agreements for additional water and wastewater systems that are expected to serve approximately 235,000 equivalent retail customers or equivalent dwelling units and total approximately $471,000 in purchase price in three of our existing states. This includes the Company's agreement to acquire the Delaware County Regional Water Quality Control Authority (DELCORA) for $276,500. DELCORA, a Pennsylvania sewer authority, serves approximately 198,000 equivalent dwelling units in the Philadelphia suburbs. Refer to Note 2 – *Acquisitions* in this Annual Report for further discussion.

As of December 31, 2021, the pipeline of potential water and wastewater municipal acquisitions the company is actively pursuing represents approximately 400,000 total customers or equivalent dwelling units. The Company remains on track to, on average, annually increase customers between 2 and 3% through acquisitions and organic customer growth.

Performance Measures Considered by Management

We consider the following financial measures (and the period to period changes in these financial measures) to be the fundamental basis by which we evaluate our operating results:

- earnings per share;
- operating revenues;
- gross margin;
- earnings before interest, taxes, and depreciation (EBITD);
- income adjusted to remove transaction-related expenses associated with the Peoples Gas Acquisition;
- earnings before income taxes;
- net income; and
- the dividend rate on common stock.

In addition, we consider other key measures in evaluating our utility business performance within our Regulated Water and Natural Gas segments:

- our number of utility customers;
- the ratio of operations and maintenance expense compared to operating revenues (this percentage is termed "operating expense ratio");
- return on revenues (net income divided by operating revenues);
- rate base growth;
- return on equity (net income divided by stockholders' equity); and
- the ratio of capital expenditures to depreciation expense.

Some of these measures, like EBITD and gross margin, are non-GAAP financial measures. The Company believes that the non-GAAP financial measures provide management the ability to measure the Company's financial operating performance across periods and as contrasted to historical financial results, which are more indicative of the Company's ongoing performance and more comparable to measures reported by other companies. When the Company discloses such non-GAAP financial measures, we believe they are useful to investors as a meaningful way to compare the Company's operating performance against its historical financial results. We believe EBITD is a relevant and useful indicator of

operating performance, as we measure it for management purposes because it provides a better understanding of our results of operations by highlighting our operations and the underlying profitability of our core businesses. Furthermore, we review the measure of earnings before unusual items that are not directly related to our core businesses, such as the measure of adjusted earnings to remove the Peoples Gas Acquisition expenses, such as transaction expenses and the change in fair value of interest rate swap agreements, which were recognized in 2019. Refer to Note 11 – *Long-term Debt and Loans Payable* in this Annual Report for information regarding the interest rate swap agreements.

We review these measurements regularly and compare them to historical periods, to our operating budget as approved by our Board of Directors, and to other publicly-traded utilities. Additionally, our Regulated Natural Gas segment is affected by the cost of natural gas, which is passed through to customers using a purchased gas adjustment mechanism and includes commodity price, transportation and storage costs. These costs are reflected in the consolidated statement of operations and comprehensive income as purchased gas expenses. Therefore, fluctuations in the cost of purchased gas impact operating revenues on dollar-for-dollar basis, but does not impact gross margin. Management uses gross margin, a non-GAAP financial measure, defined as operating revenues less purchased gas expense, to analyze the financial performance of our Regulated Natural Gas segment, as management believes gross margin provides a meaningful basis for evaluating our natural gas utility operations since purchased gas expenses are included in operating revenues and passed through to customers.

Our operating expense ratio is one measure that we use to evaluate our operating efficiency and management effectiveness of our regulated operations. Our operating expense ratio is affected by a number of factors, including the following:

- ***Regulatory lag –*** Our rate filings are designed to provide for the recovery of increases in costs of operations (primarily labor and employee benefits, electricity, chemicals, transportation, maintenance expenses, insurance and claim costs, and costs to comply with environmental regulations), capital, and taxes. The revenue portion of the operating expense ratio can be impacted by the timeliness of recovery of, and the return on capital investments. The operating expense ratio is further influenced by regulatory lag (increases in operations and maintenance expenses not yet recovered in rates or a gap between the time that a capital project is completed and the start of its cost recovery in rates). The operating expense ratio is also influenced by decreases in operating revenues without a commensurate decrease in operations and maintenance expense, such as changes in customer usage as impacted by adverse weather conditions, or conservation trends. During periods of inflation, our operations and maintenance expenses may increase, impacting the operating expense ratio, as a result of regulatory lag, since our rate cases may not be filed timely and are not retroactive.

- ***Acquisitions –*** In general, acquisitions of smaller undercapitalized utility systems in some areas may initially increase our operating expense ratio if the operating revenues generated by these operations do not reflect the true cost of service and are accompanied by a higher ratio of operations and maintenance expenses as compared to other operational areas of the company that are more densely populated and have integrated operations. In these cases, the acquired operations are characterized as having relatively higher operating costs to fixed capital costs, in contrast to the majority of our operations, which generally consist of larger, interconnected systems, with higher fixed capital costs (utility plant investment) and lower operating costs per customer. For larger acquisitions, such as the Peoples Gas Acquisition, we have incurred significant transaction expenses, which increase operations and maintenance expenses in periods prior to and in the period of the closing of the acquisition. In addition, we operate market-based subsidiary companies consisting of our non-regulated natural gas operations, Aqua Resources, and Aqua Infrastructure. The cost-structure of these market-based companies differs from our utility companies in that, although they may generate free cash flow, these companies may at times have a higher ratio of operations and maintenance expenses to operating revenues and a lower capital investment and, consequently, a lower ratio of fixed capital costs versus operating revenues in contrast to our regulated operations. As a result, the operating expense ratio is not comparable between the businesses. These market-based subsidiary companies are not a component of our Regulated Water or Regulated Natural Gas segments.

We continue to evaluate initiatives to help control operating costs and improve efficiencies.

Other Operational Measures Considered by Management

Sendout - Sendout represents the quantity of treated water delivered to our distribution systems. We use sendout as an indicator of customer demand. Weather conditions tend to impact water consumption, particularly during the late spring, summer, and early fall when discretionary and recreational use of water is at its highest. Consequently, a higher proportion of annual Regulated Water segment operating revenues are realized in the second and third quarters. In general, during this period, an extended period of hot and dry weather increases water consumption, while above-average rainfall and cool weather decreases water consumption. Conservation efforts, construction codes that require the use of low-flow plumbing fixtures, as well as mandated water use restrictions in response to drought conditions can reduce water consumption. We believe an increase in conservation awareness by our customers, including the increased use of more efficient plumbing fixtures and appliances, may continue to result in a long-term structural trend of declining water usage per customer. These gradual long-term changes are normally taken into account by the utility commissions in setting rates, whereas significant short-term changes in water usage, resulting from drought warnings, water use restrictions, or extreme weather conditions, may not be fully reflected in the rates we charge between rate proceedings. In Illinois, our operating subsidiary has adopted a revenue stability mechanism which allows us to recognize state PUC-authorized revenue for a period which is not based upon the volume of water sold during that period, and effectively lessens the impact of weather and consumption variability.

On occasion, drought warnings and water use restrictions are issued by governmental authorities for portions of our service territories in response to extended periods of dry weather conditions, regardless of our ability to meet unrestricted customer water demands. The timing and duration of the warnings and restrictions can have an impact on our water revenues and net income. In general, water consumption in the summer months is affected by drought warnings and restrictions to a higher degree because discretionary and recreational use of water is highest during the summer months, particularly in our northern service territories. At other times of the year, warnings and restrictions generally have less of an effect on water consumption. Portions of our northern and central Texas service areas have conservation water restrictions. Drought warnings and watches result in the public being asked to voluntarily reduce water consumption.

The geographic diversity of our utility customer base reduces the effect of our exposure to extreme or unusual weather conditions in any one area of the country. During the year ended December 31, 2021, our operating revenues for our Regulated Water segment were derived principally from the following states: approximately 55% in Pennsylvania, 12% in Ohio, 9% in Illinois, 8% in Texas, and 7% in North Carolina.

Heating Degree Days – The regulated natural gas utility business is subject to seasonal fluctuations with the peak usage period occurring in the heating season which generally runs from October to March. A heating degree day (HDD) is each degree that the average of the high and the low temperatures for a day is below 65 degrees Fahrenheit in a specific geographic location. Particularly during the heating season, this measure is used to reflect the demand for natural gas needed for heating based on the extent to which the average temperature falls below a reference temperature for which no heating is required (65 degrees Fahrenheit). HDDs are used in the natural gas industry to measure the relative coldness of weather and to estimate the demand for natural gas. Normal temperatures are based on a historical twenty-year average heating degree days, as calculated from data provided by the National Weather Service for the same geographic location. During the year ended December 31, 2021, we experienced actual HDDs of 5,139 days, which was warmer by 6% than the average or normal HDDs for Pittsburgh, Pennsylvania, which we use as a proxy for our western Pennsylvania service territory.

RESULTS OF OPERATIONS

Consolidated financial and operational highlights for the years ended December 31, 2021, 2020 and 2019 are presented below. Our Regulated Natural Gas segment results, which represent Peoples Gas' operating results, are included since its acquisition on March 16, 2020. The variance of the operating results in the first quarter of 2021 as compared to 2020 in the Regulated Natural Gas segment for the timing of the Peoples Gas Acquisition closing, resulted in an increase in the following income statement amounts for 2021: $304,571 of operating revenues, $42,503 of operations and maintenance expense, $110,117 of purchased gas expense, $23,022 of depreciation and amortization, $125,149 of operating income, and $105,853 of net income.

Years ended December 31,	2021	2020	2019	2021 vs. 2020	2020 vs. 2019
Operating revenues:					
Regulated water segment	$ 980,203	$ 938,540	$ 886,430	$ 41,663	$ 52,110
Regulated gas segment	859,902	506,564	-	353,338	506,564
Other and eliminations	38,039	17,594	3,262	20,445	14,332
Consolidated operating revenues	$ 1,878,144	$ 1,462,698	$ 889,692	$ 415,446	$ 573,006
Operations and maintenance expense	$ 550,580	$ 528,611	$ 333,102	$ 21,969	$ 195,509
Net income (1)	$ 431,612	$ 284,849	$ 224,543	$ 146,763	$ 60,306
Capital expenditures	$ 1,020,519	$ 835,642	$ 550,273	$ 184,877	$ 285,369
Operating Statistics					
Selected operating results as a percentage of operating revenues:					
Operations and maintenance	29.3%	36.1%	37.4%	-6.8%	-1.3%
Depreciation and amortization	15.9%	17.6%	17.6%	-1.7%	0.0%
Taxes other than income taxes	4.6%	5.2%	6.7%	-0.6%	-1.5%
Interest expense, net of interest income	10.9%	12.9%	14.1%	-2.0%	-1.2%
Net income (1)	23.0%	19.5%	25.2%	3.5%	-5.7%
Return on Essential Utilities stockholders' equity (1)	8.3%	6.1%	5.8%	2.2%	0.3%
Ratio of capital expenditures to depreciation expense	3.5	3.3	3.5	0.2	-0.2
Effective tax rate	(2.3%)	(7.5%)	(6.2%)	5.2%	(1.3%)

(1) Reflects Peoples Gas Acquisition transaction-related expenses of $20,925 ($25,573 pre-tax) in 2020 and $18,246 ($22,891 pre-tax) in 2019; utility customer rate credits issued in 2020 of $23,004 (or $16,357 net of tax); a mark-to-market fair value adjustment expense for 2019 of $18,756 ($23,742 pre-tax) associated with interest rate swap agreements entered into to mitigate interest rate risk associated with issuance of long-term debt to fund a portion of the Peoples Gas Acquisition; and in 2019 a $14,637 ($18,528 pre-tax) loss on debt extinguishment associated with the early redemption of $313,500 of the Company's long-term debt.

Consolidated Results of Operations Comparison for 2021 and 2020

Operating revenues - Operating revenues increased by $415,446 or 28.4% for the year ended December 31, 2021 compared to the year ended December 31, 2020. Revenues from our Regulated Water segment increased by $41,663, Regulated Natural Gas segment by $353,338 and other revenues by $20,445. The growth in our Regulated Water segment's revenues is primarily a result of increases in our water and wastewater rates and our customer base. The increase in our Regulated Natural Gas Revenues is primarily due to a full year of People's revenue in 2021 compared to nine months and sixteen days of results in 2020 and higher natural gas cost pass-through to customers. The variance in operating revenues in the first quarter of 2021 as compared to 2020, as a result of the timing of the Peoples' acquisition, was $304,571. Refer below for further details on the changes on Regulated Water and Regulated Natural Gas segment revenues.

Our other revenues consist of market-based revenues at Aqua Resources, Aqua Infrastructure, and our non-regulated natural gas operations (post-closing) amounting to $38,435 in 2021, $17,776 in 2020, and $3,395 in 2019. The increase in other revenues in 2021 as compared to 2020 is largely due to higher purchased gas revenues from our non-regulated natural gas operations of $15,230 resulting from the timing of Peoples' acquisition in 2020 and higher gas costs in 2021.

Operating expenses - Operations and maintenance expenses increased in 2021, as compared to 2020, by $21,969 or 4.2%, primarily due to:

- increase in operations and maintenance expenses for our Regulated Natural Gas business of $42,503 representing the variance in the first quarter of 2021 versus first quarter of 2020 as a result of the timing of the Peoples Gas Acquisition in 2020;
- costs related to the restoration and repair of facilities in southeastern Pennsylvania damaged by Hurricane Ida of $2,820;
- increase in employee related costs of $8,624 related to pension and post-retirement benefits, medical and labor;
- increase in insurance expense of $6,397 due to higher insurance claims;
- an asset impairment charge of $4,695 to write down a portion of the right of use asset of our Regulated Natural Gas Segment's office space to fair value;
- increase in outside services of $9,586;
- the prior year effect of net insurance proceeds of $2,874 and a reduction in expenses in 2021 of $690 associated with remediating an advisory for some of our water utility customers served by our Illinois subsidiary. We expect the expenses associated with remediating the advisory to continue into 2022; offset by
- decrease in COVID-19 pandemic related expenses of $18,044 and decrease in charitable donations expense of $14,014; and,
- the prior year effect of transaction expenses of $25,397 in the first quarter of 2020 for the Peoples Gas Acquisition, primarily representing expenses associated with investment banking fees, employee related expenses, obtaining regulatory approvals, legal expenses, and integration planning.

Purchased gas increased by $174,517 or 105.3% in 2021 compared to 2020. Purchased gas represents the cost of gas sold by Peoples for the regulated and non-regulated gas business and has a corresponding offset in revenue. This expense increased for the regulated natural gas business and non-regulated business by $159,287 and $15,230, respectively, as a result of the increase in natural gas prices and the timing of People's acquisition.

Depreciation and amortization expense increased by $40,748 or 16.2% and $145 or 2.6%, respectively, in 2021 over 2020, principally due to the timing of the Peoples Gas Acquisition, continued capital expenditures to expand and improve our utility facilities, our acquisitions of new utility systems, and additional rate case filings. Expenses associated with filing rate cases are deferred and amortized over periods that generally range from one to three years.

Taxes other than income taxes totaled $86,641 in 2021, $76,597 in 2020, and $59,955 in 2019, and has increased by $10,044 or 13.1% in 2021 as compared to 2020 principally due to the timing of the Peoples Gas Acquisition, increase in payroll taxes of $2,736 and reclassification of regulatory fees and assessments previously recorded in Operations and maintenance expense of $3,210.

Other expense, net - Interest expense was $207,709 in 2021, $188,435 in 2020, and 125,383 in 2019. Interest expense increased in 2021 primarily due to an increase in average borrowings, and interest on debt assumed in the Peoples Gas Acquisition, offset by a decrease in average interest rates. The weighted average cost of fixed rate long-term debt was 3.61% at December 31, 2021, 3.73% at December 31, 2020, and 4.09% at December 31, 2019. The weighted average cost of fixed and variable rate long-term debt was 3.49% at December 31, 2021, 3.56% at December 31, 2020, and 4.09% at December 31, 2019.

Interest income was $2,384 in 2021, $5,363 in 2020, and $25,406 in 2019. The decrease in 2021 is primarily due to the utilization of the proceeds held from our 2019 equity and debt offerings to close the Peoples Gas Acquisition on March 16, 2020.

Allowance for funds used during construction (AFUDC) was $20,792 in 2021, $12,687 in 2020, and $16,172 in 2019, and varies as a result of changes in the average balance of utility plant construction work in progress, to which AFUDC is applied, changes in the AFUDC rate which is based predominantly on short-term interest rates, changes in the balance of short-debt, and changes in the amount of AFUDC related to equity. The increase in 2021 is primarily due to an increase in the average balance of utility plant construction work in progress, to which AFUDC is applied. The amount of AFUDC related to equity was $16,282 in 2021, $8,253 in 2020, and $11,941 in 2019.

Gain on sale of other assets totaled $976 in 2021, $661 in 2020, and $923 in 2019, and consists of the sales of property, plant and equipment.

Equity loss (earnings) in joint venture was $3,374 in 2020, and $(2,210) in 2019. Our investment in the joint venture was sold in October 2020.

Other totaled $(2,848) in 2021, $(3,383) in 2020, and $5,691 in 2019, and largely consists of the non-service cost component of our net benefit cost for pension benefits. In 2021, there was a higher return on assets than costs recognized which resulted to a net benefit for the year. The net benefit in 2020 is primarily due to a recovery of a previously incurred cost that resulted in the recognition of a regulatory asset based on the Company's recovery in a rate case.

Provision for income tax (benefit) - Our effective income tax rate was (2.3)% in 2021, (7.5)% in 2020, and (6.2)% in 2019. The Company's provision for income taxes represents an income tax benefit due to the effects of tax deductions recognized for certain qualifying infrastructure improvements for Aqua Pennsylvania and Peoples Natural Gas. The effective income tax rate increased in 2021 due to the increase in our income before income taxes of $157,029, offset partially by the income tax benefit recognized as a result of tax deductions for qualifying infrastructure investments of Peoples Natural Gas. On March 31, 2020, we changed the method of tax accounting for certain qualifying infrastructure investments at Peoples Natural Gas, our largest natural gas subsidiary in Pennsylvania, which provided for a reduction to income tax expense of $27,822 in 2020 and $55,132 in 2021 due to the flow-through treatment of the current tax repair benefits.

Net income -

	Years ended December 31,		
	2021	2020	2019
Operating income	$ 602,709	$ 434,686	$ 340,159
Net income	431,612	284,849	224,543
Diluted net income per share	1.67	1.12	1.04

The changes in diluted net income per share in 2021 over the previous year were due to the aforementioned changes.

While the importance to the future realization of improved profitability relies on continued adequate rate increases reflecting increased operating costs and new capital improvements, other factors such as transaction expenses for acquisitions will likely cause changes in operating income, net income and diluted net income per share.

Segment Results of Operations Comparison for 2021 and 2020

We have identified twelve operating segments, and we have two reportable segments based on the following:

- Eight segments are composed of our water and wastewater regulated utility operations in the eight states where we provide these services. These operating segments are aggregated into one reportable segment, Regulated Water, since each of these operating segments has the following similarities: economic characteristics, nature of services, production processes, customers, water distribution and/or wastewater collection methods, and the nature of the regulatory environment.

- Our Regulated Natural Gas segment is composed of natural gas utility companies in three states acquired in the Peoples Gas Acquisition. These utilities provide natural gas distribution services, and their operating results subsequent to the March 16, 2020 acquisition date are reported in the Regulated Natural Gas segment.

- Three segments are not quantitatively significant to be reportable and are composed of our non-regulated natural gas operations, Aqua Resources, and Aqua Infrastructure. These segments are included as a component of "Other," in addition to corporate costs that have not been allocated to the Regulated Water and Regulated Natural Gas segments, because they would not be recoverable as a cost of utility service, and intersegment eliminations. Corporate costs include general and administrative expenses, and interest expense.

Regulated Water Segment

The following tables present the operating results and customers served for our Regulated Water segment, for and as of the year ended December 31,:

	2021	2020	2019	2021 vs. 2020	2020 vs. 2019
Sendout (in millions of gallons)					
Pennsylvania	42,198	41,683	42,074	515	(391)
Ohio	13,971	14,020	13,346	(49)	674
Illinois	8,764	8,651	8,712	113	(61)
Texas	7,212	7,393	6,937	(181)	456
North Carolina	5,984	5,780	5,727	204	53
Other states	6,191	6,299	6,113	(108)	186
Subtotal	84,320	83,826	82,909	494	917
Elimination	(154)	(65)	(65)	(89)	-
Total sendout by state	84,166	83,761	82,844	405	917
Utility customers:					
Residential water	842,200	832,902	822,817	9,298	10,085
Commercial water	42,864	42,535	41,892	329	643
Industrial water	1,331	1,338	1,339	(7)	(1)
Other water	17,932	18,561	18,984	(629)	(423)
Wastewater	162,478	151,965	141,672	10,513	10,293
Total water and wastewater utility customers	1,066,805	1,047,301	1,026,704	19,504	20,597
Operating revenues:					
Residential water	$ 561,996	$ 567,485	$ 518,192	$ (5,489)	$ 49,293
Commercial water	151,071	143,479	145,599	7,592	(2,120)
Industrial water	30,230	29,764	30,667	466	(903)
Other water	89,472	67,712	72,942	21,760	(5,230)
Wastewater	132,316	121,117	105,204	11,199	15,913
Customer rate credits	-	(4,080)	-	4,080	(4,080)
Other utility	15,118	13,063	13,826	2,055	(763)
Total operating revenues	980,203	938,540	886,430	41,663	52,110
Operating expenses:					
Operations and maintenance expense	332,598	309,608	315,052	22,990	(5,444)
Depreciation and amortization	182,074	171,152	155,898	10,922	15,254
Taxes other than income taxes	63,264	60,505	59,955	2,759	550
Operating income	402,267	397,275	355,525	4,992	41,750
Other expense, net	81,931	91,001	81,872	(9,070)	9,129
Income before income taxes	320,336	306,274	273,653	14,062	32,621
Provision for income taxes (benefit)	26,633	22,481	(1,267)	4,152	23,748
Net income	$ 293,703	$ 283,793	$ 274,920	$ 9,910	$ 8,873

Operating revenues - The growth in our Regulated Water segment's revenues over the past three years is primarily a result of increases in our water and wastewater rates and our customer base. Water and wastewater rate increases, including infrastructure rehabilitation surcharges, implemented during the past three years have provided additional operating revenues of $27,421 in 2021, $32,660 in 2020, $55,658 in 2019. The number of customers increased at an annual compound rate of 2.0% over the past three years due to acquisitions and organic growth, adjusted to exclude customers associated with utility system dispositions. Acquisitions in our Regulated Water segment have provided additional water and wastewater revenues of $6,750 in 2021, $10,951 in 2020, and $8,393 in 2019.

In 2021 and 2020, we experienced a decrease in water and wastewater revenues of $1,146 and $1,402, respectively, as a result of an advisory for some of our water utility customers served by our Illinois subsidiary, and do not expect the revenue impact to continue into 2022.

Associated with the approval of the Peoples Gas Acquisition from the Pennsylvania Public Utility Commission, the Company granted $4,080 of customer rate credits to its water and wastewater customers in 2020. There were no water and wastewater customer rate credits issued in 2021.

Our Regulated Water segment also includes operating revenues of $13,358 in 2021 and $8,781 in 2020, and $13,835 in 2019, associated with revenues earned primarily from fees received from telecommunication operators that have put cellular antennas on our water towers, fees earned from municipalities for our operation of their water or wastewater treatment services or to perform billing services, and fees earned from developers for accessing our water mains.

Operating expenses - Operations and maintenance expense for the year ended December 31, 2021 was $332,598 compared to $309,608 in the prior period. The increase of $22,990 or 7.4% was primarily due to the following:

- costs related to the restoration and repair of facilities damaged by Hurricane Ida of $2,820;
- increase in employee related costs of $10,495 related to pension and post-retirement benefits, medical and labor
- increase in outside services of $5,986; and,
- the prior year effect of net insurance proceeds of $2,874 and a reduction in expenses in 2021 of $690 associated with remediating an advisory for some of our water utility customers served by our Illinois subsidiary. We expect the expenses associated with remediating the advisory to continue into 2022; offset by
- the decrease in COVID-19 pandemic related expenses of $2,366.

Depreciation and amortization increased by $10,922 or 6.4% primarily due to continued capital spend.

Taxes other than income taxes increased by $2,759 or 4.6%.

Other expense, net - Interest expense, net, increased by $6,546 or 6.4% primarily due to the increase in average borrowings.

AFUDC increased by $8,027 or 71.5% due to the increase in the average balance of utility plant construction work in progress, to which AFUDC is applied.

Other expense decreased by $7,589, primarily due to the decrease in the non-service cost component of net pension and postretirement benefit cost in our Regulated Water segment. This is driven by improved investment returns as a result of favorable market experience from the prior period.

Regulated Natural Gas Segment

The following tables present the operating results and customers served for our Regulated Natural Gas segment, for the period since the acquisition date of March 16, 2020, for and as of the year ended December 31,:

	2021	2020 (a)	2021 vs. 2020
Gas utility customers:			
Residential gas	692,174	690,642	1,532
Commercial gas	59,595	59,424	171
Industrial gas	1,475	1,436	39
Total gas utility customers	753,244	751,502	1,742
Delivered volumes (thousand cubic feet)			
Residential gas	56,542,038	33,675,963	22,866,075
Commercial gas	33,403,899	20,082,555	13,321,344
Industrial gas	49,726,237	37,936,661	11,789,576
Total delivered volumes	139,672,174	91,695,179	47,976,995
Heating Degree Days (b)	5,139	3,013	2,126
Average Heating Degree Days (c)	5,466	2,973	2,493

	2021	2020 (a)	2021 vs. 2020
Operating revenues:			
Residential gas	$ 530,338	$ 314,274	$ 216,064
Commercial gas	99,596	50,239	49,357
Industrial gas	3,427	6,923	(3,496)
Gas transportation	198,195	133,685	64,510
Customer rate credits	(5,000)	(18,924)	13,924
Other utility	33,346	20,367	12,979
Total operating revenues	859,902	506,564	353,338
Operating expenses:			
Operations and maintenance expense	226,194	198,383	27,811
Purchased gas	313,390	154,103	159,287
Depreciation and amortization	113,238	84,201	29,037
Taxes other than income taxes	20,801	13,307	7,494
Operating income	186,279	56,570	129,709
Other expense, net	78,099	25,252	52,847
Income before income taxes	108,180	31,318	76,862
Income tax benefit	(40,013)	(25,133)	(14,880)
Net income	$ 148,193	$ 56,451	$ 91,742

(a) Includes operating results since the completion of the Peoples Gas Acquisition on March 16, 2020.

(b) Unit of measure reflecting temperature-sensitive natural gas consumption, calculated by subtracting the average of a day's high and low temperatures from 65 degrees Fahrenheit.

(c) Based on historical twenty-year average heating degree days, as calculated from data provided by the National Weather Service for the same geographic location.

Operating revenues - Operating revenues from the Regulated Natural Gas segment increased by $353,338 or 69.8% due to:

- increase of $304,571 representing variance in the first quarter of 2021 versus first quarter of 2020 as a result of the timing of the Peoples Gas Acquisition in 2020;
- impact of higher gas cost of $47,548 in 2021 as compared to 2020;
- higher average delivery and rider rates of $5,272;
- prior year effect of customer rate credits of $18,924 granted to our natural gas customers associated with the approval of the Peoples Gas Acquisition;
- and rate variance of $3,346;

- offset by lower usage of $13,664 due to warmer weather in 2021 as compared to 2020; $11,124 credit to customers for tax repair catch-up; $5,000 rate credit to customers with past-due accounts receivable; and an increased refund of the tax benefit associated with the Tax Cuts and Jobs Act of $1,456.

Operating expenses - Operations and maintenance expense for the year ended December 31, 2021 increased by $27,811 or 14.0% primarily due to the following:

- increase of $42,503 representing variance in the first quarter of 2021 versus first quarter of 2020 as a result of the timing of the Peoples' acquisition in 2020;
- increases in employee related costs of $1,918 and outside services expense of $3,600;
- and an asset impairment charge of $4,695 to write down a portion of the right of use asset of our Regulated Natural Gas Segment's office space to fair value;
- offset by decreases in COVID-19 pandemic related expenses of $8,371 and a decrease of $14,514 in charitable donations expense.

Our Regulated Natural Gas segment is affected by the cost of natural gas, which is passed through to customers using a purchased gas adjustment clause and includes commodity price, transportation and storage costs. These costs are reflected in the consolidated statement of operations and comprehensive income as purchased gas expenses. Therefore, fluctuations in the cost of purchased gas impact operating revenues on dollar-for-dollar basis but does not impact gross margin. Purchased gas increased by $159,287 or 103.4% due to an increase in the price of natural gas in 2021 as compared to the prior year. Management uses gross margin, a non-GAAP financial measure, defined as operating revenues less purchased gas expense, to analyze the financial performance of our Regulated Natural Gas segment, as management believes gross margin provides a meaningful basis for evaluating our natural gas utility operations since purchased gas expenses are included in operating revenues and passed through to customers. The following table includes the reconciliation of gross margin (non-GAAP) to operating revenues (GAAP) for our Regulated Natural Gas segment for the period since the acquisition date of March 16, 2020:

	Years ended December 31,	
	2021	2020
Operating revenues (GAAP)	$ 859,902	$ 506,564
Purchased gas	313,390	154,103
Gross margin (non-GAAP)	$ 546,512	$ 352,461

The term gross margin is not intended to represent operating revenues, the most comparable GAAP financial measure, as an indicator of operating performance. In addition, our measurement of gross margin is not necessarily comparable to similarly titled measures reported by other companies.

Depreciation and amortization increased by $29,037 or 34.5% primarily due to the timing of the Peoples Gas Acquisition and continued capital spend.

Taxes other than income taxes increased by $7,494 or 56.3% mainly due to the timing of the Peoples Gas Acquisition and higher property tax expense.

Other expense, net - Interest expense, net, increased by $46,612 or 160.6% for 2021 compared to 2020 due to additional borrowings pushed down by Parent.

AFUDC increased by $78 or 5.4% due to the increase in the average balance of utility plant construction work in progress, to which AFUDC is applied.

Other expense increased by $6,313 due to the non-service cost component of our net benefit cost for pension and post-retirement benefits.

LIQUIDITY AND CAPITAL RESOURCES

Consolidated Cash Flow and Capital Expenditures

Net operating cash flows, dividends paid on common stock, capital expenditures, including allowances for funds used during construction, and expenditures for acquiring utility systems for the three years ended December 31, 2021, 2020 and 2019 were as follows:

	Net Operating Cash Flows	Dividends	Capital Expenditures	Acquisitions
2019	338,523	188,512	550,273	59,687
2020	508,024	232,571	835,642	3,501,835
2021	644,679	258,650	1,020,519	36,326
	$ 1,491,226	$ 679,733	$ 2,406,434	$ 3,597,848

Net cash flows from operating activities increased primarily due to higher net income resulting from full year of Peoples' operating results in 2021 compared to nine and a half months in 2020. Net cash flows from operating activities increased from 2019 to 2020 primarily due to the prior year effect of the 2019 payment for the settlement of the interest rate swap agreements of $83,520, and an increase in net income.

Included in capital expenditures for the three year period are: expenditures for the rehabilitation of existing utility systems, the expansion of our utility systems, modernization and replacement of existing treatment facilities, meters, office facilities, information technology, vehicles, and equipment. During this three year period, we received $33,941 of customer advances and contributions in aid of construction to finance new utility mains and related facilities that are not included in the capital expenditures presented in the above table. In addition, during this period, we have made repayments of debt, which includes the net effect of borrowings and repayments under our long-term revolving credit facility, of $2,571,586 and have refunded $22,887 of customers' advances for construction. Dividends increased during the past three years as a result of annual increases in the dividends declared and paid and increases in the number of shares outstanding.

Our planned 2022 capital program, excluding the costs of new mains financed by advances and contributions in aid of construction is estimated to be approximately $1,000,000 in infrastructure improvements for the communities we serve. The 2022 capital program is expected to include $618,200 for infrastructure rehabilitation surcharge qualified projects. Our planned 2022 capital program in Pennsylvania for our water and natural gas utilities is estimated to be approximately $709,600, a portion of which is expected to be eligible as a deduction for qualifying utility asset improvements for Federal income tax purposes. Our overall 2022 capital program along with $132,146 of debt repayments and $428,319 of other contractual cash obligations, as reported in the section captioned "Management's Discussion and Analysis of Financial Condition and Results of Operations – *Contractual Obligations*", has been, or is expected to be, financed through internally-generated funds, our revolving credit facilities, and the issuance of long-term debt.

Future utility construction in the period 2023 through 2024, including recurring programs, such as the ongoing replacement or rehabilitation of utility meters and mains, water treatment plant upgrades, storage facility renovations, pipes, service lines, and additional transmission mains to meet customer demands, excluding the costs of new mains financed by advances and contributions in aid of construction, is estimated to require aggregate expenditures of approximately $1,940,000. We anticipate that approximately less than one-half of these expenditures will require external financing. We expect to refinance $576,580 of long-term debt during this period as it becomes due with new issues of long-term debt, internally-generated funds, and our revolving credit facilities. The estimates discussed above do not include any amounts for possible future acquisitions of utility systems or the financing necessary to support them.

Our primary sources of liquidity are cash flows from operations (including the allowed deferral of Federal income tax payments), borrowings under various short-term lines of credit and other credit facilities, and customer advances and contributions in aid of construction. Our cash flow from operations, or internally-generated funds, is impacted by the timing of rate relief, utility operating revenues, and changes in Federal tax laws, and accelerated tax depreciation or deductions for utility construction projects. We fund our capital and typical acquisitions through internally-generated funds, supplemented by short-term lines of credit. Over time, we partially repay or pay-down our short-term lines of credit with long-term debt. In 2020, we financed a portion of the Peoples Gas Acquisition purchase price, and refinanced certain debt of the Company, with a mix of common equity, equity-linked securities, and debt financing, which included senior notes issued in capital markets transactions, and credit facilities. The ability to finance our future construction programs, as well as our acquisition activities, depends on our ability to attract the necessary external debt and equity financing and maintain internally-generated funds. Timely rate orders permitting compensatory rates of return on invested capital will be required by our operating subsidiaries to achieve an adequate level of earnings and cash flow to enable them to secure the capital they will need to operate and to maintain satisfactory debt coverage ratios.

Acquisitions

As part of the Company's growth-through-acquisition strategy, as of December 31, 2021, the Company has entered into purchase agreements to acquire the water or wastewater utility system assets of seven municipalities and a private company for a total combined purchase price in cash of $471,000. The purchase price for these pending acquisitions is subject to certain adjustments at closing, and the pending acquisitions are subject to regulatory approvals, including the final determination of the fair value of the rate base acquired. Closings for these acquisitions are expected to occur through 2023, which is subject to the timing of the various regulatory approval processes. These acquisitions are expected to add approximately 235,000 equivalent retail customers in three of the states in which the Company operates.

In August 2021, the Company acquired the water utility system assets of The Commons Water Supply, Inc., which serves 992 customers in Harris County, Texas, and the wastewater utility system assets of the Village of Bourbonnais, which serves approximately 6,500 customers in Kankakee County, Illinois. The total cash purchase prices for these utility systems were $4,000 and $32,100, respectively.

On March 16, 2020, the Company completed the Peoples Gas Acquisition, which expanded the Company's regulated utility business to include natural gas distribution, serving approximately 750,000 natural gas utility customers in western Pennsylvania, West Virginia and Kentucky. The Company paid cash consideration of $3,465,344, which was subject to adjustment based upon the terms of the purchase agreement. The Company financed this acquisition through the April 2019 issuances of $1,293,750 of common stock, $900,000 of senior notes (of which $436,000 was for this acquisition), $690,000 of tangible equity units, and the issuance of $750,000 of common stock through a private placement, and borrowings on our revolving credit facility. Additionally, during 2020, we completed six acquisitions of water and wastewater utility systems for $63,279 in cash in three of the states in which we operate, adding 10,585 customers.

In December 2019, the Company acquired the wastewater utility system assets of Cheltenham Township, Pennsylvania, which serves 9,887 customers. The total cash purchase price for the utility system was $50,250. The purchase price allocation for this acquisition consisted primarily of acquired property, plant and equipment of $44,558 and goodwill of $5,692. Additionally, during 2019, we completed seven acquisitions of water and wastewater utility systems for $9,437 in cash in four of the states in which we operate, adding 2,393 customers. Refer to Note 2 – *Acquisitions* in this Annual Report for additional information.

Excluding the Peoples Gas Acquisition, during the past three years, we have expended cash of $159,292 related to the acquisition of both water and wastewater utility systems. We continue to pursue the acquisition of water and wastewater utility systems and explore other utility acquisitions that may be in a new state. Our typical acquisitions are expected to be financed with short-term debt with subsequent repayment from the proceeds of long-term debt, retained earnings, or equity issuances.

Dispositions
We routinely review and evaluate areas of our business and operating divisions and, over time, may sell utility systems or portions of systems. In 2019, the Company sold a water system in Virginia that served approximately 500 customers, which resulted in proceeds of $1,882, and recognized a gain on sale of $405.

In October 2020, the Company also sold its investment in a joint venture. Its investment represented its 49% investment in a joint venture that operates a private pipeline system to supply raw water to natural gas well drilling operations in the Marcellus Shale of north central Pennsylvania, and recorded a charge of $3,700 associated with the sale. Refer to Note 3 – *Dispositions* in this Annual Report for additional information.

Sources of Capital
Since net operating cash flow plus advances and contributions in aid of construction have not been sufficient to fully fund our cash requirements including capital expenditures and our growth through acquisitions program, which included financings for a portion of the Peoples Gas Acquisition, we issued $5,979,914 of long-term debt, and obtained other short-term borrowings during the past three years. At December 31, 2021, we have a $1,000,000 long-term revolving credit facility that expires in December 2023, of which $20,922 was designated for letter of credit usage, $679,078 was available for borrowing, and $300,000 of borrowings were outstanding at December 31, 2021. In addition, we have short-term lines of credit of $235,500 of which $170,500 was available as of December 31, 2021. Included in the short-term lines of credit is an Aqua Pennsylvania $100,000 364 day unsecured revolving credit facility and a Peoples Natural Gas $100,000 364 day unsecured revolving credit facility. These short-term lines of credit are subject to renewal on an annual basis. Although we believe we will be able to renew these facilities, there is no assurance that they will be renewed, or what the terms of any such renewal will be.

On April 15, 2021, our operating subsidiary, Aqua Ohio, Inc., issued $100,000 of first mortgage bonds, of which $50,000 is due in 2031 and $50,000 is due in 2051, with interest rates of 2.37% and 3.35%, respectively. The proceeds from these bonds were used for general corporate purposes and to repay existing indebtedness. Further, on April 19, 2021, the Company issued $400,000 of long-term debt, with expenses of $4,010, which is due in 2031 with an interest rate of 2.40%. The Company used the proceeds from this issuance to repay $50,000 of borrowings under the Aqua Pennsylvania revolving credit facility, and the balance was used to repay in full the borrowings under its existing five-year unsecured revolving credit agreement.

In August 2020, we entered into a forward equity sale agreement for 6,700,000 shares of common stock with a third party (the "forward purchaser"). In connection with the forward equity sale agreement, the forward purchaser borrowed an equal number of shares of our common stock from stock lenders and sold the borrowed shares to the public. We did not receive any proceeds from the sale of our common stock by the forward purchaser until settlement of the forward equity sale agreement. On August 9, 2021, the Company settled the forward equity sale agreement in full by physical share settlement. The Company issued 6,700,000 shares and received cash proceeds of $299,739 at a forward price of $44.74 per share. Pursuant to the agreement, the forward price was computed based upon the initial forward price of $46.00 per share, adjusted for a floating interest rate factor equal to a specified daily rate less a spread and scheduled dividends during the term of the agreement. The Company used the proceeds received upon settlement of the forward equity sale agreement to fund general corporate purposes, including for water and wastewater acquisitions, working capital and capital expenditures. The forward equity sale agreement has now been completely settled, and there are no additional shares subject to the forward equity sale agreement.

On March 29, 2019, the Company entered into a Stock Purchase Agreement (the Stock Purchase Agreement) with Canada Pension Plan Investment Board (the Investor), pursuant to which the Company agreed to issue and sell to the Investor in a private placement (the Private Placement) 21,661,095 newly issued shares of common stock, par value $0.50 per share (the Common Stock). On March 16, 2020, in connection with the closing of the Peoples Gas Acquisition, the Company closed on the Private Placement and received gross proceeds of $749,907, less expenses of $20,606. In June 2021, the Company filed a registration statement on Form S-3 ASR registering the Private Placement shares for resale. Refer to Note 13 – *Stockholders' Equity* in this Annual Report for further information.

Our consolidated balance sheet historically has had a negative working capital position, whereby routinely our current liabilities exceed our current assets. Management believes that internally-generated funds along with existing credit facilities and the proceeds from the issuance of long-term debt and common equity will be adequate to provide sufficient working capital to maintain normal operations and to meet our financing requirements for at least the next twelve months.

Our loan and debt agreements require us to comply with certain financial covenants, which among other things, subject to specific exceptions, limit the Company's ratio of consolidated total indebtedness to consolidated total capitalization, and require a minimum level of earnings coverage over interest expense. During 2021, we were in compliance with our debt covenants under our credit facilities. Failure to comply with our debt covenants could result in an event of default, which could result in us being required to repay or refinance our borrowings before their due date, possibly limiting our future borrowings, and increasing our borrowing costs.

In April 2021, the Company filed a universal shelf registration statement through a filing with the SEC to allow for the potential future offer and sale by the Company, from time to time, in one or more public offerings, of an indeterminate amount of our common stock, preferred stock, debt securities, and other securities specified therein at indeterminate prices. In April 2019, March 2020 and August 2020, we issued common stock, including common stock in connection with a forward equity sale agreement, long-term debt and tangible equity units in several offerings under this shelf registration statement. Refer to Note 11 – *Long-term Debt and Loans Payable* and Note 13 – *Stockholders' Equity* in this Annual Report for further information regarding these financings.

In addition, we have an acquisition shelf registration statement, which was filed with the SEC on February 27, 2015, to permit the offering from time to time of an aggregate of $500,000 of our common stock and shares of preferred stock in connection with acquisitions. During 2016, we issued 439,943 shares of common stock totaling $12,845 to acquire a water system. The balance remaining available for use under the acquisition shelf registration as of December 31, 2021 is $487,155.

We will determine the form and terms of any further securities issued under the universal shelf registration statement and the acquisition shelf registration statement at the time of issuance.

We offer a Dividend Reinvestment and Direct Stock Purchase Plan (the Plan) that provides a convenient and economical way to purchase shares of the Company. Under the direct stock purchase portion of the Plan, shares are issued throughout the year. The dividend reinvestment portion of the Plan offers a five percent discount on the purchase of shares of common stock with reinvested dividends. As of the December 2021 dividend payment, holders of 5.8% of the common shares outstanding participated in the dividend reinvestment portion of the Plan. The shares issued under the Plan are either original issue shares or shares purchased by the Company's transfer agent in the open-market. During the past three years, we have sold 1,000,468 original issue shares of common stock for net proceeds of $42,280 through the dividend reinvestment portion of the Plan, and we used the proceeds to invest in our operating subsidiaries, to repay short-term debt, and for general corporate purposes. In 2021, 2020 and 2019, we sold 374,824, 388,978 and 236,666 original issues shares of common stock for net proceeds of $16,799, $16,522 and $8,959, respectively, through the dividend reinvestment portion of the plan. In 2019, 183,731 shares of common stock were purchased under the dividend reinvestment portion of the Plan by the Company's transfer agent in the open-market for $7,777.

Off-Balance Sheet Financing Arrangements

We do not engage in any off-balance sheet financing arrangements. We do not have any interest in entities referred to as variable interest entities, which includes special purpose entities and other structured finance entities. For risk management purposes, the Company has used interest rate swap agreements. Refer to Note 11 – *Long-term Debt and Loans Payable* in this Annual Report for further information regarding these agreements.

Contractual Obligations

The following table summarizes our contractual cash obligations as of December 31, 2021:

		Payments Due By Period			
	Total	Less than 1 year	1 - 3 years	3 - 5 years	More than 5 years
Long-term debt	$ 5,947,357	$ 132,146	$ 576,580	$ 173,328	$ 5,065,303
Interest on fixed-rate, long-term debt (1)	194,374	3,880	15,968	8,302	166,224
Operating leases (2)	71,243	9,730	18,301	15,692	27,520
Unconditional purchase obligations (3)	16,914	4,535	7,497	4,551	331
Gas purchase obligations (4)	3,045,125	271,168	508,699	505,417	1,759,841
Other purchase obligations (5)	113,299	113,299	-	-	-
Pension plan obligations (6)	20,390	20,390	-	-	-
Other obligations (7)	19,837	5,317	6,384	4,550	3,586
Total	$ 9,428,539	$ 560,465	$ 1,133,429	$ 711,840	$ 7,022,805

(1) Represents interest payable on fixed rate, long-term debt. Amounts reported may differ from actual due to future refinancing of debt.

(2) Represents minimum lease payments for long-term operating leases of land, office facilities, office equipment, and vehicles.

(3) Represents our commitment to purchase minimum quantities of water as stipulated in agreements with other water purveyors. We use purchased water to supplement our water supply, particularly during periods of peak customer demand. Our actual purchases may exceed the minimum required levels.

(4) Represents our commitment to purchase minimum quantities of natural gas stipulated in agreements with various producers of natural gas to meet regulated customers' natural gas requirements.

(5) Represents an approximation of the open purchase orders for goods and services purchased in the ordinary course of business.

(6) Represents contributions to be made to the Company's retirement plans.

(7) Represents expenditures estimated to be required under legal and binding contractual obligations.

In addition to the contractual obligations table above, we have the following obligations:

- *Refunds of customer's advances for construction* - We pay refunds on customers' advances for construction over a specific period of time based on operating revenues related to developer-installed utility mains or as new customers are connected to and take service from such mains. After all refunds are paid, any remaining balance is transferred to contributions in aid of construction. The refund amounts are not included in the above table because the refund amounts and timing are dependent upon several variables, including new customer connections, customer consumption levels and future rate increases, which cannot be accurately estimated. Portions of these refund amounts are payable annually through 2030 and amounts not paid by the contract expiration dates become non-refundable.

- *Asset Retirement Obligations* – We recognize asset retirement obligations associated with retirements of production, storage wells and other pipeline components at fair value, as incurred, or when sufficient information becomes available to determine a reasonable estimate of the fair value of the retirement activities to be performed. Expected obligations are not included in the above table because the amounts and timing are dependent upon several variables, which cannot be accurately estimated.

- *Uncertain tax positions* - We have uncertain tax positions of $20,201. Although we believe our tax positions comply with applicable law, we have made judgments as to the sustainability of each uncertain tax position based on its technical merits. Due to the uncertainty of future cash outflows, if any, associated with our uncertain tax positions, we are unable to make a reasonable estimate of the timing or amounts that may be paid. See Note 7 – *Income Taxes* in this Annual Report for further information on our uncertain tax positions.

We will fund these contractual obligations with cash flows from operations and liquidity sources held by or available to us.

The Company is routinely involved in legal matters, including both asserted and unasserted legal claims, during the ordinary course of business. See Note 9 – *Commitments and Contingencies* in this Annual Report for a discussion of the Company's legal matters. It is not always possible for management to make a meaningful estimate of the potential loss or range of loss associated with such litigation. Also, unanticipated changes in circumstances and/or revisions to the assessed probability of the outcomes of legal matters could result in expenses being incurred in future periods as well as an increase in actual cash required to resolve the legal matter.

Capitalization
The following table summarizes our capitalization as of December 31, 2021 and 2020:

December 31,	2021	2020
Long-term debt (1)	53.4%	54.6%
Essential Utilities stockholders' equity	46.6%	45.4%
	100.0%	100.0%

(1) Includes current portion, as well as our borrowings under a variable rate revolving credit agreement of $300,000 at December 31, 2021, $385,000 at December 31, 2020.

Over the past two years, the changes in the capitalization ratios primarily resulted from the issuance of debt to finance our acquisitions and capital program, changes in net income, the issuance of common stock, and the declaration of dividends.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Our financial condition and results of operations are impacted by the methods, assumptions, and estimates used in the application of critical accounting policies. The following accounting policies are particularly important to our financial condition or results of operations and require estimates or other judgments of matters of uncertainty. Changes in the estimates or other judgments included within these accounting policies could result in a significant change to the financial statements. We believe our most critical accounting policies include the use of regulatory assets and liabilities, revenue recognition, the valuation of our long-lived assets (which consist primarily of utility plant in service, regulatory assets, and goodwill), our accounting for post-retirement benefits, and our accounting for income taxes. We have discussed the selection and development of our critical accounting policies and estimates with the Audit Committee of the Board of Directors.

Regulatory Assets and Liabilities ─ We defer costs and credits on the balance sheet as regulatory assets and liabilities when it is probable that these costs and credits will be recognized in the rate-making process in a period different from when the costs and credits were incurred. These deferred amounts, both assets and liabilities, are then recognized in the consolidated statement of operations in the same period that they are reflected in our rates charged for utility service. We make significant judgments and estimates to record regulatory assets and liabilities, such as for amounts related to income taxes, pension and postretirement benefits, acquisitions and capital projects. For each regulatory jurisdiction with regulated operations, we evaluate at the end of each reporting period, whether the regulatory assets and liabilities continue to meet the probable criteria for future recovery or refund. The evaluation considers factors such as regulatory orders or guidelines, in the same regulatory jurisdiction, of a specific matter or a similar matter, as provided to us in the past or to other regulated utilities. In addition, the evaluation may be impacted by changes in the regulatory environment and pending or new legislation that could impact the ability to recover costs through regulated rates. There may be multiple participants to rate or transactional regulatory proceedings who might offer different views on various aspects of such proceedings, and in these instances may challenge our prudence of business policies and practices, seek cost disallowances or request other relief.

In the event that our assessment as to the probability of the inclusion in the rate-making process is incorrect, the associated regulatory asset or liability would be adjusted to reflect the change in our assessment or change in regulatory approval.

Revenue Recognition ─ Our utility revenues recognized in an accounting period include amounts billed to customers on a cycle basis and unbilled amounts based on estimated usage from the last billing to the end of the accounting period. The estimated usage is based on our judgment and assumptions; our actual results could differ from these estimates, which would result in operating revenues being adjusted in the period that the revision to our estimates is determined.
In Virginia, North Carolina, and Kentucky, we may bill our utility customers, in certain circumstances, in accordance with a rate filing that is pending before the respective regulatory commission, which would allow interim rates before the final commission rate order is issued. The revenue recognized reflects an estimate based on our judgment of the final outcome of the commission's ruling. We monitor the applicable facts and circumstances regularly and revise the estimate as required. The revenue billed and collected prior to the final ruling is subject to refund based on the commission's final ruling.

Valuation of Long-Lived Assets, Goodwill and Intangible Assets ─ We review our long-lived assets for impairment, including utility plant in service and investment in joint venture. We also review regulatory assets for the continued application of the FASB accounting guidance for regulated operations. Our review determines whether there have been changes in circumstances or events, such as regulatory disallowances, or abandonments, that have occurred that require adjustments to the carrying value of these assets. Adjustments to the carrying value of these assets would be made in instances where their inclusion in the rate-making process is unlikely. For utility plant in service, we would recognize an impairment loss for any amount disallowed by the respective utility commission.

Our long-lived assets, which consist primarily of utility plant in service, operating lease right-of-use assets and intangible assets, are reviewed for impairment when changes in circumstances or events occur. These circumstances or events could include a decline in the market value or physical condition of a long-lived asset, an adverse change in the manner in which long-lived assets are used or planned to be used, a change in historical trends, operating cash flows associated with the long-lived assets, changes in macroeconomic conditions, industry and market conditions, or overall financial performance. When these circumstances or events occur, we determine whether it is more likely than not that the fair value of those assets s less than their carrying amount. If we determine that it is more likely than not (that is, the likelihood of more than 50 percent), we would recognize an impairment charge if it is determined that the carrying amount of an asset exceeds the sum of the undiscounted estimated cash flows. In this circumstance, we would recognize an impairment charge equal to the difference between the carrying amount and the fair value of the asset. Fair value is estimated to be the present value of future net cash flows associated with the asset, discounted using a discount rate commensurate with the risk and remaining life of the asset. This assessment requires significant management judgment and estimates that are based on budgets, general strategic business plans, historical trends and other data and relevant factors. These estimates include significant inherent uncertainties, since they involve forecasting future events. If changes in circumstances or events occur, or estimates and assumptions that were used in this review are changed, we may be required to record an impairment charge on our long-lived assets. During the year ended December 31, 2021, the Company recorded an

impairment loss to write down a portion of the operating lease right-of-use asset for office space not used in operations. Refer to Note 1 – *Summary of Significant Accounting Policies – Impairment of Long-Lived Assets* in this Annual Report for additional information regarding the review of long-lived assets for impairment.

We test the goodwill attributable for each of our reporting units for impairment at least annually on July 31, or more often, if circumstances indicate a possible impairment may exist. When testing goodwill for impairment, we may assess qualitative factors, including macroeconomic conditions, industry and market considerations, cost factors, overall financial performance, and entity specific events, for some or all of our reporting units to determine whether it's more likely than not that the fair value of a reporting unit is less than its carrying amount. Alternatively, based on our assessment of the qualitative factors previously noted, or at our discretion, we may perform a quantitative goodwill impairment test by determining the fair value of a reporting unit by weighting the results from the income approach and the market approach. These valuation approaches consider a number of factors that include, but are not limited to, prospective financial information, growth rates, terminal value, discount rates, and comparable multiples from publicly traded companies in our industry and require us to make certain assumptions and estimates regarding industry economic factors and future profitability of our business. If we perform a quantitative test and determine that the fair value of a reporting unit is less than its carrying amount, we would record an impairment loss for the amount by which a reporting unit's carrying amount exceeds its fair value, not to exceed the carrying amount of goodwill. The assessment requires significant management judgment and estimates that are based on budgets, general strategic business plans, historical trends and other data and relevant factors. If changes in circumstances or events occur, or estimates and assumptions that were used in our impairment test change, we may be required to record an impairment charge for goodwill. Refer to Note 1 – *Summary of Significant Accounting Policies – Goodwill* in this Annual Report for information regarding the results of our annual impairment test.

Accounting for Post-Retirement Benefits ─ We maintain a qualified and a non-qualified defined benefit pension plan and plans that provide for post-retirement benefits other than pensions. Accounting for pension and other post-retirement benefits requires an extensive use of assumptions including the discount rate, expected return on plan assets, the rate of future compensation increases received by our employees, mortality, turnover and medical costs. Each assumption is reviewed annually with assistance from our actuarial consultant, who provides guidance in establishing the assumptions. The assumptions are selected to represent the average expected experience over time and may differ in any one year from actual experience due to changes in capital markets and the overall economy. These differences will impact the amount of pension and other post-retirement benefits expense that we recognize.

Our discount rate assumption, which is used to calculate the present value of the projected benefit payments of our post-retirement benefits, was determined by selecting a hypothetical portfolio of high quality corporate bonds appropriate to match the projected benefit payments of the plans. The selected bond portfolio was derived from a universe of Aa-graded corporate bonds. The discount rate was then developed as the rate that equates the market value of the bonds purchased to the discounted value of the projected benefit payments of the plans. A decrease in the discount rate would generally increase our post-retirement benefits expense and benefit obligation. After reviewing the hypothetical portfolio of bonds, we selected a discount rate of 2.91% for our pension plan, and 2.96% for our other post-retirement benefit plans as of December 31, 2021, which represent a 34 and 28 basis-point increase as compared to the discount rates selected at December 31, 2020, respectively. Our post-retirement benefits expense under these plans is determined using the discount rate as of the beginning of the year, which was 2.57% for our pension plan and 2.68% for our other-postretirement benefit plan for 2021, and will be 2.91% for our pension plan, and 2.96% for our other post-retirement benefit plans for 2022.

Our expected return on plan assets is determined by evaluating the asset class return expectations with our advisors as well as actual, long-term, historical results of our asset returns. The Company's market-related value of plan assets is equal to the fair value of the plans' assets as of the last day of its fiscal year and is a determinant for the expected return on plan assets, which is a component of post-retirement benefits expense. The allocation of our plans' assets impacts our expected return on plan assets. The expected return on plan assets is based on a targeted allocation of 50% to 70% return seeking assets and 30% to 50% liability hedging assets. Our post-retirement benefits expense increases as the expected return on plan assets decreases. We believe that our actual long-term asset allocations on average will approximate our targeted allocations. Our targeted allocations are driven by our investment strategy to earn a reasonable rate of return

while maintaining risk at acceptable levels through the diversification of investments across and within various asset categories. For 2021, we used a 5.6% expected return on plan assets assumption, and are currently reviewing this assumption for 2022 and expect it may decrease slightly in 2022.

Funding requirements for qualified defined benefit pension plans are determined by government regulations and not by accounting pronouncements. In accordance with funding rules and our funding policy, during 2022 our pension contribution is expected to be $20,390. Future years' contributions will be subject to economic conditions, plan participant data and the funding rules in effect at such time as the funding calculations are performed, though we expect future changes in the amount of contributions and expense recognized to be generally included in customer rates.

Accounting for Income Taxes ─ We estimate the amount of income tax payable or refundable for the current year and the deferred income tax liabilities and assets that results from estimating temporary differences resulting from the treatment of specific items, such as depreciation, for tax and financial statement reporting. Generally, these differences result in the recognition of a deferred tax asset or liability on our consolidated balance sheet and require us to make judgments regarding the probability of the ultimate tax impact of the various transactions we enter into. Based on these judgments, we may record tax reserves or adjustments to valuation allowances on deferred tax assets to reflect the expected realization of future tax benefits. Actual income taxes could vary from these estimates and changes in these estimates can increase income tax expense in the period that these changes in estimates occur.

Our determination of what qualifies as a capital cost versus a tax deduction, for qualifying utility asset improvements, as it relates to our income tax accounting method, is subject to subsequent adjustment as well as IRS audits, changes in income tax laws, including regulations regarding tax-basis depreciation as it applies to our capital expenditures, or qualifying utility asset improvements, the expiration of a statute of limitations, or other unforeseen matters could impact the tax benefits that have already been recognized. We establish reserves for uncertain tax positions based upon management's judgment as to the sustainability of these positions. These accounting estimates related to the uncertain tax position reserve require judgments to be made as to the sustainability of each uncertain tax position based on its technical merits. We believe our tax positions comply with applicable law and that we have adequately recorded reserves as required. However, to the extent the final tax outcome of these matters is different than our estimates recorded, we would then need to adjust our tax reserves which could result in additional income tax expense or benefits in the period that this information is known.

IMPACT OF RECENT ACCOUNTING PRONOUNCEMENTS

We describe the impact of recent accounting pronouncements in Note 1 – *Summary of Significant Accounting Policies* in this Annual Report.

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
Management's Report On Internal Control Over Financial Reporting

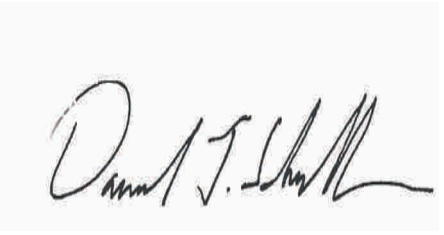
Management of Essential Utilities, Inc. (the "Company") is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) under the Securities Exchange Act of 1934. The Company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America. The Company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In assessing the effectiveness of internal control over financial reporting, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in *Internal Control-Integrated Framework* (2013). As a result of management's assessment and based on the criteria in the framework, management has concluded that, as of December 31, 2021, the Company's internal control over financial reporting was effective.

The effectiveness of our internal control over financial reporting as of December 31, 2021 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which is included herein.





Christopher H. Franklin
Chairman, President and Chief Executive Officer

Daniel J. Schuller
Executive Vice President and Chief Financial Officer

March 1, 2022

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Essential Utilities, Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets, including the consolidated statements of capitalization, of Essential Utilities, Inc. and its subsidiaries (the "Company") as of December 31, 2021 and 2020, and the related consolidated statements of operations and comprehensive income, of equity, and of cash flows for each of the three years in the period ended December 31, 2021, including the related notes and schedule of condensed parent company financial statements as of December 31, 2021 and 2020 and for each of the three years in the period ended December 31, 2021 appearing after the signature pages (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2021 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control Over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Accounting for Rate Regulation

As described in Notes 1 and 6 to the consolidated financial statements, most of the operating companies of the Company that are regulated public utilities are subject to regulation by the utility commissions of the states in which they operate. Some of the operating companies that are regulated public utilities are subject to rate regulation by county or city government. As of December 31, 2021, regulatory assets were $1.4 billion and regulatory liabilities were $0.8 billion. Regulated public utilities follow the Financial Accounting Standards Board's accounting guidance for regulated operations, which provides for the recognition of regulatory assets and liabilities as allowed by regulators for costs or credits that are reflected in current rates or are considered probable of being included in future rates. The regulatory assets represent costs that are probable to be fully recovered from customers in future rates while regulatory liabilities represent amounts that are expected to be refunded to customers in future rates or amounts recovered from customers in advance of incurring the costs. The regulatory assets or liabilities are then relieved as the cost or credit is reflected in the Company's rates charged for utility service. If, as a result of a change in circumstances, it is determined that a regulated operating company no longer meets the criteria to apply regulatory accounting, the operating company would have to discontinue regulatory accounting and write-off the respective regulatory assets and liabilities. Management makes significant judgments and estimates to record regulatory assets and liabilities. For each regulatory jurisdiction with regulated operations, management evaluates at the end of each reporting period, whether the regulatory assets and liabilities continue to meet the probable criteria for future recovery or refund. The evaluation considers factors such as regulatory orders or guidelines, in the same regulatory jurisdiction, of a specific matter or a similar matter, as provided to the Company in the past or to other regulated utilities. In addition, the evaluation may be impacted by changes in the regulatory environment and pending or new legislation that could impact the ability to recover costs through regulated rates. There may be multiple participants to rate or transactional regulatory proceedings who might offer different views

on various aspects of such proceedings, and in these instances, may challenge the prudence of business policies and practices, seek cost disallowances or request other relief.

The principal considerations for our determination that performing procedures relating to management's accounting for rate regulation is a critical audit matter are the significant judgment by management when assessing the impact of regulation on the accounting for regulatory assets and liabilities, which in turn led to a high degree of auditor judgment and effort in performing procedures and in evaluating audit evidence related to whether the regulatory assets will be recovered and liabilities will be refunded.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's evaluation of regulatory matters impacting regulatory assets and liabilities, including controls over the recovery of regulatory assets and the refund of regulatory liabilities. These procedures also included, among others (i) obtaining the Company's correspondence with regulators and assessing the reasonableness of management's judgments regarding the recovery of regulatory assets and refund of regulatory liabilities, (ii) assessing the reasonableness of management's accounting judgments related to new and updated regulatory orders and guidelines, and (iii) testing the calculation of regulatory assets and liabilities based on provisions outlined in regulatory correspondence.

PricewaterhouseCoopers LLP

Philadelphia, Pennsylvania
March 1, 2022

We have served as the Company's auditor since 2000.

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(In thousands of dollars, except per share amounts)

	December 31,	
	2021	2020
Assets		
Property, plant and equipment, at cost	$ 12,610,376	$ 11,620,019
Less: accumulated depreciation	2,358,510	2,107,142
Net property, plant and equipment	10,251,866	9,512,877
Current assets:		
Cash and cash equivalents	10,567	4,827
Accounts receivable, net	141,025	154,775
Unbilled revenues	119,896	118,538
Inventory - materials and supplies	33,756	21,669
Inventory - gas stored	75,804	36,732
Prepayments and other current assets	36,597	38,594
Regulatory assets	20,150	5,085
Total current assets	437,795	380,220
Regulatory assets	1,429,840	1,362,788
Deferred charges and other assets, net	141,955	56,002
Funds restricted for construction activity	1,313	1,268
Goodwill	2,340,815	2,324,547
Operating lease right-of-use assets	48,930	60,334
Intangible assets	5,764	7,241
Total assets	$ 14,658,278	$ 13,705,277

See accompanying notes to consolidated financial statements.

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS (continued)
(In thousands of dollars, except per share amounts)

	December 31, 2021	December 31, 2020
Liabilities and Equity		
Essential Utilities stockholders' equity:		
Common stock at $0.50 par value, authorized 600,000,000 shares, issued 256,102,388 and 248,571,355 as of December 31, 2021 and December 31, 2020	$ 128,050	$ 124,285
Capital in excess of par value	3,705,814	3,379,057
Retained earnings	1,434,201	1,261,862
Treasury stock, at cost, 3,234,765 and 3,180,887 shares as of December 31, 2021 and December 31, 2020	(83,615)	(81,327)
Total stockholders' equity	5,184,450	4,683,877
Long-term debt, excluding current portion	5,815,211	5,545,890
Less: debt issuance costs	35,707	38,146
Long-term debt, excluding current portion, net of debt issuance costs	5,779,504	5,507,744
Commitments and contingencies (See Note 9)		
Current liabilities:		
Current portion of long-term debt	132,146	84,353
Loans payable	65,000	78,198
Accounts payable	192,932	177,489
Book overdraft	81,722	44,003
Accrued interest	40,815	39,408
Accrued taxes	37,924	37,172
Regulatory liabilities	384	19,866
Other accrued liabilities	124,140	123,384
Total current liabilities	675,063	603,873
Deferred credits and other liabilities:		
Deferred income taxes and investment tax credits	1,406,537	1,258,098
Customers' advances for construction	103,619	99,014
Regulatory liabilities	769,617	773,310
Asset retirement obligations	1,256	1,336
Operating lease liabilities	48,230	55,642
Pension and other postretirement benefit liabilities	50,226	91,896
Other	43,666	56,713
Total deferred credits and other liabilities	2,423,151	2,336,009
Contributions in aid of construction	596,110	573,774
Total liabilities and equity	$ 14,658,278	$ 13,705,277

See accompanying notes to consolidated financial statements.

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME
(In thousands, except per share amounts)

	Years ended December 31,		
	2021	2020	2019
Operating revenues	$ 1,878,144	$ 1,462,698	$ 889,692
Operating expenses:			
Operations and maintenance	550,580	528,611	333,102
Purchased gas	340,262	165,745	-
Depreciation	292,191	251,443	158,179
Amortization	5,761	5,616	(1,703)
Taxes other than income taxes	86,641	76,597	59,955
Total operating expenses	1,275,435	1,028,012	549,533
Operating income	602,709	434,686	340,159
Other expense (income):			
Interest expense	207,709	188,435	125,383
Interest income	(2,384)	(5,363)	(25,406)
Allowance for funds used during construction	(20,792)	(12,687)	(16,172)
Change in fair value of interest rate swap agreements	-	-	23,742
Loss on debt extinguishment	-	-	18,528
Gain on sale of other assets	(976)	(661)	(923)
Equity loss (earnings) in joint venture	-	3,374	(2,210)
Other	(2,848)	(3,383)	5,691
Income before income taxes	422,000	264,971	211,526
Provision for income tax benefit	(9,612)	(19,878)	(13,017)
Net income	$ 431,612	$ 284,849	$ 224,543
Comprehensive income	$ 431,612	$ 284,849	$ 224,543
Net income per common share:			
Basic	$ 1.68	$ 1.14	$ 1.04
Diluted	$ 1.67	$ 1.12	$ 1.04
Average common shares outstanding during the period:			
Basic	257,487	249,768	215,550
Diluted	258,180	254,629	215,931

See accompanying notes to consolidated financial statements.

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CAPITALIZATION
(In thousands of dollars, except per share amounts)

			December 31, 2021	December 31, 2020
Essential Utilities stockholders' equity:				
Common stock, $0.50 par value			$ 128,050	$ 124,285
Capital in excess of par value			3,705,814	3,379,057
Retained earnings			1,434,201	1,261,862
Treasury stock, at cost			(83,615)	(81,327)
Total stockholders' equity			5,184,450	4,683,877
Long-term debt of subsidiaries (substantially collateralized by utility plant):				
Interest Rate Range		Maturity Date Range		
0.00% to 0.99%		2023 to 2033	2,341	2,805
1.00% to 1.99%		2021 to 2039	9,341	10,260
2.00% to 2.99%		2022 to 2058	312,751	265,557
3.00% to 3.99%		2021 to 2056	1,359,284	1,316,872
4.00% to 4.99%		2021 to 2059	1,286,024	1,315,812
5.00% to 5.99%		2021 to 2043	16,119	17,804
6.00% to 6.99%		2022 to 2036	32,475	33,955
7.00% to 7.99%		2022 to 2027	28,980	29,890
8.00% to 8.99%		2021 to 2025	2,772	4,425
9.00% to 9.99%		2021 to 2026	11,800	16,900
			3,061,887	3,014,280
Notes payable to bank under revolving credit agreement, variable rate, due 2023			300,000	385,000
Unsecured notes payable:				
Amortizing notes at 3.00% due 2022			20,470	60,502
Notes at 2.40% due 2031			400,000	-
Notes at 2.704% due 2030			500,000	500,000
Notes ranging from 3.01% to 3.59%, due 2029 through 2050			1,125,000	1,125,000
Notes at 4.28%, due 2049			500,000	500,000
Notes ranging from 5.64% to 5.95%, due 2021 through 2034			40,000	45,461
Total long-term debt			5,947,357	5,630,243
Current portion of long-term debt			132,146	84,353
Long-term debt, excluding current portion			5,815,211	5,545,890
Less: debt issuance costs			35,707	38,146
Long-term debt, excluding current portion, net of debt issuance costs			5,779,504	5,507,744
Total capitalization			$ 10,963,954	$ 10,191,621

See accompanying notes to consolidated financial statements.

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF EQUITY
(In thousands of dollars, except per share amounts)

	Common stock	Capital in excess of par value	Retained earnings	Treasury stock	Total
Balance at December 31, 2018	$ 90,576	$ 820,378	$ 1,174,245	$ (75,835)	$ 2,009,364
Net income	-	-	224,543	-	224,543
Dividends declared ($0.9066 per share)	-	-	(188,512)	-	(188,512)
Stock issued to finance acquisition (37,370,017 shares)	18,685	1,244,414	-	-	1,263,099
Proceeds from stock purchase contracts issued under tangible equity units	-	557,389	-	-	557,389
Issuance of common stock from stock purchase contracts (4,846,601 shares)	2,423	(2,423)	-	-	-
Issuance of common stock under dividend reinvestment plan (236,666 shares)	118	8,841	-	-	8,959
Repurchase of stock (52,359 shares)	-	-	-	(1,867)	(1,867)
Equity compensation plan (146,867 shares)	73	(73)	-	-	-
Exercise of stock options (119,306 shares)	60	1,838	-	-	1,898
Stock-based compensation	-	7,368	(204)	-	7,164
Other	-	(1,177)	-	-	(1,177)
Balance at December 31, 2019	111,935	2,636,555	1,210,072	(77,702)	3,880,860
Net income	-	-	284,849	-	284,849
Dividends declared ($0.97 per share)	-	-	(232,571)	-	(232,571)
Issuance of common stock from private placement (21,661,095 shares)	10,831	718,470	-	-	729,301
Issuance of common stock from stock purchase contracts (2,335,654 shares)	1,168	(1,168)	-	-	-
Issuance of common stock under dividend reinvestment plan (388,978 shares)	194	16,328	-	-	16,522
Repurchase of stock (82,320 shares)	-	-	-	(4,365)	(4,365)
Equity compensation plan (239,512 shares)	120	(120)	-	-	-
Exercise of stock options (74,832 shares)	37	1,552	-	-	1,589
Stock-based compensation	-	8,276	(488)	-	7,788
Other	-	(836)	-	740	(96)
Balance at December 31, 2020	124,285	3,379,057	1,261,862	(81,327)	4,683,877
Net income	-	-	431,612	-	431,612
Dividends declared ($1.0378 per share)	-	-	(258,650)	-	(258,650)
Issuance of common stock from stock purchase contracts (127,749 shares)	64	(64)	-	-	-
Issuance of common stock under dividend reinvestment plan (374,824 shares)	187	16,612	-	-	16,799
Issuance of common stock from forward equity sale agreement (6,700,000 shares)	3,350	296,389	-	-	299,739
Repurchase of stock (76,732 shares)	-	-	-	(3,291)	(3,291)
Equity compensation plan (206,163 shares)	103	(103)	-	-	-
Exercise of stock options (122,297 shares)	61	4,111	-	-	4,172
Stock-based compensation	-	9,998	(623)	-	9,375
Other	-	(186)	-	1,003	817
Balance at December 31, 2021	$ 128,050	$ 3,705,814	$ 1,434,201	$ (83,615)	$ 5,184,450

See accompanying notes to consolidated financial statements.

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands of dollars, except per share amounts)

	Years ended December 31,		
	2021	2020	2019
Cash flows from operating activities:			
Net income	$ 431,612	$ 284,849	$ 224,543
Adjustments to reconcile net income to net cash flows from operating activities:			
Depreciation and amortization	297,952	257,059	156,476
Deferred income taxes	(8,514)	(17,782)	(10,436)
Provision for doubtful accounts	27,336	32,325	5,306
Stock-based compensation	10,078	8,160	7,368
Gain on sale of utility system and other assets	(1,589)	(642)	(1,328)
Loss on interest rate swap agreements	-	-	23,742
Loss on debt extinguishment	-	-	18,528
Settlement of interest rate swap agreements	-	-	(83,520)
Net change in receivables, inventory, deferred purchased gas costs and prepayments	(109,605)	(35,348)	(4,335)
Net change in payables, accrued interest, accrued taxes and other accrued liabilities	5,190	(1,819)	5,108
Pension and other postretirement benefits contributions	(15,135)	(20,282)	(8,597)
Other	7,354	1,504	5,668
Net cash flows from operating activities	644,679	508,024	338,523
Cash flows from investing activities:			
Property, plant and equipment additions, including the debt component of allowance for funds used during construction of $4,510, $4,434 and $4,231	(1,020,519)	(835,642)	(550,273)
Acquisitions of utility systems and other, net	(36,326)	(3,501,835)	(59,687)
Net proceeds from the sale of utility systems and other assets	1,819	2,115	2,893
Other	(1,032)	1,696	2,464
Net cash flows used in investing activities	(1,056,058)	(4,333,666)	(604,603)
Cash flows from financing activities:			
Customers' advances and contributions in aid of construction	15,264	9,585	9,092
Repayments of customers' advances	(7,725)	(8,337)	(6,825)
Net proceeds (repayments) of short-term debt	(13,350)	(129,407)	10,275
Proceeds from long-term debt	1,095,171	3,366,838	1,434,506
Repayments of long-term debt	(769,546)	(1,820,571)	(1,048,471)
Extinguishment of long-term debt	-	-	(25,237)
Change in cash overdraft position	37,719	33,059	1,993
Proceeds from issuance of common stock under dividend reinvestment plan	16,799	16,522	8,959
Proceeds from issuance of common stock from private placement	-	729,301	1,263,099
Proceeds from issuance of common stock from forward equity sale agreement	299,739	-	-
Proceeds from tangible equity unit issuance	-	-	673,642
Proceeds from exercised stock options	4,172	1,589	1,898
Repurchase of common stock	(3,291)	(4,365)	(1,867)
Dividends paid on common stock	(258,650)	(232,571)	(188,512)
Other	817	(96)	(1,177)
Net cash flows from financing activities	417,119	1,961,547	2,131,375
Net increase (decrease) in cash and cash equivalents	5,740	(1,864,095)	1,865,295
Cash and cash equivalents at beginning of year	4,827	1,868,922	3,627
Cash and cash equivalents at end of year	$ 10,567	$ 4,827	$ 1,868,922
Cash paid during the year for:			
Interest, net of amounts capitalized	$ 201,792	$ 169,048	$ 89,228
Income taxes	5,692	4,853	970
Non-cash investing activities:			
Property, plant and equipment additions purchased at the period end, but not yet paid	$ 95,945	$ 98,569	$ 60,628
Non-cash utility property contributions	36,882	36,181	30,693

See accompanying notes to consolidated financial statements.

Refer to Note 2 – *Acquisitions*, Note 11 – *Long-term Debt and Loans Payable*, and Note 15 – *Employee Stock and Incentive Plan* for a description of non-cash activities.

Note 1 – *Summary of Significant Accounting Policies*

Nature of Operations ─ Essential Utilities, Inc. ("Essential Utilities," the "Company," "we," "our", or "us") is the holding company for regulated utilities providing water, wastewater, or natural gas services concentrated in Pennsylvania, Ohio, Texas, Illinois, North Carolina, New Jersey, Indiana, Virginia, West Virginia, and Kentucky under the Aqua and Peoples brands. One of our largest operating subsidiaries is Aqua Pennsylvania, Inc., which accounted for approximately 55% of our Regulated Water segment's operating revenues and approximately 68% of our Regulated Water segment's income for 2021. As of December 31, 2021, Aqua Pennsylvania provided water or wastewater services to approximately one-half of the total number of Regulated Water customers we serve. Aqua Pennsylvania's service territory is located in the suburban areas north and west of the City of Philadelphia and in 27 other counties in Pennsylvania. The Company's other regulated water or wastewater utility subsidiaries provide similar services in seven additional states. Additionally, pursuant to the Company's growth strategy, commencing on March 16, 2020 with the completion of the Peoples Gas Acquisition, the Company began to provide natural gas distribution services to customers in western Pennsylvania, Kentucky, and West Virginia. Approximately 93% of the total number of natural gas utility customers we serve are in western Pennsylvania. Lastly, the Company's market-based activities are conducted through Aqua Infrastructure LLC, and Aqua Resources, Inc., and certain other non-regulated subsidiaries of Peoples. Prior to our October 2020 sale of our investment in a joint venture, Aqua Infrastructure provided non-utility raw water supply services for firms in the natural gas drilling industry. Aqua Resources offers, through a third-party, water and sewer line protection solutions and repair services to households. Other non-regulated subsidiaries of Peoples provide utility service line protection services to households and operate gas marketing and production businesses.

The Company has identified twelve operating segments and has two reportable segments. The Regulated Water segment is comprised of eight operating segments representing its water and wastewater regulated utility companies, which are organized by the states where the Company provides water and wastewater services. These operating segments are aggregated into one reportable segment since each of the Company's operating segments has the following similarities: economic characteristics, nature of services, production processes, customers, water distribution or wastewater collection methods, and the nature of the regulatory environment. The Regulated Natural Gas segment is comprised of one operating segment representing natural gas utility companies, acquired in the Peoples Gas Acquisition, where the Company provides natural gas distribution services. In addition, our non-regulated natural gas operations, Aqua Resources, and Aqua Infrastructure are not quantitatively significant to be reportable and are included as a component of "Other," in addition to corporate costs that have not been allocated to the Regulated Water and Regulated Natural Gas segments, because they would not be recoverable as a cost of utility service, and intersegment eliminations.

Regulation ─ Most of the operating companies that are regulated public utilities are subject to regulation by the utility commissions of the states in which they operate. The respective utility commissions have jurisdiction with respect to rates, service, accounting procedures, issuance of securities, acquisitions and other matters. Some of the operating companies that are regulated public utilities are subject to rate regulation by county or city government. Regulated public utilities follow the Financial Accounting Standards Board's ("FASB") accounting guidance for regulated operations, which provides for the recognition of regulatory assets and liabilities as allowed by regulators for costs or credits that are reflected in current rates or are considered probable of being included in future rates. Costs, for which the Company has received or expects to receive prospective rate recovery, are deferred as a regulatory asset and amortized over the period of rate recovery in accordance with the FASB's accounting guidance for regulated operations. The regulatory assets or liabilities are then relieved as the cost or credit is reflected in Company's rates charged for utility service. If, as a result of a change in circumstances, it is determined that a regulated operating company no longer meets the criteria to apply regulatory accounting, the operating company would have to discontinue regulatory accounting and write-off the respective regulatory assets and liabilities. See Note 6 - *Regulatory Assets and Liabilities* for further information regarding the Company's regulatory assets.

The Company makes significant judgments and estimates to record regulatory assets and liabilities. For each regulatory jurisdiction with regulated operations, the Company evaluates at the end of each reporting period, whether the regulatory assets and liabilities continue to meet the probable criteria for future recovery or refund. The evaluation considers factors such as regulatory orders or guidelines, in the same regulatory jurisdiction, of a specific matter or a similar matter, as provided to the Company in the past or to other regulated utilities. In addition, the evaluation may be impacted by changes in the regulatory environment and pending or new legislation that could impact the ability to recover costs through regulated rates. There may be multiple participants to rate or transactional regulatory proceedings who might offer different views on various aspects of such proceedings, and in these instances may challenge the prudence of our business policies and practices, seek cost disallowances or request other relief.

Use of Estimates in Preparation of Consolidated Financial Statements ─ The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

The current novel coronavirus ("COVID-19") pandemic has, at times, caused significant social and economic restrictions that have been imposed in the United States and abroad, which resulted in significant volatility in the global economy and led to reduced economic activity in some industries. In the preparation of these financial statements and related disclosures, we have assessed the impact that the COVID-19 pandemic has had on our estimates, assumptions, forecasts, and accounting policies. Because of the essential nature of our business, we do not believe the COVID-19 pandemic had a material impact on our estimates, assumptions and forecasts used in the preparation of our financial statements, although we continue to monitor this closely. As the COVID-19 situation is ever evolving, future events and effects related to the COVID-19 pandemic, including the effects of potential vaccination requirements, cannot be determined with precision, and actual results could significantly differ from our estimates or forecasts.

Basis of Presentation – The consolidated financial statements include the accounts of the Company and its subsidiaries. All intercompany accounts and transactions have been eliminated.

Property, Plant and Equipment and Depreciation ─ Property, plant and equipment consist primarily of utility plant. The cost of additions includes contracted cost, direct labor and fringe benefits, materials, overheads, and for additions meeting certain criteria, allowance for funds used during construction. Utility systems acquired are typically recorded at estimated original cost of utility plant when first devoted to utility service and the applicable depreciation is recorded to accumulated depreciation. Further, utility systems acquired under fair value regulations would be recorded based on the valuation of the utility plant as approved by the respective utility commission. The difference between the estimated original cost, less applicable accumulated depreciation, and the purchase price may be recorded as an acquisition adjustment within utility plant as permitted by the applicable regulatory jurisdiction. At December 31, 2021 and 2020, utility plant includes a net credit acquisition adjustment of $9,055 and $12,215, respectively, which is generally being amortized from 2 to 59 years. Amortization of the acquisition adjustments totaled $2,842 in 2021, $2,895 in 2020, and $6,076 in 2019.

Utility expenditures for maintenance and repairs, including major maintenance projects and minor renewals, are charged to operating expenses when incurred in accordance with the system of accounts prescribed by the utility commissions of the states in which the company operates. The cost of new units of property and betterments are capitalized. Utility expenditures for water main cleaning and relining of pipes are deferred and are presented in net property, plant and equipment in accordance with the FASB's accounting guidance for regulated operations. As of December 31, 2021, $1,635 of these costs have been incurred since the last respective rate proceeding and the Company expects to recover these costs in future rates.

The cost of software upgrades and enhancements are capitalized if they result in added functionality, which enables the software to perform tasks it was previously incapable of performing. Information technology costs associated with major system installations, conversions and improvements, such as software training, data conversion and business process reengineering costs, are deferred as a regulatory asset if the Company expects to recover these costs in future rates. If these costs are not deferred, then these costs are charged to operating expenses when incurred. As of December 31, 2021, $52,810 of these costs have been deferred since the last respective rate proceeding as a regulatory asset, and the deferral is reported as a component of net property, plant and equipment.

When units of utility property are replaced, retired or abandoned, the recorded value thereof is credited to the asset account and such value, together with the net cost of removal, is charged to accumulated depreciation. To the extent the Company anticipates recovery of the cost of removal or other retirement costs through rates after the retirement costs are incurred, a regulatory asset is recorded as those costs are incurred. In some cases, the Company recovers retirement costs through rates during the life of the associated asset and before the costs are incurred. These amounts, which are not yet utilized, result in a regulatory liability being reported based on the amounts previously recovered through customer rates.

The straight-line remaining life method is used to compute depreciation on utility plant. Generally, the straight-line method is used with respect to transportation and mechanical equipment, office equipment and laboratory equipment.

Impairment of Long-Lived Assets - Long-lived assets of the Company, which consist primarily of utility plant in service, operating lease right-of-use assets and intangible assets, are reviewed for impairment when changes in circumstances or events occur. These circumstances or events could include a decline in the market value or physical condition of a long-lived asset, an adverse change in the manner in which long-lived assets are used or planned to be used, a change in historical trends, operating cash flows associated with the long-lived assets, changes in macroeconomic conditions, industry and market conditions, or overall financial performance. When these circumstances or events occur, the Company determines whether it is more likely than not that the fair value of those assets is less than their carrying amount. If the Company determines that it is more likely than not (that is, the likelihood of more than 50 percent), the Company would recognize an impairment charge if it is determined that the carrying amount of an asset exceeds the sum of the undiscounted estimated cash flows. In this circumstance, the Company would recognize an impairment charge equal to the difference between the carrying amount and the fair value of the asset. Fair value is estimated to be the present value of future net cash flows associated with the asset, discounted using a discount rate commensurate with the risk and remaining life of the asset. During the year ended December 31, 2021, the Company recorded an impairment loss to write down a portion of the operating lease right-of-use asset for office space not used in operations to fair value. Refer to Note 10 – *Leases*, for further details.

Regulatory assets are reviewed for the continued application of the FASB accounting guidance for regulated operations. The Company's review determines whether there have been changes in circumstances or events, such as regulatory disallowances, or abandonments, that have occurred that require adjustments to the carrying value of these assets. Adjustments to the carrying value of these assets would be made in instances where their inclusion in the rate-making process is unlikely. For utility plant in service, we would recognize an impairment loss for any amount disallowed by the respective utility commission.

Allowance for Funds Used During Construction ─ The allowance for funds used during construction ("AFUDC") represents the capitalized cost of funds used to finance the construction of utility plant. In general, AFUDC is applied to construction projects requiring more than one month to complete. No AFUDC is applied to projects funded by customer advances for construction, contributions in aid of construction, or applicable state-revolving fund loans. AFUDC includes the net cost of borrowed funds and a rate of return on other funds when used and is recovered through rates as the utility plant is depreciated. The amount of AFUDC related to equity funds in 2021 was $16,282, 2020 was $8,253, and 2019 was $11,941. No interest was capitalized by our market-based businesses.

Lease Accounting ─ The Company evaluates the contracts it enters into to determine whether such contracts contain leases. A contract contains a lease if the contract conveys the right to control the use of identified property, plant or equipment for a period of time in exchange for consideration. We enter into operating lease contracts for the right to utilize certain land, office facilities, office equipment, and vehicles from third parties. For contracts that extend for a period greater than 12 months, we recognize a right of use asset and a corresponding lease liability on our consolidated balance sheet. The present value of each lease is based on the future minimum lease payments in accordance with Accounting Standards Codification ("ASC") 842 and is determined by discounting these payments using an incremental borrowing rate.

Recognition of Revenues ─ The Company recognizes revenue as utility services are provided to our customers, which happens over time as the services are delivered and the performance obligation is satisfied. The Company's utility revenues recognized in an accounting period includes amounts billed to customers on a cycle basis and unbilled amounts based on estimated usage from the last billing to the end of the accounting period. Unbilled amounts are calculated by deriving estimates based on average usage of the prior month. The Company's actual results could differ from these estimates, which would result in operating revenues being adjusted in the period that the revision to our estimates are determined.

Generally, payment is due within 30 days once a bill is issued to a customer. Sales tax and other taxes we collect on behalf of government authorities, concurrent with our revenue-producing activities, are primarily excluded from revenue.

The following table presents our revenues disaggregated by major source and customer class:

2021	Water Revenues	Wastewater Revenues	Natural Gas Revenues	Other Revenues
Revenues from contracts with customers:				
Residential	$ 561,996	$ 99,931	$ 530,338	$ -
Commercial	151,071	22,060	99,596	-
Fire protection	35,984	-	-	-
Industrial	30,230	1,729	3,427	-
Gas transportation	-	-	198,195	-
Other water	53,488	-	-	-
Other wastewater	-	8,860	-	-
Customer rate credits	-	-	(5,000)	-
Other utility	-	-	32,812	13,358
Revenues from contracts with customers	832,769	132,580	859,368	13,358
Alternative revenue program	1,760	(264)	534	-
Other and eliminations	-	-	-	38,039
Consolidated	$ 834,529	$ 132,316	$ 859,902	$ 51,397

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements (continued)
(In thousands of dollars, except per share amounts)

2020	Water Revenues	Wastewater Revenues	Natural Gas Revenues	Other Revenues
Revenues from contracts with customers:				
Residential	$ 567,486	$ 95,051	$ 314,274	$ -
Commercial	143,479	19,062	50,239	-
Fire protection	35,340	-	-	-
Industrial	29,764	1,619	6,923	-
Gas transportation	-	-	133,685	-
Other water	32,372	-	-	-
Other wastewater	-	5,385	-	-
Customer rate credits	(3,757)	(323)	(18,924)	-
Other utility	-	-	20,243	12,861
Revenues from contracts with customers	804,684	120,794	506,440	12,861
Alternative revenue program	87	114	124	-
Other and eliminations	-	-	-	17,594
Consolidated	$ 804,771	$ 120,908	$ 506,564	$ 30,455

2019	Water Revenues	Wastewater Revenues	Other Revenues
Revenues from contracts with customers:			
Residential	$ 518,192	$ 83,561	$ -
Commercial	145,599	15,222	-
Fire protection	33,589	-	-
Industrial	30,667	1,765	-
Other water	39,353	-	-
Other wastewater	-	4,656	-
Other utility	-	-	13,835
Revenues from contracts with customers	767,400	105,204	13,835
Alternative revenue program	80	(89)	-
Other and eliminations	-	-	3,262
Consolidated	$ 767,480	$ 105,115	$ 17,097

On March 16, 2020, the Company completed the Peoples Gas Acquisition, which expanded the Company's regulated utility business to include natural gas distribution. The natural gas revenues of Peoples are included for the period since the date of the acquisition.

Revenues from Contracts with Customers – These revenues are composed of four main categories: water, wastewater, natural gas, and other. Water revenues represent revenues earned for supplying customers with water service. Wastewater revenues represent revenues earned for treating wastewater and releasing it into the environment. Natural gas revenues represent revenues earned for the gas commodity and delivery of natural gas to customers. Other revenues are associated fees that relate to our utility businesses but are not water, wastewater, or natural gas revenues. Refer to the description below for a discussion of the performance obligation for each of these revenue streams.

- Tariff Revenues – These revenues are categorized by customer class: residential, commercial, fire protection, industrial, gas transportation, other water, and other wastewater. The rates that generate these revenues are approved by the respective state utility commission, and revenues are billed cyclically and accrued for when unbilled. The regulated natural gas rates are set and adjusted for increases or decreases in our purchased gas costs through purchased gas adjustment mechanisms. Purchased gas adjustment mechanisms provide us with a means to recover purchased gas costs on an ongoing basis without filing a rate case. Other water and other wastewater revenues consists primarily of fines, penalties, surcharges, and availability lot fees. Our performance obligation for tariff revenues is to provide potable water, wastewater treatment service, or delivery and sale of natural gas to customers. This performance obligation is satisfied over time as the services are rendered. The amounts that the Company has a right to invoice for tariff revenues reflect the right to consideration from the customers in an amount that corresponds directly with the value transferred to the customer for the performance completed to date.
- Other Utility Revenues – Other utility revenues represent revenues earned primarily from: antenna revenues, which represents fees received from telecommunication operators that have put cellular antennas on our water towers; operation and maintenance and billing contracts, which represent fees earned from municipalities for our operation of their water or wastewater treatment services or performing billing services; and fees earned from developers for accessing our water mains, miscellaneous service revenue from gas distribution operations, gas processing and handling revenue, sales of natural gas at market-based rates and contracted fixed prices, sales of gas purchased from third parties, and other gas marketing activities. The performance obligations vary for these revenues, but all are primarily recognized over time as the service is delivered.

- Alternative Revenue Program:
    - Water / Wastewater Revenues – These revenues represent the difference between the actual billed utility volumetric water and wastewater revenues for Aqua Illinois and the revenues set in the last Aqua Illinois rate case. In accordance with the Illinois Commerce Commission, we recognize revenues based on the target amount established in the last rate case, and then record either a regulatory asset or liability based on the cumulative annual difference between the target and actual amounts billed, which results in either a payment from customers or a refund due to customers. The cumulative annual difference is either refunded to customers or collected from customers over a nine-month period.

    - Natural Gas Revenues – These revenues represent the weather-normalization adjustment (“WNA”) mechanism in place for our natural gas customers served in Kentucky. The WNA serves to minimize the effects of weather on the Company’s results for its residential and small commercial natural gas customers. This regulatory mechanism adjusts revenues earned for the variance between actual and normal weather and can have either positive (warmer than normal) or negative (colder than normal) effects on revenues. Customer bills are adjusted in the December through April billing months, with rates adjusted for the difference between actual revenues and revenues calculated under this mechanism billed to the customers.

  These revenue programs represent a contract between the utility and its regulators, not customers, and therefore are not within the scope of the FASB’s accounting guidance for recognizing revenue from contracts with customers.

- Other and Eliminations – Other and eliminations consist of our market-based revenues, which comprises: our non-regulated natural gas operations, Aqua Infrastructure, and Aqua Resources (described below), and intercompany eliminations for revenue billed between our subsidiaries. Our non-regulated natural gas operations consist of utility service line protection solutions and repair services for households and the operation of gas marketing and production entities. Revenue is recognized and the performance obligation is satisfied over time as the service is delivered.

Aqua Infrastructure is the holding company for our former 49% investment in a joint venture that operated a private pipeline system to supply raw water to natural gas well drilling operations in the Marcellus Shale of north central Pennsylvania. Prior to our October 30, 2020 sale of our investment in the joint venture, the joint venture earned revenues through providing non-utility raw water supply services to natural gas drilling companies which enter into water supply contracts. The performance obligation was to deliver non-potable water to the joint venture's customers. Aqua Infrastructure's share of the revenues recognized by the joint venture was reflected, net, in equity earnings in joint venture on our consolidated statements of operations and comprehensive income. Aqua Resources earned revenues by providing non-regulated water and wastewater services through an operating and maintenance contract, which concluded in 2020, and continues to earn revenue through third-party water and sewer service line protection and repair services. For the contract operations and maintenance business, the performance obligations were performing agreed upon contract services to operate the water and wastewater system. For the service line protection business, the performance obligations are allowing the use of our logo to a third-party water and sewer service line repair provider. Revenues are primarily recognized over time as service is delivered.

Cash and Cash Equivalents ─ The Company considers all highly liquid investments with an original maturity of three months or less, which are not restricted for construction activity, to be cash equivalents.

The Company had a book overdraft, which represents transactions that have not cleared the bank accounts at the end of the period, for specific disbursement cash accounts of $81,722 and $44,003 at December 31, 2021 and 2020, respectively. The Company transfers cash on an as-needed basis to fund these items as they clear the bank in subsequent periods. The balance of the book overdraft is reported as book overdraft and the change in the book overdraft balance is reported as cash flows from financing activities, due to our ability to fund the overdraft with the Company's credit facility.

Accounts Receivable ─ Accounts receivable are recorded at the invoiced amounts, which consists of billed and unbilled revenues. The allowance for doubtful accounts is the Company's best estimate of the amount of probable credit losses in our existing accounts receivable and is determined based on lifetime expected credit losses and the aging of account balances. The Company reviews the allowance for doubtful accounts quarterly. Account balances are written off against the allowance when it is probable the receivable will not be recovered. When utility customers request extended payment terms, credit is extended based on regulatory guidelines, and collateral is not required.

Inventories – Materials and Supplies – Inventories are stated at cost. Cost is determined using the first-in, first-out method.

Inventory – Gas Stored – The Company accounts for gas in storage inventory using the weighted average cost of gas method.

Investment in Joint Venture – The Company used the equity method of accounting to account for our former 49% investment in a joint venture with a firm in the natural gas industry for the construction and operation of a private pipeline system to supply raw water to natural gas well drilling operations in the Marcellus Shale in north-central Pennsylvania, which commenced operations in 2012. In 2020, the Company sold its investment in joint venture and recorded a charge of $3,700 associated with the sale. Our share of equity loss (earnings) in the joint venture was reported in the consolidated statements of operations and comprehensive income as equity loss (earnings) in joint venture. During 2020 and 2019, we received distributions of $2,137 and $3,185, respectively.

Goodwill ─ Goodwill represents the excess cost over the fair value of net tangible and identifiable intangible assets acquired through acquisitions. Goodwill is not amortized but is tested for impairment annually, or more often, if circumstances indicate a possible impairment may exist. When testing goodwill for impairment, we may assess qualitative factors, including macroeconomic conditions, industry and market considerations, cost factors, overall financial performance, and entity specific events, for some or all of our reporting units to determine whether it's more likely than not that the fair value of a reporting unit is less than its carrying amount. Alternatively, based on our assessment of the qualitative factors previously noted or at our discretion, we may perform a quantitative goodwill impairment test by determining the fair value of a reporting unit. If we perform a quantitative test and determine that the fair value of a reporting unit is less than its carrying amount, we would record an impairment loss for the amount by which a reporting unit's carrying amount exceeds its fair value, not to exceed the carrying amount of goodwill.

Impairment testing for goodwill is done at the reporting unit level. A reporting unit is an operating segment or one level below an operating segment (also known as a component). A component of an operating segment is a reporting unit if the component constitutes a business for which discrete financial information is available, and segment management regularly reviews the operating results of that component. We assigned assets and liabilities to each reporting unit based on either specific identification or by using judgment for the remaining assets and liabilities that are not specific to a reporting unit. Goodwill was assigned to the reporting units based on a combination of specific identification and relative fair values.

The Company performed a quantitative assessment for its annual test of the goodwill attributable to its Regulated Natural Gas reporting unit as of July 31, 2021. We estimated the fair value of the reporting unit by weighting results from the market approach and the income approach. Key assumptions in the valuation methodologies for goodwill included growth rates, terminal value, discount rates, and comparable multiples from publicly traded companies in our industry. Based on our analysis, we determined that the fair values of our Regulated Natural Gas reporting unit exceeded its carrying values, indicating none of its goodwill was impaired.

The Company performed a qualitative assessment for its annual test of the goodwill attributable to its Regulated Water and Aqua Resources reporting units as of July 31, 2021, and concluded that it is more likely than not that the fair value of each reporting unit, which has goodwill recorded, exceeded its carrying amount, indicating that none of the Company's goodwill was impaired.

The following table summarizes the changes in the Company's goodwill:

	Regulated Water	Regulated Natural Gas	Other	Consolidated
Balance at December 31, 2019	$ 58,981	$ -	$ 4,841	$ 63,822
Goodwill acquired	2,596	2,261,047	-	2,263,643
Reclassifications to utility plant acquisition adjustment	(2,918)	-	-	(2,918)
Balance at December 31, 2020	58,659	2,261,047	4,841	2,324,547
Goodwill acquired	-	-	-	-
Measurement period purchase price allocation adjustments	-	16,400	-	16,400
Reclassifications to utility plant acquisition adjustment	(132)	-	-	(132)
Balance at December 31, 2021	$ 58,527	$ 2,277,447	$ 4,841	$ 2,340,815

The measurement period purchase price allocation adjustments resulted from the completion of the Peoples Gas Acquisition on March 16, 2020, which resulted in goodwill of $2,277,447 which was subject to adjustment over the one year measurement period that ended on March 15, 2021. Refer to Note 2 – *Acquisitions* for information about the goodwill attributed to our Regulated Natural Gas segment.

The reclassification of goodwill to utility plant acquisition adjustment results from either a regulatory order or a mechanism approved by the applicable utility commission. A regulatory order may provide for the one-time transfer of certain acquired goodwill. The mechanism provides for the transfer over time, and the recovery through customer rates, of goodwill associated with some acquisitions upon achieving specific objectives.

Intangible assets – The Company's intangible assets consist of customer relationships for our non-regulated natural gas operations, and non-compete agreements with certain former employees of Peoples. These intangible assets are amortized on a straight-line basis over their estimated useful lives of fifteen years for the customer relationships and five years for the non-compete agreements.

Derivative Instruments – The Company's natural gas commodity price risk, driven mainly by price fluctuations of natural gas, is mitigated by its purchased-gas cost adjustment mechanisms. The Company also uses derivative instruments to economically hedge the cost of anticipated natural gas purchases during the winter heating months that seeks to offset the risk to the Company's utility customers from upward market price volatility. These strategies include requirements contracts, spot purchase contracts and underground storage to meet regulated customers' natural gas requirements that may have fixed or variable pricing. The variable price contracts qualify as derivative instruments; however, because the contract price is the prevailing price at the future transaction date the contract has no determinable fair value. The fixed price contracts and firm commitments to purchase a fixed quantity of gas in the future qualify for the normal purchases and normal sales exception that is allowed for contracts that are probable of delivery in the normal course of business and, as such, are accounted for under the accrual basis and are not recorded at fair value in the Company's consolidated financial statements.

Deferred Charges and Other Assets ─ Deferred charges and other assets consist primarily of assets held to compensate employees in the future who participate in the Company's deferred compensation plan, prepaid pension and other post-retirement benefit plans assets, and the non-current portion of Peoples' financing notes receivable, which amounted to $28,576, $25,978, and $65,744 as of December 31, 2021; and, $25,780, $0, and $0 as of December 31, 2020, respectively. The assets of the deferred compensation plan are invested in mutual funds which are carried on the consolidated balance sheet at fair market value, and changes in fair value are included in other expense (income), refer to Note 12 – *Fair Value of Financial Instruments* for further details. Refer to Note 16 – *Pension Plans and Other Post-Retirement Benefit Plans* for further information on the prepaid pension and other post-retirement benefit plan assets.

Pursuant to agreements entered into by Peoples in 2019, Peoples committed to design, construct, and operate over a 20-year period, three onsite natural gas fueled energy plants on customer-owned property in the western Pennsylvania area. Under the provisions of ASC 842, *Leases*, the Company determined that indicators of control over the assets constructed were not met, as such this failed sale-leaseback transaction was accounted for as a financing arrangement in accordance with ASC Topic 310, *Receivables*. During the period of construction of the plants, which began in 2020, expenditures incurred by Peoples on the projects were recorded in property, plant and equipment and amounted to $58,380 as of December 31, 2020. During 2021, when construction was completed and the plants became on-line and began generation activity, the accumulated balances of the projects included in property, plant and equipment of $71,665 was reclassified as a note receivable and included within deferred charges and other assets in the consolidated balance sheet. Amounts becoming due for payment by the customer in the current year are included within prepayments and other current assets in the consolidated balance sheets, which amounted to $2,423 as of December 31, 2021. Interest income is recognized on these financing notes receivable using an imputed interest rate ranging from 3.4% to 4.3% and is recorded as interest income in the consolidated statements of operations and comprehensive income. For the year ended December 31, 2021, interest income on financing note receivable amounted to $1,971.

Income Taxes ─ The Company accounts for some income and expense items in different time periods for financial and tax reporting purposes. Deferred income taxes are provided on specific temporary differences between the tax basis of the assets and liabilities, and the amounts at which they are carried in the consolidated financial statements. The income tax effect of temporary differences not currently included in rates is recorded as deferred taxes with an offsetting regulatory asset or liability. These deferred income taxes are based on the enacted tax rates expected to be in effect when such temporary differences are projected to reverse. Valuation allowances are established when necessary to reduce deferred tax assets to the amount more likely than not to be realized. Investment tax credits are deferred and amortized over the estimated useful lives of the related properties. Judgment is required in evaluating the Company's Federal and state tax positions. Despite management's belief that the Company's tax return positions are fully supportable, the Company establishes reserves when it believes that its tax positions are likely to be challenged and it may not fully prevail in these challenges. The Company's provision for income taxes includes interest, penalties and reserves for uncertain tax positions.

Customers' Advances for Construction and Contributions in Aid of Construction ─ Utility mains, other utility property or, in some instances, cash advances to reimburse the Company for its costs to construct utility mains or other utility property, are contributed to the Company by customers, real estate developers and builders in order to extend utility service to their properties. The value of these contributions is recorded as customers' advances for construction. Over time, the amount of non-cash contributed property will vary based on the timing of the contribution of the non-cash property and the volume of non-cash contributed property received in connection with development in our service territories. The Company makes refunds on these advances over a specific period of time based on operating revenues related to the property, or as new customers are connected to and take service from the applicable water main. After all refunds are made, any remaining balance is transferred to contributions in aid of construction for our regulated water business. Contributions in aid of construction include direct non-refundable contributions and the portion of customers' advances for construction that become non-refundable. For our regulated gas business, non-refundable contributions are netted against the cost of the related utility mains or other utility property.

Based on regulatory conventions in states where the Company operates, generally our subsidiaries depreciate contributed property and amortize contributions in aid of construction at the composite rate of the related property. Contributions in aid of construction and customers' advances for construction are deducted from the Company's rate base for rate-making purposes, and therefore, no return is earned on contributed property.

Stock-Based Compensation ─ The Company records compensation expense in the financial statements for stock-based awards based on the grant date fair value of those awards. Stock-based compensation expense includes an estimate for pre-vesting forfeitures and is recognized over the requisite service periods of the awards on either a straight-line basis, or the graded vesting method, which is generally commensurate with the vesting term.

Fair Value Measurements – The Company follows the FASB's accounting guidance for fair value measurements and disclosures, which defines fair value and establishes a framework for using fair value to measure assets and liabilities. That framework provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are as follows:

- Level 1: unadjusted quoted prices in active markets for identical assets or liabilities that the Company has the ability to access;

- Level 2: inputs other than Level 1 that are observable, either directly or indirectly, such as quoted market prices in active markets for similar assets or liabilities, quoted prices for identical or similar assets or liabilities in non-active markets, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; or

- Level 3: inputs that are unobservable and significant to the fair value measurement.

The asset's or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs. Additionally, assets that are measured at fair value using the net asset value ("NAV") per share practical expedient are not classified in the fair value hierarchy. There have been no changes in the valuation techniques used to measure fair value or asset or liability transfers between the levels of the fair value hierarchy for the years ended December 31, 2021 and 2020.

Recent Accounting Pronouncements —

Pronouncements to be adopted upon the effective date:

In August 2020, the FASB issued updated accounting guidance on accounting for convertible instruments and contracts in an entity's own equity. The updated guidance reduces the number of accounting models for convertible debt and convertible preferred stock instruments and makes certain disclosure amendments intended to improve the information provided to users. Additionally, the guidance also amends the derivative guidance for the "own stock" scope exception, which exempts qualifying instruments from being accounted for as derivatives if certain criteria are met. Further, the standard changes the way certain convertible instruments are treated when calculating earnings per share. The updated accounting guidance is effective for fiscal years beginning after December 15, 2021 with early adoption permitted beginning in 2021. The adoption of this standard is not expected to have a material impact to the Company's financial statements.

In October 2021, the FASB issued accounting guidance on accounting for acquired revenue contracts with customers in a business combination. The guidance specifies for all acquired revenue contracts, regardless of their timing of payment, the circumstances in which the acquirer should recognize contract assets and contract liabilities that are acquired in a business combination, as well as how to measure those contract assets and contract liabilities. The updated accounting guidance is effective for fiscal years beginning after December 15, 2022 with early adoption permitted. The Company is evaluating the requirements of the updated guidance to determine the impact of adoption.

Pronouncements adopted during the fiscal year:

In March 2020, the FASB issued accounting guidance that provides companies with optional guidance, including expedients and exceptions for applying generally accepted accounting principles to contracts and other transactions affected by reference rate reform, such as the London Interbank Offered Rate (LIBOR). The accounting guidance was effective upon issuance and generally can be applied to applicable contract modifications through December 31, 2022. The Company adopted the guidance in the fourth quarter of 2021 and there was no impact on its Consolidated Financial Statements upon adoption.

In December 2019, the FASB issued updated accounting guidance that simplifies the accounting for income taxes. The updated guidance removes certain exceptions to the general principles of accounting for income taxes to reduce the cost and complexity of its application, including the accounting for intraperiod tax allocation when there is a loss from continuing operations and income or a gain from other items, deferred tax liabilities for equity method investments when a foreign subsidiary becomes an equity method investment or when a foreign equity method investment becomes a subsidiary, and calculating income taxes in an interim period when a year-to-date loss exceeds the anticipated loss for the year. Additionally, the updated guidance clarifies and amends the existing guidance over accounting for franchise taxes and other taxes partially based on income, an entity's tax basis of goodwill, separate entity financial statements, interim recognition of enactment of tax laws or rate changes, and improvements to the codification for income taxes related to employee stock ownership plans and investments in qualified affordable housing projects accounted for using the equity method. As permitted, we adopted this updated guidance on January 1, 2021, which did not have a material impact on our consolidated financial statements.

Recently issued accounting standards or pronouncements not disclosed above have been excluded as they are not relevant to the Company.

Note 2 – *Acquisitions*

Peoples Gas Acquisition

On March 16, 2020 (the "Closing Date"), the Company completed the acquisition of Peoples Natural Gas (the "Peoples Gas Acquisition"), which expanded the Company's regulated utility business to include natural gas distribution, serving approximately 750,000 natural gas utility customers in western Pennsylvania, West Virginia, and Kentucky. The Company paid cash consideration of $3,465,344, which was subject to adjustment based upon the terms of the purchase agreement. Purchase price adjustments included the completion of a closing balance sheet, which was provided to the seller, and an adjustment for utility capital expenditures made by the seller during the period between November 1, 2018 and the Closing Date. There was a dispute between the parties regarding this adjustment for utility capital expenditures. In November 2021, the dispute between the parties regarding the adjustment for utility capital expenditures was resolved in accordance with the provisions of the purchase agreement and an inconsequential payment was made between the parties. The purchase price paid by the Company was determined as follows:

Base purchase price	$	4,275,000
Adjustments:		
Estimated change in working capital		43,935
Certain estimated capital expenditures		247,500
Assumption of indebtedness		(1,101,091)
Cash consideration	$	3,465,344

The assumption of $1,101,091 of indebtedness as of the Closing Date, consisted of $920,091 of senior notes and $181,000 of short-term debt. The acquisition was financed through a series of financing transactions which included the issuance of common stock from a public offering and a private placement, a tangible equity unit offering, and short and long-term debt. Refer to Note 11 – *Long-term Debt and Loans Payable,* and Note 13 – *Stockholder's Equity* for further information on these financings.

The Company accounted for the Peoples Gas Acquisition as a business combination using the acquisition method of accounting. The purchase price was allocated to the net tangible and intangible assets based upon their estimated fair values at the date of the acquisition. The purchase price allocation was preliminary and was subject to revision through the end of the measurement period on March 15, 2021. During the first quarter of 2021, the Company recorded an adjustment to increase goodwill by $16,400 primarily reflecting an adjustment to deferred income taxes and the valuation of accounts receivable. Goodwill recorded for the Peoples Gas Acquisition is not expected to be deductible for tax purposes. The following table summarizes the purchase price allocation as of the acquisition date and measurement period adjustments as of March 15, 2021:

	Amounts Previously Recognized as of Acquisition Date (a)	Measurement Period Adjustments	Amounts Recognized as of Acquisition Date (as Adjusted)
Property, plant and equipment, net	$ 2,476,551	$ -	$ 2,476,551
Current assets	242,531	(9,197)	233,334
Regulatory assets	286,751	(22,293)	264,458
Goodwill	2,261,047	16,400	2,277,447
Other long-term assets	75,071	-	75,071
Total assets acquired	5,341,951	(15,090)	5,326,861
Current portion of long-term debt	5,136	-	5,136
Loans payable	181,000	-	181,000
Other current liabilities	186,120	(200)	185,920
Long-term debt	999,460	-	999,460
Deferred income taxes	213,647	(20,522)	193,125
Regulatory liabilities	123,029	6,389	129,418
Other long-term liabilities	168,215	(757)	167,458
Total liabilities assumed	1,876,607	(15,090)	1,861,517
Net assets acquired	$ 3,465,344	$ -	$ 3,465,344

(a) As reported in the Essential Utilities, Inc. Form 10-K for the period ended December 31, 2020.

The fair value of long-term debt was determined based on prevailing market prices for similar debt issuances as of March 16, 2020, which resulted in an adjustment to increase the carrying amount by $84,569. The fair value adjustment is being amortized over the remaining life of the debt.

Goodwill is attributable to the assembled workforce of Peoples, planned growth in new markets, and planned growth in rate base through continued investment in utility infrastructure. Goodwill recorded for the Peoples Gas Acquisition is not expected to be deductible for tax purposes.

The Company incurred transaction-related expenses for the Peoples Gas Acquisition, which consisted of costs recorded as operations and maintenance expenses in the first quarter of 2020 of $25,397, and in 2019 of $22,891, respectively, primarily representing expenses associated with investment banking fees, including bridge financing, employee related costs, obtaining regulatory approvals, legal expenses, and integration planning. Additionally, for the year to date 2019 period through settlement on April 24, 2019, the change in fair value of interest rate swap agreements of $23,742 represents expense recognized from the mark-to-market adjustment. The interest rate swap agreements were settled on April 24, 2019, which coincided with debt financings to partially fund the Peoples Gas Acquisition. There were no further transaction-related expenses for the Peoples Gas Acquisition after the first quarter of 2020.

The results of Peoples have been included in our consolidated financial statements as of the Closing Date. Peoples contributed revenues of $520,944 and earnings of $57,377 for the period from the Closing Date to December 31, 2020. The following pro forma summary presents consolidated unaudited information as if the Peoples Gas Acquisition had occurred on January 1, 2019:

	Years ended December 31,	
	2020	2019
Operating revenues	$ 1,743,766	$ 1,798,346
Net income	367,492	318,170

The supplemental pro forma information is not necessarily representative of the actual results that may have occurred for these periods or of the results that may occur in the future. This supplemental pro forma information is based upon the historical operating results of Peoples for periods prior to the Closing Date, and is adjusted to reflect the effect of non-recurring acquisition-related costs, incurred in 2020 and 2019 as if they occurred on January 1, 2019, including $20,628 ($25,197 pre-tax) and $16,464 ($21,406 pre-tax) of expenses incurred in 2020 and 2019, respectively, primarily associated with investment banking fees, obtaining regulatory approvals, legal expenses and other direct costs of the Peoples Gas Acquisition, adjustments to reflect net acquisition financing as of January 1, 2019 of $39,567 ($50,883 pre-tax), the elimination of interest on debt that was not assumed in the acquisition of $7,971 ($11,210 pre-tax), and the elimination of a management fee charged quarterly to Peoples by its former parent company of $885 ($1,245 pre-tax).

Associated with the approval of the Peoples Gas Acquisition from the Pennsylvania Public Utility Commission, the Company committed to addressing the replacement of gathering pipe over a seven year timeframe for an estimated cost of $120,000, which will be recoverable through customer rates. Additionally, the Company committed to provide $23,004 of one-time customer rate credits to its Pennsylvania natural gas utility customers and water and wastewater customers served by Aqua Pennsylvania. The Company granted $4,080 of customer rate credits to its water and wastewater customers during the third quarter of 2020, and $18,924 to its natural gas utility customers in the fourth quarter of 2020 to satisfy the $23,004 commitment.

On October 23, 2018, the Company entered into interest rate swap agreements to mitigate interest rate risk associated with an anticipated $850,000 of debt issuances to fund a portion of the Peoples Gas Acquisition. The interest rate swaps were settled on April 24, 2019 in conjunction with the issuance of long-term debt to be used to finance a portion of the purchase price of this acquisition, which resulted in a payment by the Company of $83,520. The interest rate swap agreements did not qualify for hedge accounting and any changes in the fair value of the swaps was included in our earnings.

Water and Wastewater Utility Acquisitions – Pending Completion

In December 2021, the Company entered into a purchase agreement to acquire the water utility assets of the Southern Oaks Water System, which serves approximately 740 customers for $3,300.

In October 2021, the Company entered into a purchase agreement to acquire the wastewater utility assets of the City of Beaver Falls, Pennsylvania which consists of approximately 7,600 customers for $41,250. In July 2021, the Company entered into a purchase agreement to acquire the water utility assets of Shenandoah Borough, Pennsylvania which consists of approximately 2,930 customers for $12,000. In April 2021, the Company entered into a purchase agreement to acquire certain water or wastewater utility assets of Oak Brook, Illinois which consists of approximately 4,000 customers for $12,500. In January 2021, the Company entered into purchase agreements to acquire, in separate transactions, the wastewater utility system assets of East Whiteland Township, Pennsylvania and Willistown Township, Pennsylvania which consist of approximately 10,500 customers for $72,400. In September 2020, the Company entered into a purchase agreement to acquire the wastewater utility system assets of Lower Makefield Township, Pennsylvania, which consists of approximately 11,000 customers for $53,000.

The purchase price for these pending acquisitions are subject to certain adjustments at closing, and are subject to regulatory approval, including the final determination of the fair value of the rate based acquired. We plan to finance the purchase price of these acquisitions by utilizing our revolving credit facility until permanent debt and common equity are secured. The closing for the wastewater assets of Lower Makefield Township is expected to occur in the first quarter of 2022, and the closings of our acquisitions of East Whiteland Township, Willistown Township, Oak Brook and Shenandoah Borough are expected to occur in the second half of 2022. The closings of our Beaver Falls and Southern Oaks acquisitions are expected to occur late in 2022 or in early 2023. Closing for our utility acquisitions are subject to the timing of the regulatory approval process.

In September 2019, the Company entered into a purchase agreement to acquire the wastewater utility system assets of the Delaware County Regional Water Quality Control Authority ("DELCORA"), which consists of approximately 16,000 customers, or the equivalent of 198,000 retail customers, in 42 municipalities in Southeast Pennsylvania for $276,500. In May 2020, Delaware County, Pennsylvania filed a lawsuit alleging that DELCORA does not have the legal authority to establish and fund a customer trust with the net proceeds of the transaction. In December 2020, the judge in the Delaware County Court lawsuit issued an order that (1) the County cannot interfere with the purchase agreement between DELCORA and the Company, (2) the County cannot terminate DELCORA prior to the closing of the transaction, and (3) that the establishment of the customer trust was valid. Delaware County appealed this decision to Commonwealth Court of Pennsylvania, where this case is continuing. A three-judge panel heard oral arguments on October 18, 2021; a decision is expected in the next several months. The administrative law judges in the regulatory approval process recommended that the Company's application be denied, and subsequently, the Company provided exceptions to the recommended decision. On March 25, 2021, the Pennsylvania Public Utility Commission ruled that the case be remanded back to the Office of Administrative Law Judge and vacated the original administrative law judges' recommended decision. On April 16, 2021, the administrative law judge issued an order staying the proceeding until the Delaware County Court lawsuit is final and unappealable. The purchase price for this pending acquisition is subject to certain adjustments at closing, and is subject to regulatory approval, including the final determination of the fair value of the rate base acquired. We plan to finance the purchase price of this acquisition by the issuance of common stock and by utilizing our revolving credit facility until permanent debt is secured. Closing of our acquisition of DELCORA is expected to occur in late 2022 or early 2023, subject to the timing of the regulatory approval process and DELCORA's above-referenced litigation with Delaware County.

Water and Wastewater Utility Acquisitions - Completed

In August 2021, the Company acquired the water utility system assets of The Commons Water Supply, Inc., which serves 992 customers in Harris County, Texas, and the wastewater utility system assets of the Village of Bourbonnais, which serves approximately 6,500 customers in Kankakee County, Illinois. The total cash purchase prices for these utility systems were $4,000 and $32,100, respectively. The purchase price allocation for these acquisitions consisted primarily of property, plant and equipment. The operating revenues included in the consolidated financial statements of the Company during the period owned by the Company for the utility systems acquired in 2021 are $2,462.

In December 2020, the Company acquired the wastewater utility system asset of New Garden Township, Pennsylvania, which serves 1,965 customers. The total cash purchase price for the utility system was $29,944. Further, in June 2020, the Company acquired the wastewater utility system assets of East Norriton Township, Pennsylvania, which serves 4,947 customers. The total cash purchase price for the utility system was $21,000. The purchase price allocation for these acquisitions consisted primarily of property, plant and equipment. Additionally, during 2020, we completed four acquisitions of water and wastewater utility systems for $12,335 in cash in three of the states in which we operate, adding 3,673 customers. The operating revenues included in the consolidated financial statements of the Company during the period owned by the Company for the utility systems acquired in 2020 were $8,365 in 2021 and $3,569 in 2020.

In December 2019, the Company acquired the wastewater utility system assets of Cheltenham Township, Pennsylvania, which serves 9,887 customers for $50,250. The preliminary purchase price allocation for this acquisition consisted primarily of property, plant and equipment of $44,558 and goodwill of $5,692. Additionally, in 2019, the Company completed seven acquisitions of water and wastewater utility systems in three states adding 2,393 customers. The total purchase price of these utility systems consisted of $9,437 in cash. The purchase price allocation for these acquisitions consisted primarily of acquired property, plant and equipment. The operating revenues included in the consolidated financial statements of the Company during the period owned by the Company for the utility systems acquired in 2019 were $8,419 in 2021, $8,353 in 2020 and $506 in 2019.

The pro forma effect of the businesses acquired is not material either individually or collectively to the Company's results of operations.

Note 3 –*Dispositions*

The following dispositions have not been presented as discontinued operations in the Company's consolidated financial statements as they do not qualify as discontinued operations, since their disposal does not represent a strategic shift that has a major effect on our operations or financial results. Except where noted otherwise, the gains or losses disclosed below are reported in the consolidated statements of operations and comprehensive income as a component of operations and maintenance expense.

In October 2020 the Company sold its investment in a joint venture. Its investment represented its 49% investment in a joint venture that operates a private pipeline system to supply raw water to natural gas well drilling operations in the Marcellus Shale of north central Pennsylvania. This investment was an unconsolidated affiliate and was accounted for under the equity method of accounting within our Aqua Infrastructure subsidiary. In 2020, the Company recorded a charge of $3,700 for the write-down of the Company's investment associated with the sale and is reported in equity loss in joint venture.

In 2018, the Company decided to market for sale a water system in Virginia that serves approximately 500 customers. This water system was reported as assets held for sale in the Company's consolidated balance sheet, and in April 2019, the Company completed the sale for proceeds of $1,882 and recognized a gain on sale of $405.

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements (continued)
(In thousands of dollars, except per share amounts)

Note 4 – *Property, Plant and Equipment*

	December 31, 2021	December 31, 2020	Approximate Range of Useful Lives	Weighted Average Useful Life
Regulated Water segment:				
Utility plant and equipment				
Mains and accessories	$ 4,014,507	$ 3,800,878	32 - 94 years	76 years
Services, hydrants, treatment plants and reservoirs	2,672,186	2,425,303	5 - 89 years	56 years
Operations structures and water tanks	376,880	352,094	14 - 80 years	48 years
Miscellaneous pumping and purification equipment	1,011,487	976,719	9 - 76 years	42 years
Meters, transportation and other operating equipment	980,208	898,607	5 - 84 years	28 years
Land and other non-depreciable assets	116,888	137,390	-	-
Utility plant and equipment - regulated water segment	9,172,156	8,590,991		
Utility construction work in progress	304,373	225,208	-	-
Net utility plant acquisition adjustment	(9,055)	(12,215)	2 - 59 years	28 years
Non-utility plant and equipment	21,098	21,681	17 - 64 years	58 years
Property, Plant and Equipment - Regulated Water segment	9,488,572	8,825,665		
Regulated Gas segment:				
Natural gas transmission	365,051	362,477	5 - 93 years	67 years
Natural gas storage	60,985	60,846	5 - 85 years	47 years
Natural gas gathering and processing	131,237	126,105	5 - 88 years	59 years
Natural gas distribution	1,874,040	1,540,366	25 - 78 years	63 years
Meters, transportation and other operating equipment	588,716	580,043	5 - 95 years	25 years
Land and other non-depreciable assets	3,872	3,872	-	-
Utility plant and equipment - Regulated Natural Gas segment	3,023,901	2,673,709		
Utility construction work-in-progress	97,903	120,645	-	-
Property, plant and equipment-Regulated Natural Gas segment	3,121,804	2,794,354		
Total property, plant and equipment	$ 12,610,376	$ 11,620,019		

Note 5 – *Accounts Receivable*

	December 31, 2021	December 31, 2020
Billed utility revenue	$ 197,815	$ 189,280
Other	1,283	5,594
	199,098	194,874
Less allowance for doubtful accounts	58,073	40,099
Net accounts receivable	$ 141,025	$ 154,775

The Company's utility customers are located principally in the following states: 66% in Pennsylvania, 9% in Ohio, 6% in North Carolina, 5% in Texas, and 5% in Illinois. No single customer accounted for more than one percent of the Company's utility operating revenues during the years ended December 31, 2021, 2020, and 2019. The following table summarizes the changes in the Company's allowance for doubtful accounts:

	2021	2020	2019
Balance at January 1,	$ 40,099	$ 7,353	$ 6,914
Amounts charged to expense	27,336	32,325	5,306
Accounts written off	(19,731)	(12,613)	(5,980)
Recoveries of accounts written off and other	10,369	13,034	1,113
Balance at December 31,	$ 58,073	$ 40,099	$ 7,353

For Recoveries of accounts written off and other, other represents the opening balance from the Peoples Gas Acquisition of $10,962 in 2020 and additional measurement period adjustments in 2021 of $12,851 before the measurement period ended.

Note 6 – *Regulatory Assets and Liabilities*

The regulatory assets represent costs that are probable to be fully recovered from customers in future rates while regulatory liabilities represent amounts that are expected to be refunded to customers in future rates or amounts recovered from customers in advance of incurring the costs. Except for income taxes and utility plant retirement costs, regulatory assets and regulatory liabilities are excluded from the Company's rate base and do not earn a return. The components of regulatory assets and regulatory liabilities are as follows:

	December 31, 2021		December 31, 2020	
	Regulatory Assets	Regulatory Liabilities	Regulatory Assets	Regulatory Liabilities
Income taxes	$ 1,219,924	$ 595,185	$ 1,098,363	$ 630,106
Purchased gas costs	13,798	-	585	18,618
Utility plant retirement costs	47,683	56,479	50,225	50,560
Post-retirement benefits	60,640	115,283	108,036	89,953
Accrued vacation	3,760	-	4,056	-
Water tank painting	7,553	-	6,306	978
Fair value adjustment of long-term debt assumed in acquisition	62,722	-	76,019	-
Debt refinancing	19,083	-	14,880	-
Rate case filing expenses and other	14,827	3,054	9,403	2,961
	$ 1,449,990	$ 770,001	$ 1,367,873	$ 793,176

Items giving rise to deferred state income taxes, as well as a portion of deferred Federal income taxes related to specific differences between tax and book depreciation expense, are recognized in the rate setting process on a cash basis or as a reduction in current income tax expense and will be recovered as they reverse. Amounts include differences that arise between specific utility asset improvement costs capitalized for book and deducted as an expense for tax purposes. Additionally, the recording of AFUDC for equity funds results in the recognition of a regulatory asset for income taxes, which represents amounts due related to the revenue requirement. The regulatory asset / (liability) for income taxes as of December 31, 2021 and 2020 includes an amount of $(111) and $659, respectively, related to Aqua Pennsylvania's deductions on qualifying utility system repairs. This regulatory asset/liability is recoverable (or refundable) in future rate filings based on the difference between the amount of the income tax benefits that were incorporated into the Company's cost of service in its latest rate case as compared to the actual income tax benefits recognized.

A portion of the regulatory liability for income taxes is related to Aqua Pennsylvania's income tax accounting change for the tax benefits realized on the Company's 2012 tax return, which have not yet reduced current income tax expense due to a rate order requiring a ten year amortization period which began in 2013. Beginning in 2013, the Company amortized $38,000, annually, of its deferred income tax benefits, which reduced current income tax expense. In 2019, the amortization of this tax benefit was incorporated into the Company's cost of service by a rate order issued in May 2019. A portion of the income taxes regulatory liability is also related to Peoples Natural Gas' income tax accounting change for the tax benefits expected to be realized for the periods prior to adoption on March 16, 2020. The Company recorded a regulatory liability for this catch-up adjustment in the amount of $160,655 in 2020 and it remained on the consolidated balance sheet as of December 31, 2020. In May 2021, the Company received a regulatory order directing the Company to refund the catch-up adjustment to its utility customers over a five-year period, which was initiated by the Company in August 2021.

The regulatory asset or liability for purchased gas costs reflects the differences between actual purchased gas costs and the levels of recovery for these costs in current rates. The unrecovered costs are recovered and the over-recovered costs are refunded in future periods, typically within a year, through quarterly and annual filings with the applicable state regulatory agency.

The regulatory asset for utility plant retirement costs, including cost of removal, represents costs already incurred that are expected to be recovered in future rates over a five year recovery period. The regulatory liability for utility plant retirement costs represents amounts recovered through rates during the life of the associated asset and before the costs are incurred.

The regulatory asset for accrued vacation represents costs that would otherwise be charged to operations and maintenance expense for vacation that is earned by employees, which is recovered as a cost of service.

The regulatory asset for post-retirement benefits, which includes pension and other post-retirement benefits, primarily reflects a regulatory asset that has been recorded for the costs that would otherwise be charged to stockholders' equity for the underfunded status of the Company's pension and other post-retirement benefit plans. The Company also has a regulatory asset related to post-retirement benefits costs that represent costs already incurred which are now being or anticipated to be recovered in rates over a period ranging from approximately 10 to 37 years. The regulatory liability for post-retirement benefits represents costs recovered in rates in excess of post-retirement benefits expense.

Expenses associated with water tank painting are deferred and amortized over a period of time as approved in the regulatory process. Water tank painting costs are generally being amortized over a period ranging from 10 to 20 years. The regulatory liability for water tank painting costs represents amounts recovered through rates and before the costs are incurred.

The Company recorded a fair value adjustment for fixed rate, long-term debt assumed in acquisitions that matures in various years ranging from 2022 to 2032. The regulatory asset or liability results from the rate setting process continuing to recognize the historical interest cost of the assumed debt.

The regulatory asset for debt refinancing represents a portion of a make whole payment of $25,237 incurred in 2019 for the Company's redemption of $313,500 of the Company's outstanding notes that had maturities ranging from 2019-2037 and interest rates ranging from 3.57-5.83%. The Company deferred a portion of the make whole payment as it represents an amount by which we expect to receive prospective rate recovery.

The regulatory asset related to rate case filing expenses and other represents the costs associated with filing for rate increases that are deferred and amortized over periods that generally range from one year to five years, and costs incurred by the Company for which it has received or expects to receive rate recovery.

The regulatory asset related to the costs incurred for information technology software projects and water main cleaning and relining projects are described in Note 1 – *Summary of Significant Accounting Policies – Property, Plant and Equipment and Depreciation*.

Note 7 – *Income Taxes*

Income tax benefit for the years ended December 31, is comprised of the following:

	Years Ended December 31,		
	2021	2020	2019
Current:			
Federal	$ (5,132)	$ (1,831)	$ (4,415)
State	4,034	(265)	1,834
	(1,098)	(2,096)	(2,581)
Deferred:			
Federal	3,036	(11,527)	(3,906)
State	(11,550)	(6,255)	(6,530)
	(8,514)	(17,782)	(10,436)
Total tax benefit	$ (9,612)	$ (19,878)	$ (13,017)

The statutory Federal tax rate is 21% for 2021, 2020, and 2019. For states with a corporate net income tax, the state corporate net income tax rates range from 2.5% to 9.99% for all years presented. The Company's effective income tax rate for 2021, 2020, and 2019 was (2.3)%, (7.5)%, and (6.2)%, respectively. The Company remains subject to examination by federal and state tax authorities for the 2018 through 2021 tax years.

The reasons for the differences between amounts computed by applying the statutory Federal corporate income tax rate to income before income tax expense are as follows:

	Years Ended December 31,		
	2021	2020	2019
Computed Federal tax expense at statutory rate	$ 88,620	$ 55,644	$ 44,420
Decrease in Federal tax expense related to an income tax accounting change for qualifying utility asset improvement costs	(76,534)	(53,532)	(48,518)
State income taxes, net of Federal tax benefit	(1,681)	(6,896)	(3,616)
Increase in tax expense for depreciation expense to be recovered in future rates	925	140	347
Stock-based compensation	(611)	(1,484)	(167)
Deduction for Essential Utilities common dividends paid under employee benefit plan	(330)	(315)	(315)
Amortization of deferred investment tax credits	(314)	(319)	(361)
Impact of Federal rate change and amortization of excess deferred income tax	(11,715)	(15,352)	(6,323)
Impact of acquisitions and reorganizations	(4,632)	-	-
Other, net	(3,340)	2,236	1,516
Actual income tax benefit	$ (9,612)	$ (19,878)	$ (13,017)

In response to a June 2012 rate order issued by the Pennsylvania Public Utility Commission to Aqua Pennsylvania, the Company changed its tax method of accounting for qualifying utility system repairs, which provides for the expensing of qualifying utility asset improvement costs that were previously being capitalized and depreciated for book and tax purposes. The rate order allows for a reduction in current income tax expense as a result of the flow-through recognition of some income tax benefits due to the income tax accounting change. The Company recorded income tax benefits of $48,965, $49,077, and $66,816 during 2021, 2020, and 2019, respectively. In May 2019 the Pennsylvania Public Utility Commission issued a rate order to Aqua Pennsylvania and commencing in 2020 the base rates are designed to include annual tax benefits for qualifying utility system improvement costs equal to $158,865, subject to $3,000 either above or below this target amount. To the extent actual tax benefits are outside this range, tax benefits will either be deferred or accrued, and settled in the next rate filing.

Aqua Pennsylvania adopted this method of tax accounting in 2012, and for prior tax years, the qualifying utility system asset improvement costs were previously capitalized and depreciated for book and tax purposes. The Company recognized a tax deduction on its 2012 Federal tax return of $380,000 and based on a 2012 rate order, Aqua Pennsylvania began to amortize this benefit over ten years beginning in 2013. The amortization of this benefit, which annually amounted to $38,000, effectively reduced current income tax expense annually by $13,848. In May 2019, the Pennsylvania Public Utility Commission issued a new rate order and as a result, the amortization period was slightly shortened and now includes the tax benefits in establishing utility rates.

The following table provides the changes in the Company's unrecognized tax benefits:

	2021	2020
Balance at January 1,	$ 19,194	$ 18,671
Impact of current year activity on tax provision	1,007	523
Balance at December 31,	$ 20,201	$ 19,194

In accordance with the FASB's accounting guidance for income taxes we recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position are measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate resolution. From time to time, the Company may be assessed interest and penalties by taxing authorities, which would be recorded as income tax expense. There were no expenses for interest and penalties assessed by taxing authorities for the years ended December 31, 2021, 2020, and 2019. The Company accrued $409 and $24 in interest and penalties relative to their uncertain tax position during the years ended December 31, 2021 and 2020.

On its 2012 Federal tax return, filed in September 2013, Aqua Pennsylvania filed a change in accounting method to adopt the IRS temporary tangible property regulations. This method change allowed the Company to take a current year deduction for expenses that were previously capitalized for tax purposes. Since the filing of the 2012 tax return, the IRS has issued final regulations. While the Company maintains the belief that the deduction taken on its tax return is appropriate, the methodology for determining the deduction has not been agreed to by the taxing authorities. Provisions for uncertain tax positions were recorded to reflect the possible challenge of the Company's methodology for determining its repair deduction as required by the FASB's accounting guidance for income taxes. Should the taxing authority challenge the Company's tax treatment, and ultimately disallow a portion of the repair deduction, the Company expects Federal net operating loss carryforwards to offset any resulting liability, and state net operating loss carryforwards will offset a portion of any resulting liability.

The unrecognized tax benefits relate to the income tax accounting change, and the tax position is attributable to a temporary difference. The Company does not anticipate material changes to its unrecognized tax benefits within the next year. As a result of the regulatory treatment afforded by the income tax accounting change in Pennsylvania and despite this position being a temporary difference, as of December 31, 2021 and 2020, $34,980 and $33,050, respectively, of

these tax benefits would have an impact on the Company's effective income tax rate in the event the Company does sustain all, or a portion, of its tax position.

The following table provides the components of net deferred tax liability:

	December 31,	
	2021	2020
Deferred tax assets:		
Customers' advances for construction	$ 28,845	$ 30,155
Costs expensed for book not deducted for tax, principally accrued expenses	28,211	11,441
Post-retirement benefits	5,186	51,914
Tax effect of regulatory liabilities for post-retirement benefits	16,080	-
Tax attribute and credit carryforwards	243,131	206,347
Operating lease liabilities	16,064	17,432
Unrecovered purchased gas costs	-	5,239
Other	7,586	10,979
	345,103	333,507
Less valuation allowance	(36,662)	(34,772)
	308,441	298,735
Deferred tax liabilities:		
Utility plant, principally due to depreciation and differences in the basis of fixed assets due to variation in tax and book accounting	1,510,752	1,298,127
Deferred taxes associated with the gross-up of revenues necessary to recover, in rates, the effect of temporary differences	179,825	205,869
Tax effect of regulatory asset for post-retirement benefits	-	30,441
Utility plant acquisition adjustment basis differences	222	195
Deferred investment tax credit	5,406	5,744
Operating lease right-of-use assets	14,034	16,457
Over-recovered purchased gas costs	4,739	-
	1,714,978	1,556,833
Net deferred tax liability	$ 1,406,537	$ 1,258,098

At December 31, 2021, the Company has a cumulative Federal NOL of $507,330. The Company believes the Federal NOLs are more likely than not to be recovered and require no valuation allowance. The Company's Federal NOLs do not begin to expire until 2032.

At December 31, 2021, the Company has a cumulative state NOL of $1,657,743 a portion of which is offset by a valuation allowance because the Company does not believe these NOLs are more likely than not to be realized. The state NOLs do not begin to expire until 2023.

At December 31, 2021, the Company's Federal and state NOL carryforwards are reduced by an unrecognized tax position, on a gross basis, of $80,150 and $86,251, respectively, which results from the Company's adoption in 2013 of the FASB's accounting guidance on the presentation of an unrecognized tax benefit when a net operating loss carryforward, a similar tax loss, or a tax credit carryforward exists. The amounts of the Company's Federal and state NOL carryforwards prior to being reduced by the unrecognized tax positions are $587,480 and $1,743,994 respectively. The Company records its unrecognized tax benefit as a component of its net deferred income tax liability.

On March 16, 2020, the Company completed the Peoples Gas Acquisition. On March 31, 2020, the Company changed the method of tax accounting for certain qualifying infrastructure investments at its Peoples Natural Gas subsidiary, its largest natural gas subsidiary in Pennsylvania. This change allows a tax deduction for qualifying utility asset improvement costs that were formerly capitalized for tax purposes. Consistent with the Company's accounting for differences between book and tax expenditures for its Aqua Pennsylvania subsidiary, the Company is utilizing the flow-through method to account for this timing difference. In addition, the Company calculated the income tax benefits for qualifying capital expenditures made prior to March 16, 2020 ("catch-up adjustment") and has recorded a regulatory liability for $160,655 for these income tax benefits. In August 2020, the Company filed a petition with the Pennsylvania Public Utility Commission proposing treatment of the catch-up adjustment. On March 11, 2021, the Company and the statutory advocates filed a Joint Petition of Settlement ("Settlement") representing a settlement of the parties, and, on May 6, 2021, it was approved by the Pennsylvania Public Utility Commission. The Settlement stipulates, among other points, that the catch-up adjustment be provided to utility customers over a five-year period, and the Company can continue to use flow-through accounting for the current tax repair benefit until its next base rate case. The five-year customer surcredit for the catch-up adjustment was initiated in August 2021. In addition, the Company contributed $500 to a customer-bill payment assistance program in July 2021 and in December 2021, provided $5,000 in relief to past-due accounts for natural gas customers impacted by the COVID-19 pandemic through a rate credit fulfilling this requirement.

In connection with the completion of the Peoples Gas Acquisition, as the Company identified changes to acquired deferred tax asset or liabilities, including the impact of valuation allowances or liabilities related to uncertain tax positions during the one year measurement period that ended on March 15, 2021, and they were related to new information obtained about facts and circumstances that existed as of the acquisition date, those changes were considered a measurement-period adjustment, and resulted in an adjustment to goodwill. The Company records all other changes to deferred tax assets and liabilities in current-period income tax expense.

On November 15, 2021, President Biden signed into law the Infrastructure Investment and Jobs ("IIJ") Act. The IIJ contained several tax provisions, including the modification of the tax code to exclude from taxable income any contribution in aid of construction. This provision effectively restored the exclusion that existed prior to the enactment of TCJA and would generally apply to contributions made after December 31, 2020. The Company evaluated the tax provisions included in the IIJ, and their impact was incorporated in the calculation of the income tax provision.

Note 8 – *Taxes Other than Income Taxes*

The following table provides the components of taxes other than income taxes, including the expenses of Peoples for the period since the completion of the acquisition on March 16, 2020:

	Years Ended December 31,		
	2021	2020	2019
Property	$ 33,946	$ 32,054	$ 27,735
Gross receipts, excise and franchise	15,777	14,462	13,500
Payroll	21,789	19,053	10,303
Regulatory assessments	6,968	3,130	2,916
Pumping fees	5,761	6,028	5,112
Other	2,400	1,870	389
Total taxes other than income taxes	$ 86,641	$ 76,597	$ 59,955

Note 9 – *Commitments and Contingencies*

Commitments –

The Company maintains agreements with other water purveyors for the purchase of water to supplement its water supply, particularly during periods of peak demand. The agreements stipulate purchases of minimum quantities of water to the year 2029. The estimated annual commitments related to such purchases through 2026 are expected to average $3,322 and the aggregate of the years remaining approximates $331.

The Company has entered into purchase obligations, in the ordinary course of business, that include agreements for water treatment processes at some of its wells in a small number of its divisions. The 20 year term agreement provides for the use of treatment equipment and media used in the treatment process and are subject to adjustment based on changes in the Consumer Price Index. The future contractual cash obligations related to these agreements are as follows:

2022	2023	2024	2025	2026	Thereafter
$ 3,120	$ 1,038	$ 1,055	$ 1,078	$ 1,102	$ 3,261

The Company's natural gas supply is provided by sources on the interstate pipeline system and from local western Pennsylvania gas well production. The Company has various interstate pipeline service agreements that provide for firm transportation capacity, firm storage capacity, and other services and include capacity reservation charges based upon the maximum daily and annual contract quantities set forth in the agreements. Some of these agreements have minimum volume obligations and are transacted at applicable tariff and negotiated rates to the year 2034. The estimated annual commitments related to such purchases through 2026 are expected to average $257,057 and the aggregate of the years remaining beyond 2026 approximates $1,759,841.

The purchased water, water treatment, and purchased gas expenses under these agreements were as follows:

	Years Ended December 31,		
	2021	2020	2019
Purchased water under long-term agreements	$ 5,867	$ 5,931	$ 6,577
Water treatment expense under contractual agreement	1,017	1,006	989
Purchased natural gas under long-term agreements	340,262	165,745	-

Contingencies – The Company is routinely involved in various disputes, claims, lawsuits and other regulatory and legal matters, including both asserted and unasserted legal claims, in the ordinary course of business. The status of each such matter, referred to herein as a loss contingency, is reviewed and assessed in accordance with applicable accounting rules regarding the nature of the matter, the likelihood that a loss will be incurred, and the amounts involved. As of December 31, 2021, the aggregate amount of $17,215 is accrued for loss contingencies and is reported in the Company's consolidated balance sheet as other accrued liabilities and other liabilities. These accruals represent management's best estimate of probable loss (as defined in the accounting guidance) for loss contingencies or the low end of a range of losses if no single probable loss can be estimated. For some loss contingencies, the Company is unable to estimate the amount of the probable loss or range of probable losses. Further, Essential Utilities has insurance coverage for certain of these loss contingencies, and as of December 31, 2021, estimates that approximately $2,458 of the amount accrued for these matters are probable of recovery through insurance, which amount is also reported in the Company's consolidated balance sheet as deferred charges and other assets, net.

During a portion of 2019, the Company initiated a do not consume advisory for some of its customers in one division served by the Company's Illinois subsidiary. During the second quarter of 2021, an immaterial amount was accrued for the portion of the fine or penalty that we determined to be probable and estimable of being incurred. In addition, on September 3, 2019, two individuals, on behalf of themselves and those similarly situated, commenced an action against the Company's Illinois subsidiary in the State court in Will County, Illinois related to this do not consume advisory. The complaint seeks class action certification, attorney's fees, and "damages, including, but not limited to, out of pocket damages, and discomfort, aggravation, and annoyance" based upon the water provided by the Company's subsidiary to a discrete service area in University Park Illinois. The complaint contains allegations of damages as a result of supplied water that exceeded the standards established by the federal Lead and Copper Rule. The complaint is in the discovery phase and class certification has not been granted. The Company is vigorously defending against this claim. A claim for the expenses incurred has been submitted to the Company's insurance carrier for potential recovery of a portion of these costs, and on August 3, 2020, the Company received $2,874 in insurance proceeds. The Company continues to assess the potential loss contingency on this matter. While the final outcome of this claim cannot be predicted with certainty, and unfavorable outcomes could negatively impact the Company, at this time in the opinion of management, the final resolution of this matter is not expected to have a material adverse effect on the Company's financial position, results of operations or cash flows.

Although the results of legal proceedings cannot be predicted with certainty, other than disclosed above, there are no pending legal proceedings to which the Company or any of its subsidiaries is a party or to which any of its properties is the subject that are material or are expected to have a material effect on the Company's financial position, results of operations or cash flows.

In addition to the aforementioned loss contingencies, the Company self-insures a portion of its employee medical benefit program, and maintains stop-loss coverage to limit the exposure arising from these claims. The Company's reserve for these claims totaled $2,470 and $1,535 at December 31, 2021 and 2020 and represents a reserve for unpaid claim costs, including an estimate for the cost of incurred but not reported claims.

Associated with the approval of the Peoples Gas Acquisition from the Pennsylvania Public Utility Commission, the Company committed to addressing the replacement of gathering pipe over a seven year timeframe for an estimated cost of $120,000, which will be recoverable through customer rates. Additionally, the Company committed to provide $23,004 of one-time customer rate credits to its Pennsylvania natural gas utility customers and water and wastewater customers served by Aqua Pennsylvania, Inc. In 2020, the Company granted $4,080 of customer rate credits to its Pennsylvania water and wastewater customers and $18,924 to its Pennsylvania natural gas utility customers.

Note 10 – *Leases*

The Company leases land, office facilities, office equipment, and vehicles for use in its operations, which are accounted for as operating leases. Leases with a term of 12 months or less are not recorded on the balance sheet; rather, lease expense is recognized over the lease term. Our leases have remaining lives of 1 year to 73 years.

Some of the Company's leases can be extended on a month-to-month basis, which allow us to terminate the lease at any given month without penalty while others include options to extend the leases for up to 50 years. The renewal of a month-to-month lease is at our sole discretion.

The Company accounts for lease and non-lease components of lease arrangements separately. For calculating lease liabilities, we may deem lease terms to include options to extend or terminate the lease when it's reasonably certain that we will exercise that option. The Company's lease agreements do not contain significant residual value guarantees, restrictions or covenants.

Lease liabilities and corresponding right-of-use assets are recorded based on the present value of the lease payments over the expected lease term, including leases with variable payments that are based on a market rate or an index and net of any impairment. All other variable payments are expensed as incurred. Since the Company's lease agreements do not provide an implicit interest rate, we utilize our incremental borrowing rate to determine the discount rate used to present value the lease payments.

During the fourth quarter of 2021, the Company determined that there were impairment indicators that required the Company to review a portion of office space that was not used in operations for impairment. Accordingly, the Company performed undiscounted cash flow analyses on the related right-of-use asset group and determined that such right-of-use asset was impaired. This resulted in a non-cash impairment charge of $4,695, representing the excess of the right-of-use asset over its fair value, and is included within operations and maintenance expense in the consolidated statements of operations and comprehensive income. On March 16, 2020, the Company completed the Peoples Gas Acquisition and, upon application of the leasing standard and evaluation of acquired leases, it was determined that the market rental rate for one of its office spaces was lower than the contractual rental rate. Accordingly a fair market value adjustment of $3,375 was recorded against the operating right-of-use assets in the consolidated balance sheets in 2020. The balance of the right-of-use asset group, after adjustments, is being amortized over the remaining life of the lease.

	Years Ended December 31,		
	2021	2020	2019
Components of lease expense were as follows:			
Operating lease cost	$ 9,716	$ 8,496	$ 2,183

	Years Ended December 31,	
	2021	2020
Supplemental cash flow information related to leases was as follows:		
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	$ 9,612	$ 6,324

	December 31,	
	2021	2020
Supplemental balance sheet information related to leases was as follows:		
Operating leases:		
Operating lease right-of-use assets	$ 48,930	$ 60,334
Other accrued liabilities	$ 7,841	$ 7,666
Operating lease liabilities	48,230	55,642
Total operating lease liabilities	$ 56,071	$ 63,308

	December 31,	
	2021	2020
Weighted average remaining lease term:		
Operating leases	10 years	11 years
Weighted average discount rate:		
Operating leases	3.62%	3.62%

Maturities of operating lease liabilities and a reconciliation of the operating lease liabilities reported on our consolidated balance sheets as of December 31, 2021 are as follows:

	Operating Leases
2022	$ 9,732
2023	9,294
2024	9,009
2025	9,028
2026	6,666
Thereafter	27,520
Total operating lease payments	$ 71,249
Total operating lease payments	$ 71,249
Less operating lease liabilities	56,071
Present value adjustment	$ 15,178

Note 11 – *Long-term Debt and Loans Payable*

Long-term Debt – The consolidated statements of capitalization provide a summary of long-term debt as of December 31, 2021 and 2020. The supplemental indentures with respect to specific issues of the first mortgage bonds restrict the ability of Aqua Pennsylvania and other operating subsidiaries of the Company to declare dividends, in cash or property, or repurchase or otherwise acquire the stock of these companies. Loan agreements for Aqua Pennsylvania and other operating subsidiaries of the Company have restrictions on minimum net assets. As of December 31, 2021, restrictions on the net assets of the Company were $3,926,205 of the total $5,184,450 in net assets. Included in this amount were restrictions on Aqua Pennsylvania's net assets of $1,523,351 of their total net assets of $2,158,273. As of December 31, 2021, $1,929,339 of Aqua Pennsylvania's retained earnings of $1,949,339 and $244,809 of the retained earnings of $397,547 of other subsidiaries were free of these restrictions. Some supplemental indentures also prohibit Aqua Pennsylvania and some other subsidiaries of the Company from making loans to, or purchasing the stock of, the Company.

Sinking fund payments are required by the terms of specific issues of long-term debt. Excluding amounts due under the Company's revolving credit agreement, the future sinking fund payments and debt maturities of the Company's long-term debt are as follows:

Interest Rate Range	2022	2023	2024	2025	2026	Thereafter
0.00% to 0.99%	$ 466	$ 463	$ 256	$ 195	$ 182	$ 779
1.00% to 1.99%	947	827	755	766	776	5,270
2.00% to 2.99%	101,964	2,870	1,619	1,427	1,305	1,103,566
3.00% to 3.99%	23,103	32,731	53,578	783	751	2,393,807
4.00% to 4.99%	1,644	157,518	1,658	124,592	1,562	1,499,050
5.00% to 5.99%	1,696	11,872	10,611	636	104	31,200
6.00% to 6.99%	1,364	111	-	-	5,000	26,000
7.00% to 7.99%	332	17	-	23,000	-	5,631
8.00% to 8.99%	630	853	841	449	-	-
9.00% to 9.99%	-	-	-	-	11,800	-
Total	$ 132,146	$ 207,262	$ 69,318	$ 151,848	$ 21,480	$ 5,065,303

On April 15, 2021, the Company's operating subsidiary, Aqua Ohio, Inc., issued $100,000 of first mortgage bonds, of which $50,000 is due in 2031 and $50,000 is due in 2051, with interest rates of 2.37% and 3.35%, respectively. The proceeds from these bonds were used for general corporate purposes and to repay existing indebtedness. Further, on April 19, 2021, the Company issued $400,000 of long-term debt, with expenses of $4,010, which is due in 2031 with an interest rate of 2.40%. The Company used the proceeds from this issuance to repay $50,000 of borrowings under the Aqua Pennsylvania revolving credit facility, and the balance was used to repay in full the borrowings under its existing five year unsecured revolving credit agreement.

In November 2020, Aqua Pennsylvania issued $150,000 of first mortgage bonds, of which $50,000 is due in 2053, $50,000 is due in 2057, and $50,000 is due in 2058 with interest rates of 2.85%, 2.89%, and 2.90%, respectively. In May 2020, Aqua Pennsylvania issued $175,000 of first mortgage bonds, of which $75,000 is due in 2051, $50,000 is due in 2055, and $50,000 is due in 2056 with interest rates of 3.49%, 3.54%, and 3.55%, respectively. The proceeds from these bonds were used to repay existing indebtedness and for general corporate purposes.

On April 3, 2020, the Company entered into a 364 day credit agreement that provided the Company with short-term borrowing capacity of up to $500,000 in unsecured term loans (the "Term Loan Agreement"). The Company borrowed the full $500,000 on April 3, 2020, which was used to strengthen its liquidity and cash position and maximize its financial flexibility in light of the uncertainty surrounding the impact of the COVID-19 pandemic. In May and June 2020, the Company repaid $300,000 and $200,000 of the term loans, respectively, and based on the Company's ability to access financial markets, we terminated the facility. The term loans bore interest at either the Adjusted LIBO Rate or the Alternate Base Rate, as each such term is defined in the Term Loan Agreement. Amounts under the term loan could not be re-borrowed upon repayment. Additionally, on April 13, 2020, the Company issued $1,100,000 of long-term debt, less expenses of $10,525, of which $500,000 is due in 2030, and $600,000 is due in 2050 with interest rates of 2.704% and 3.351%, respectively. The Company used the proceeds from this issuance to repay in full the borrowings of $181,000 of short-term debt assumed in the Peoples Gas Acquisition, $150,000 of short-term debt issued on March 13, 2020, and to repay borrowings under its existing five year unsecured revolving credit agreement.

On March 13, 2020, the Company entered into a 364 day $150,000 credit agreement pursuant to which the Company borrowed $150,000, which was used to fund a portion of the Peoples Gas Acquisition in lieu of additional borrowings under our revolving credit facility, which was subsequently repaid with the proceeds from the Company's April 2020 long-term debt issuance noted above.

The Company completed the Peoples Gas Acquisition on March 16, 2020, which resulted in the assumption of $1,101,091 of indebtedness, which included $920,091 of senior notes and $181,000 of short-term debt. The senior notes have maturities ranging from 2020 to 2032 and interest rates that range from 2.90% to 6.42%. The short-term debt assumed at closing was repaid with the proceeds from the Company's April 2020 long-term debt issuance noted above.

In December 2019, Aqua Pennsylvania issued $125,000 of first mortgage bonds, of which $75,000 is due in 2052 and $50,000 is due in 2053 with interest rates of 3.39% and 3.41%, respectively. In September 2019, Aqua Pennsylvania issued $175,000 of first mortgage bonds, of which $50,000 is due in 2054, $75,000 is due in 2058, and $50,000 is due in 2059 with interest rates of 4.09%, 4.13% and 4.14%, respectively. In May 2019, Aqua Pennsylvania issued $125,000 of first mortgage bonds, of which $75,000 is due in 2049, $25,000 is due in 2054, and $25,000 is due in 2059 with interest rates of 4.02%, 4.07%, and 4.12%, respectively. The proceeds from these bonds were used to repay existing indebtedness and for general corporate purposes.

On May 18, 2019, the Company redeemed $313,500 of the Company's outstanding notes (the "Company Debt Refinancing") that had maturities ranging from 2019-2037 and interest rates ranging from 3.57% - 5.83%. Additionally, the Company Debt Refinancing was subject to a make whole payment of $25,237, and $18,528 of this payment was expensed, and is presented in the consolidated statements of operations on the line item "loss on debt extinguishment." The balance of the payment, or $6,709, was deferred, as a regulatory asset, as it represents an amount by which the Company expects to receive prospective rate recovery. Further, in 2020 the Company recorded an additional regulatory asset for $3,888, as it represents an amount on which the Company expects to receive prospective rate recovery. The recognition of this regulatory asset in 2020 has been presented in the consolidated statements of operations and comprehensive income within the line item "Other."

On April 26, 2019, the Company issued $900,000 of long-term debt (the "Senior Notes"), less expenses of $7,931, of which $400,000 is due in 2029, and $500,000 is due in 2049 with interest rates of 3.566% and 4.276%, respectively. The Company used the net proceeds from the issuance of Senior Notes to (1) secure $436,000 of funding for the Peoples Gas Acquisition, (2) complete the redemption of $313,500 aggregate principal amount of certain of the Company's outstanding notes associated with the Company Debt Refinancing, (3) pay related costs and expenses, and (4) for general corporate purposes.

The weighted average cost of long-term debt at December 31, 2021 and 2020 was 3.49% and 3.56%, respectively. The weighted average cost of fixed rate long-term debt at December 31, 2021 and 2020 was 3.61% and 3.73%, respectively.

As of December 31, 2021, the Company has an amended $1,000,000 five year unsecured revolving credit facility, which expires in December 2023. The Company's unsecured revolving credit facility is used for other general corporate purposes. The facility includes a $50,000 sublimit for daily demand loans. Funds borrowed under this facility are classified as long-term debt and are used to provide working capital as well as support for letters of credit for insurance policies and other financing arrangements. As of December 31, 2021, the Company has the following sublimits and available capacity under the credit facility: $50,000 letter of credit sublimit, $29,078 of letters of credit available capacity, and $300,000 of funds borrowed under the agreement. Interest under this facility is based at the Company's option, on the prime rate, an adjusted Euro-Rate, an adjusted federal funds rate or at rates offered by the banks. A facility fee is charged on the total commitment amount of the agreement. Under these facilities the average cost of borrowings was 1.31% and 1.62%, and the average borrowing was $174,026 and $221,230, during 2021 and 2020, respectively.

The Company is obligated to comply with covenants under some of its loan and debt agreements. These covenants contain a number of restrictive financial covenants, which among other things limit, subject to specific exceptions, the Company's ratio of consolidated total indebtedness to consolidated total capitalization, and require a minimum level of earnings coverage over interest expense. During 2021, the Company was in compliance with its debt covenants under its loan and debt agreements. Failure to comply with the Company's debt covenants could result in an event of default, which could result in the Company being required to repay or finance its borrowings before their due date, possibly limiting the Company's future borrowings, and increasing its borrowing costs.

Loans Payable – In November 2021, Aqua Pennsylvania renewed its $100,000 364-day unsecured revolving credit facility with four banks. The funds borrowed under this agreement are classified as loans payable and used to provide working capital. As of December 31, 2021 and 2020, funds borrowed under the agreement were $35,000 and $49,198, respectively. Prior to November 2021, interest under this facility was based, at the borrower's option, on the prime rate, an adjusted federal funds rate, an adjusted London Interbank Offered Rate corresponding to the interest period selected, an adjusted Euro-Rate corresponding to the interest period selected or at rates offered by the banks. Effective November 2021, interest under this facility is based, at the borrower's option, on the prime rate, an adjusted overnight bank funding rate, or an adjusted Bloomberg Short-Term Bank Yield Index (BSBY) floating rate. This agreement restricts short-term borrowings of Aqua Pennsylvania. A commitment fee of 0.05% is charged on the total commitment amount of Aqua Pennsylvania's revolving credit agreement. The average cost of borrowing under the facility was 0.78% and 1.12%, and the average borrowing was $40,312 and $37,166 , during 2021 and 2020, respectively. The maximum amount outstanding at the end of any one month was $70,000 and $54,669 in 2021 and 2020, respectively.

In November 2021, Peoples Natural Gas Companies renewed its $100,000 364-day secured revolving credit facility with two banks. As of December 31, 2021 and 2020, funds borrowed under the agreement were $30,000 and $29,000, respectively. The funds borrowed under this agreement are classified as loans payable and used to provide working capital. Prior to November 2021, interest under this facility was based, at the borrower's option, on the prime rate, an adjusted federal funds rate, an adjusted London Interbank Offered Rate corresponding to the interest period selected or at rates offered by the banks. Beginning November 2021, interest under this facility is based, at the borrower' option, at the prime rate, an adjusted overnight bank funding rate, or an adjusted BSBY floating rate. A commitment fee of 0.05% is charged on the total commitment amount of Peoples' revolving credit agreement. The average cost of borrowing under the facility was 1.02% and 0.96%, and the average borrowing was $23,750 and $2,417, during 2021 and 2020, respectively. The maximum amount outstanding at the end of any one month was $30,000 and $29,000 in 2021 and 2020, respectively.

At December 31, 2021 and 2020, the Company had other combined short-term lines of credit of $35,500. Funds borrowed under these lines are classified as loans payable and are used to provide working capital. As of December 31, 2021 and 2020, funds borrowed under the short-term lines of credit were $0. The average borrowing under the lines was $0 and $2,500 during 2021 and 2020, respectively. The maximum amount outstanding at the end of any one month was $0 and $7,500 in 2021 and 2020, respectively. Interest under the lines is based at the Company's option, depending on the line, on the prime rate, an adjusted Euro-Rate, an adjusted federal funds rate or at rates offered by the banks. The average cost of borrowings under all lines during 2021 and 2020 was 0% and 1.11%, respectively.

Interest Income and Expense– Interest income of $2,384, $5,363, and $25,406 was recognized for the years ended December 31, 2021, 2020, and 2019, respectively. Interest expense was $207,709, $188,435, and $125,383 in 2021, 2020, and 2019, including amounts capitalized for borrowed funds of $4,510, $4,434, and $4,231, respectively.

Interest Rate Swap Agreements – In October 2018, the Company entered into interest rate swap agreements to mitigate interest rate risk associated with an anticipated $850,000 of debt issuances to fund a portion of the Peoples Gas Acquisition and refinance a portion of the Company's borrowings. On April 24, 2019, the Company settled the interest rate swap agreements upon issuance of $900,000 of long-term debt to be used to finance a portion of the purchase price of the Peoples Gas Acquisition and redeem $313,500 of the Company's existing debt. The settlement resulted in a payment by the Company of $83,520.

The interest rate swaps did not qualify for hedge accounting and any changes in the fair value of the swaps was included in our earnings. The interest rate swaps were classified as financial derivatives used for non-trading activities. The Company recorded the fair value of the interest rate swaps by discounting the future net cash flows associated with the debt issuance and recognized either an asset or liability at the balance sheet date.

The following table provides a summary of the amounts recognized in earnings for our interest rate swap agreements:

		Amount of Loss Recognized in Income on Derivatives		
		Years Ended December 31,		
	Location of Loss Recognized	2021	2020	2019
Derivatives not designated as hedging instrument:				
Interest rate swaps	Other expense	$ -	$ -	$ (23,742)

Note 12 – *Fair Value of Financial Instruments*

Financial instruments are recorded at carrying value in the financial statements and approximate fair value, with the exception of long-term debt, as of the dates presented. The fair value of these instruments is disclosed below in accordance with current accounting guidance related to financial instruments.

The fair value of loans payable is determined based on its carrying amount and utilizing Level 1 methods and assumptions. As of December 31, 2021 and 2020, the carrying amount of the Company's loans payable was $65,000 and $78,198, respectively, which equates to their estimated fair value. The fair value of cash and cash equivalents is determined based on Level 1 methods and assumptions. As of December 31, 2021 and 2020, the carrying amounts of the Company's cash and cash equivalents were $10,567 and $4,827, respectively, which equates to their fair value. The Company's assets underlying the deferred compensation and non-qualified pension plans are determined by the fair value of mutual funds, which are based on quoted market prices from active markets utilizing Level 1 methods and assumptions. As of December 31, 2021 and 2020, the carrying amount of these securities was $28,576 and $25,780, respectively, which equates to their fair value, and is reported in the consolidated balance sheet in deferred charges and other assets.

Unrealized gains and losses on equity securities held in conjunction with our non-qualified pension plan is as follows:

	Years ended December 31,		
	2021	2020	2019
Net gain recognized during the period on equity securities	$ 607	$ 492	$ 293
Less: net gain / loss recognized during the period on equity securities sold during the period	-	-	-
Unrealized gain recognized during the reporting period on equity securities still held at the reporting date	$ 607	$ 492	$ 293

The net gain (loss) recognized on equity securities is presented on the consolidated statements of operations and comprehensive income on the line item "Other."

The carrying amounts and estimated fair values of the Company's long-term debt is as follows:

	December 31,	
	2021	2020
Carrying amount	$ 5,947,357	$ 5,630,243
Estimated fair value	6,482,499	6,366,030

The fair value of long-term debt has been determined by discounting the future cash flows using current market interest rates for similar financial instruments of the same duration utilizing level 2 methods and assumptions. The Company's customers' advances for construction have a carrying value of $103,619 and $99,014 at December 31, 2021 and 2020, respectively. Their relative fair values cannot be accurately estimated because future refund payments depend on several variables, including new customer connections, customer consumption levels and future rates. Portions of these non-interest bearing instruments are payable annually through 2031 and amounts not paid by the respective contract expiration dates become non-refundable. The fair value of these amounts would, however, be less than their carrying value due to the non-interest bearing feature.

Note 13 – *Stockholders' Equity*

At December 31, 2021, the Company had 600,000,000 shares of common stock authorized; par value $0.50. Shares outstanding and treasury shares held were as follows:

	December 31,		
	2021	2020	2019
Shares outstanding	252,867,623	245,390,468	220,758,719
Treasury shares	3,234,765	3,180,887	3,112,565

Forward Equity Sale

In August 2020, the Company entered into a forward equity sale agreement for 6,700,000 shares of common stock with a third party (the "forward purchaser"). In connection with the forward equity sale agreement, the forward purchaser borrowed an equal number of shares of the Company's common stock from stock lenders and sold the borrowed shares to the public. The Company did not receive any proceeds from the sale of its common stock by the forward purchaser until settlement of the shares underlying the forward equity sale agreement. The actual proceeds to be received by the Company would have varied depending upon the settlement date, the number of shares designated for settlement on that settlement date and the method of settlement. The forward equity sale agreement was accounted for as an equity instrument and was recorded at a fair value of $0 at inception. The fair value was not adjusted as the Company continued to meet the accounting requirements for equity instruments.

On August 9, 2021, the Company settled the forward equity sale agreement in full by physical share settlement. The Company issued 6,700,000 shares and received cash proceeds of $299,739 at a forward price of $44.74 per share. Pursuant to the agreement, the forward price was computed based upon the initial forward price of $46.00 per share, adjusted for a floating interest rate factor equal to a specified daily rate less a spread and scheduled dividends during the term of the agreement. The Company used the proceeds received upon settlement of the forward equity sale agreement to fund general corporate purposes, including for water and wastewater utility acquisitions, working capital and capital expenditures. The forward equity sale agreement has now been completely settled, and there are no additional shares subject to the forward equity sale agreement.

Private Placement

On March 29, 2019, the Company entered into a Stock Purchase Agreement (the "Stock Purchase Agreement") with Canada Pension Plan Investment Board (the "Investor"), pursuant to which the Company agreed to issue and sell to the Investor in a private placement (the "Private Placement") 21,661,095 newly issued shares of common stock, par value $0.50 per share (the "Common Stock"). On March 16, 2020, in connection with the closing of the Peoples Gas Acquisition, the Company closed on the Private Placement and received gross proceeds of $749,907, less expenses of $20,606. In June 2021, the Company filed a registration statement on Form S-3 ASR registering the Private Placement shares for resale.

The shares issued and sold to the Investor pursuant to the Private Placement were to be priced at the lower of (1) $34.62, which represents a 4.5% discount to the trailing 20 consecutive trading day volume weighted average price of the Common Stock ending on, and including, March 28, 2019, and (2) the volume weighted average price per share in the Company' subsequent public offering of Common Stock to fund a portion of the Peoples Gas Acquisition. Based on the common stock offering noted below, the Private Placement was priced at $34.62 per share.

The Stock Purchase Agreement contains customary representations, warranties and covenants of the Company and the Investor, and the parties have agreed to indemnify each other for losses related to breaches of their respective representations and warranties. At the closing of the Private Placement, the Company reimbursed the Investor for reasonable out-of-pocket diligence expenses of $4,000.

Common Stock / Tangible Equity Unit Issuances

On April 23, 2019, the Company issued $1,293,750, less expenses of $30,651, of its common stock and $690,000, less expenses of $16,358, of its tangible equity units (the "Units"), with a stated amount of $50 per unit. These issuances were part of the financing of the Peoples Gas Acquisition. The common stock was issued at $34.62 per share and thus the Private Placement noted above was priced at $34.62 per share.

Each Unit consists of a prepaid stock purchase contract and an amortizing note due April 30, 2022, each issued by the Company. Unless earlier settled or redeemed, each stock purchase contract will automatically settle on April 30, 2022 (subject to postponement in limited circumstances) for between 1.1790 and 1.4442 shares of the Company's common stock, subject to adjustment, based upon the applicable market value of the common stock, as described in the final prospectus supplement relating to the Units. As of December 31, 2021, 6,196,766 stock purchase contracts have been early settled by the holders of the contracts, resulting in the issuance of 7,310,004 shares of the Company's common stock. As of December 31, 2021, the balance of stock purchase contracts is 7,603,234. The amortizing notes have an initial principal amount of $8.62909, or $119,081 in aggregate, and bear interest at a rate of 3.00% per year, and pay equal quarterly cash installments of $0.75000 per amortizing note (except for the July 30, 2019 installment payment, which was $0.80833 per amortizing note), that will constitute a payment of interest and a partial repayment of principal, and which cash payment in the aggregate will be equivalent to 6.00% per year with respect to each $50 stated amount of the Units. The amortizing notes represent unsecured senior obligations of the Company.

The issuance of the common stock and the Units (including the component stock purchase contracts and amortizing notes) were separate public issuances made by means of separate prospectus supplements pursuant to the Company's universal "pay as you go" shelf registration statement, which allows for the potential future offer and sale by us, from time to time, in one or more public offerings, of an indeterminate amount of the Company's common stock, preferred stock, debt securities, and other securities specified therein at indeterminate prices.

The Company recorded the issuance of the purchase contract portion of the Units as additional paid-in-capital of $570,919, less allocable issuance costs of $13,530, in our financial statements. The Company recorded the amortizing notes portion of the Units of $119,081 as long-term debt and recorded allocable issuance costs of $2,828 as debt issuance costs.

At December 31, 2021, the Company had 1,770,819 shares of authorized but unissued Series Preferred Stock, $1.00 par value.

In April 2021, the Company filed a universal shelf registration, through a filing with the Securities and Exchange Commission ("SEC"), to allow for the potential future offer and sale by the Company, from time to time, in one or more public offerings, of an indeterminate amount of our common stock, preferred stock, debt securities and other securities specified therein at indeterminate prices.

The Company has an acquisition shelf registration statement on file with the SEC which permits the offering, from time to time, of an aggregate of $500,000 in shares of common stock and shares of preferred stock in connection with acquisitions. The balance remaining available for use under the acquisition shelf registration as of December 31, 2021 is $487,155.

The form and terms of any securities issued under the universal shelf registration statement and the acquisition shelf registration statement will be determined at the time of issuance.

The Company has a Dividend Reinvestment and Direct Stock Purchase Plan ("Plan") that allows reinvested dividends to be used to purchase shares of common stock at a five percent discount from the current market value. Under the direct stock purchase program, shares are issued throughout the year. The shares issued under the Plan are either shares purchased by the Company's transfer agent in the open-market or original issue shares. In 2021, and 2020, the Company sold 374,824 and 388,978 original issue shares of common stock through the dividend reinvestment portion of the Plan, for net proceeds of $16,799 and $16,522, respectively. In 2019, 183,731 shares of the Company were purchased under the dividend reinvestment portion of the Plan by the Company's transfer agent in the open-market for $7,777.

The Company's accumulated other comprehensive income is reported in the consolidated statements of equity. The Company recorded a regulatory asset for its underfunded status of its pension and other post-retirement benefit plans that would otherwise be charged to other comprehensive income, as it anticipates recovery of its costs through customer rates.

Note 14 – ***Net Income per Common Share and Equity per Common Share***

Basic net income per share is based on the weighted average number of common shares outstanding and the minimum number of shares to be issued upon settlement of the stock purchase contracts issued under the tangible equity units. Diluted net income per share is based on the weighted average number of common shares outstanding and potentially dilutive shares, and the expected number of shares to be issued upon settlement of the stock purchase contracts issued under the tangible equity units, based on the applicable market value of our common stock. The dilutive effect of employee stock-based compensation and shares issuable under the forward equity sale agreement (from the date the Company entered into the forward equity sale agreement to the settlement date) are included in the computation of diluted net income per share. The dilutive effect of stock-based compensation and shares issuable under the forward equity sale agreement are calculated by using the treasury stock method and expected proceeds upon exercise or issuance of the stock-based compensation and settlement of the forward equity sale agreement. The treasury stock method assumes that the proceeds from stock-based compensation and settlement of the forward equity sale agreement are used to purchase the Company's common stock at the average market price during the period. The following table summarizes the shares, in thousands, used in computing basic and diluted net income per share:

	Years ended December 31,		
	2021	2020	2019
Average common shares outstanding during the period for basic computation	257,487	249,768	215,550
Effect of dilutive securities:			
Forward equity sale agreement	189	-	-
Issuance of common stock from private placement	-	4,438	-
Tangible equity units	-	-	-
Employee stock-based compensation	504	423	381
Average common shares outstanding during the period for diluted computation	258,180	254,629	215,931

For the year ended December 31, 2020, the average common shares outstanding during the period for diluted computation reflects the impact of the issuance of common stock from the March 16, 2020 private placement as if the shares were issued on January 1, 2020.

For the years ended December 31, 2021, 2020 and 2019, all of the Company's employee stock options were included in the calculation of diluted net income per share as the calculated cost to exercise the stock options was less than the average market price of the Company's common stock during these periods. Additionally, the dilutive effect of performance share units and restricted share units granted are included in the Company's calculation of diluted net income per share.

For the years ended December 31, 2021, 2020, and 2019, the average common shares outstanding during the period for basic computation includes the weighted-average impact of 9,041,687, 9,370,646 and 10,533,133 shares, respectively, based on the minimum number of shares of 8,963,964, 9,091,179 and 11,425,345, respectively, to be issued in April 2022 upon settlement of the stock purchase contracts issued in April 2019 under the tangible equity units.

Equity per common share was $20.50 and $19.09 at December 31, 2021 and 2020, respectively. These amounts were computed by dividing Essential Utilities stockholders' equity by the number of shares of common stock outstanding at the end of each year.

Note 15 – *Employee Stock and Incentive Plan*

Under the Company's Amended and Restated Equity Compensation Plan, (the "Plan") approved by the Company's shareholders on May 2, 2019, to replace the 2004 Equity Compensation Plan, stock options, stock units, stock awards, stock appreciation rights, dividend equivalents, and other stock-based awards may be granted to employees, non-employee directors, and consultants and advisors. The Plan authorizes 6,250,000 shares for issuance under the plan. A maximum of 3,125,000 shares under the Plan may be issued pursuant to stock award, stock units and other stock-based awards, subject to adjustment as provided in the Plan. During any calendar year, no individual may be granted (i) stock options and stock appreciation rights under the Plan for more than 500,000 shares of common stock in the aggregate or (ii) stock awards, stock units or other stock-based awards under the Plan for more than 500,000 shares of Company stock in the aggregate, subject to adjustment as provided in the Plan. Awards to employees and consultants under the Plan are made by a committee of the Board of Directors, except that with respect to awards to the Chief Executive Officer, the committee recommends those awards for approval by the non-employee directors of the Board of Directors. In the case of awards to non-employee directors, the Board of Directors makes such awards. At December 31, 2021, 2,099,761 shares were still available for issuance under the Plan. No further grants may be made under the Company's 2004 Equity Compensation Plan.

Performance Share Units – During 2021 and 2020, the Company granted performance share units. A performance share unit ("PSU") represents the right to receive a share of the Company's common stock if specified performance goals are met over the three year performance period specified in the grant, subject to exceptions through the respective vesting periods, which is generally three years. Each grantee is granted a target award of PSUs, and may earn between 0% and 200% of the target amount depending on the Company's performance against the performance goals.

The Company did not grant PSUs for the year ended December 31, 2019. The performance goals of the 2021 and 2020 PSU grants consisted of the following metrics:

	Performance Grant 2021 and 2020
Metric 1 – Company's total shareholder return ("TSR") compared to the TSR for a specific peer group of investor-owned utilities (a market-based condition)	38.46%
Metric 2 – Achievement of a targeted cumulative level of rate base growth as a result of acquisitions (a performance-based condition)	30.77%
Metric 3 – Achievement of targets for maintaining consolidated operations and maintenance expenses over the three year measurement period (a performance-based condition)	30.77%

The following table provides the compensation expense and income tax benefit for PSUs:

	Years ended December 31,		
	2021	2020	2019
Stock-based compensation within operations and maintenance expense	$ 7,150	$ 3,630	$ 2,741
Income tax benefit	2,038	957	767

The following table summarizes nonvested PSU transactions for the year ended December 31, 2021:

	Number of Share Units	Weighted Average Fair Value
Nonvested share units at beginning of period	283,007	$ 34.57
Granted	151,711	43.18
Performance criteria adjustment	70,783	49.41
Forfeited	(8,789)	46.34
Share units issued	(141,328)	31.36
Nonvested share units at end of period	355,384	42.19

A portion of the fair value of PSUs was estimated at the grant date based on the probability of satisfying the market-based conditions associated with the PSUs using the Monte Carlo valuation method, which assesses the probabilities of various outcomes of market conditions. The other portion of the fair value of the PSUs associated with performance-based conditions was based on the fair market value of the Company's stock at the grant date, regardless of whether the market-based condition is satisfied. The fair value of each PSU grant is amortized into compensation expense on a straight-line basis over their respective vesting periods, generally 36 months. The accrual of compensation costs is based on an estimate of the final expected value of the award and is adjusted as required for the portion based on the performance-based condition. The Company assumes that forfeitures will be minimal, and recognizes forfeitures as they occur, which results in a reduction in compensation expense. As the payout of the PSUs includes dividend equivalents, no separate dividend yield assumption is required in calculating the fair value of the PSUs. The recording of compensation expense for PSUs has no impact on net cash flows. The following table provides the assumptions used in the pricing model for the grant, the resulting grant date fair value of PSUs, and the intrinsic value and fair value of PSUs that vested during the year:

	Years ended December 31,		
	2021	2020	2019
Expected term (years)	3.0	3.0	-
Risk-free interest rate	0.24%	0.66%	-
Expected volatility	32.1%	24.2%	-
Weighted average fair value of PSUs granted	$ 43.18	$ 55.25	$ -
Intrinsic value of vested PSUs	$ 6,050	$ 9,030	$ 3,181
Fair value of vested PSUs	$ 5,321	$ 5,215	$ 2,569

As of December 31, 2021, $9,295 of unrecognized compensation costs related to PSUs is expected to be recognized over a weighted average period of approximately 1.77 years. The aggregate intrinsic value of PSUs as of December 31, 2021 was $13,270. The aggregate intrinsic value of PSUs is based on the number of nonvested share units and the market value of the Company's common stock as of the period end date.

Restricted Stock Units – A restricted stock unit ("RSU") represents the right to receive a share of the Company's common stock and is valued based on the fair market value of the Company's stock on the date of grant. RSUs are eligible to be earned at the end of a specified restricted period, generally three years, beginning on the date of grant. In some cases, the right to receive the shares is subject to specific performance goals established at the time the grant is made. The Company assumes that forfeitures will be minimal, and recognizes forfeitures as they occur, which results in a reduction in compensation expense. As the payout of the RSUs includes dividend equivalents, no separate dividend yield assumption is required in calculating the fair value of the RSUs. The following table provides the compensation expense and income tax benefit for RSUs:

	Years ended December 31,		
	2021	2020	2019
Stock-based compensation within operations and maintenance expense	$ 3,360	$ 2,180	$ 1,650
Income tax benefit	953	585	466

The following table summarizes nonvested RSU transactions for the year ended December 31, 2021:

	Number of Stock Units	Weighted Average Fair Value
Nonvested stock units at beginning of period	163,906	$ 40.80
Granted	85,626	44.44
Stock units vested and issued	(50,406)	35.45
Forfeited	(5,439)	43.38
Nonvested stock units at end of period	193,687	43.76

The following table summarizes the value of RSUs:

	Years ended December 31,		
	2021	2020	2019
Weighted average fair value of RSUs granted	$ 44.44	$ 49.19	$ 36.25
Intrinsic value of vested RSUs	2,108	2,130	1,456
Fair value of vested RSUs	1,726	1,203	1,341

As of December 31, 2021, $3,851 of unrecognized compensation costs related to RSUs is expected to be recognized over a weighted average period of approximately 1.79 years. The aggregate intrinsic value of RSUs as of December 31, 2021 was $10,399. The aggregate intrinsic value of RSUs is based on the number of nonvested stock units and the market value of the Company's common stock as of the period end date.

Stock Options – A stock option represents the option to purchase a number of shares of common stock of the Company as specified in the stock option grant agreement at the exercise price per share as determined by the closing market price of our common stock on the grant date. Stock options are exercisable in installments of 33% annually, starting one year from the grant date and expire ten years from the grant date. The vesting of stock options granted in 2019 and 2018 are subject to the achievement of the following performance goal: the Company achieves at least an adjusted return on equity equal to 150 basis points below the return on equity granted by the Pennsylvania Public Utility Commission during the Company's Pennsylvania subsidiary's last rate proceeding. The adjusted return on equity equals net income, excluding net income or loss from acquisitions which have not yet been incorporated into a rate application as of the last year end, divided by equity which excludes equity applicable to acquisitions which are not yet incorporated in a rate application during the award period.

The Company did not grant stock options for the years ended December 31, 2021 and 2020.

The fair value of each stock option is amortized into compensation expense using the graded vesting method, which results in the recognition of compensation costs over the requisite service period for each separately vesting tranche of the stock options as though the stock options were, in substance, multiple stock option grants. The following table provides compensation expense and income tax benefit for stock options:

	Years ended December 31,		
	2021	2020	2019
Stock-based compensation within operations and maintenance expenses	$ 480	$ 1,322	$ 2,280
Income tax benefit	136	374	643

Options under the plans were issued at the closing market price of the stock on the day of the grant. The fair value of options was estimated at the grant date using the Black-Scholes option-pricing model, which relies on assumptions that require management's judgment. The following table provides the assumptions used in the pricing model for grants and the resulting grant date fair value of stock options granted in the period reported:

	Year ended December 31,
	2019
Expected term (years)	5.47
Risk-free interest rate	2.53%
Expected volatility	17.7%
Dividend yield	2.44%
Grant date fair value per option	$ 5.25

Historical information was the principal basis for the selection of the expected term and dividend yield. The expected volatility is based on a weighted-average combination of historical and implied volatilities over a time period that approximates the expected term of the option. The risk-free interest rate was selected based upon the U.S. Treasury yield curve in effect at the time of grant for the expected term of the option. The Company assumes that forfeitures will be minimal, and recognizes forfeitures as they occur, which results in a reduction in compensation expense.

The following table summarizes stock option transactions for the year ended December 31, 2021:

	Shares	Weighted Average Exercise Price	Weighted Average Remaining Life (years)	Aggregate Intrinsic Value
Outstanding, beginning of year	947,680	$ 35.22		
Granted	-	-		
Forfeited	(10,478)	35.92		
Expired / Cancelled	(1,413)	34.54		
Exercised	(122,297)	34.11		
Outstanding at end of year	813,492	$ 35.37	6.9	$ 14,899
Exercisable at end of year	584,652	$ 35.15	6.8	$ 10,842

The intrinsic value of stock options is the amount by which the market price of the stock on a given date, such as at the end of the period or on the day of exercise, exceeded the closing market price of stock on the date of grant. The following table summarizes the intrinsic value of stock options exercised and the fair value of stock options which vested:

	Years ended December 31,		
	2021	2020	2019
Intrinsic value of options exercised	$ 1,709	$ 1,849	$ 2,552
Fair value of options vested	1,485	1,673	422

The following table summarizes information about the options outstanding and options exercisable as of December 31, 2021:

	Options Outstanding			Options Exercisable	
	Shares	Weighted Average Remaining Life (years)	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price
Range of prices:					
$30.00 - 33.99	59,159	5.2	$ 30.50	58,962	$ 30.49
$34.00 - 34.99	97,500	6.2	34.51	97,500	34.51
$35.00 - 35.99	654,374	7.2	35.93	428,190	35.93
$36.00 and above	2,459	7.2	37.80	-	-
	813,492	6.9	$ 35.37	584,652	$ 35.15

As of December 31, 2021, there was $63 of total unrecognized compensation costs related to nonvested stock options granted under the plans. The cost is expected to be recognized over a weighted average period of approximately 0.16 years.

Restricted Stock – Restricted stock awards provide the grantee with the rights of a shareholder, including the right to receive dividends and to vote such shares, but not the right to sell or otherwise transfer the shares during the restriction period. Restricted stock awards result in compensation expense that is equal to the fair market value of the stock on the date of the grant and is amortized ratably over the restriction period. The Company expects forfeitures of restricted stock to be de minimis. The Company did not grant restricted stock for the year ended December 31, 2019.

The following table provides the compensation cost and income tax benefit for stock-based compensation related to restricted stock:

	Year ended December 31,		
	2021	2020	2019
Stock-based compensation within operations and maintenance expense	$ 130	$ 333	$ -
Income tax benefit	37	96	-

The following table summarizes restricted stock transactions for the year ended December 31, 2021:

	Number of Shares	Weighted Average Fair Value
Nonvested shares at beginning of period	13,228	$ 34.02
Granted	1,068	46.83
Vested	(13,228)	34.02
Nonvested shares at end of period	1,068	$ 46.83

Stock Awards – Stock awards represent the issuance of the Company's common stock, without restriction. Stock awards are granted to the Company's non-employee directors. The issuance of stock awards results in compensation expense which is equal to the fair market value of the stock on the grant date, and is expensed immediately upon grant. The following table provides compensation cost and income tax benefit for stock-based compensation related to stock awards:

	Years ended December 31,		
	2021	2020	2019
Stock-based compensation within operations and maintenance expense	$ 700	$ 695	$ 698
Income tax benefit	202	201	202

The following table summarizes the value of stock awards:

	Years ended December 31,		
	2021	2020	2019
Intrinsic and fair value of stock awards vested	$ 700	$ 695	$ 698
Weighted average fair value of stock awards granted	47.46	41.97	41.75

The following table summarizes stock award transactions for year ended December 31, 2021:

	Number of Stock Awards	Weighted Average Fair Value
Nonvested stock awards at beginning of period	-	$ -
Granted	14,749	47.46
Vested	(14,749)	47.46
Nonvested stock awards at end of period	-	-

Note 16 – *Pension Plans and Other Post-retirement Benefits*

The Company maintains a qualified, defined benefit pension plan that covers its full-time employees who were hired prior to the date their respective pension plan was closed to new participants. Retirement benefits under the plan are generally based on the employee's total years of service and compensation during the last five years of employment. The Company's policy is to fund the plan annually at a level which is deductible for income tax purposes and which provides assets sufficient to meet its pension obligations over time. To offset some limitations imposed by the Internal Revenue Code with respect to payments under qualified plans, the Company has a non-qualified Supplemental Pension Benefit Plan for Salaried Employees in order to prevent some employees from being penalized by these limitations, and to provide certain retirement benefits based on employee's years of service and compensation. The net pension costs and obligations of the qualified and non-qualified plans are included in the tables which follow. Employees hired after their respective pension plan was closed, may participate in a defined contribution plan that provides a Company matching contribution on amounts contributed by participants and an annual profit-sharing contribution based upon a percentage of the eligible participants' compensation.

On March 16, 2020, the Company completed the Peoples Gas Acquisition and assumed the pension and other postretirement benefit plans for its employees. On April 1, 2020, the Company merged the pension plans acquired in the Peoples Gas Acquisition into the Company's Pension Plan.

Effective July 1, 2015, the Company added a permanent lump sum option to the form of benefit payments offered to participants of the qualified defined benefit pension plan upon retirement or termination. The plan paid $11,069 and $10,889 to participants who elected this option during 2021 and 2020, respectively.

In addition to providing pension benefits, the Company offers post-retirement benefits other than pensions to employees retiring with a minimum level of service and hired before their respective plan closed to new participants. These benefits include continuation of medical and prescription drug benefits, or a cash contribution toward such benefits, for eligible retirees and life insurance benefits for eligible retirees. The Company funds these benefits through various trust accounts. The benefits of retired officers and other eligible retirees are paid by the Company and not from plan assets due to limitations imposed by the Internal Revenue Code.

The following benefit payments, which reflect expected future service, as appropriate, are expected to be paid in the years indicated:

	Pension Benefits	Other Post-retirement Benefits
Years:		
2022	$ 31,670	$ 5,514
2023	32,165	5,703
2024	31,666	5,644
2025	32,154	5,786
2026	31,513	5,961
2027-2031	149,483	31,739

The changes in the benefit obligation and fair value of plan assets, the funded status of the plans and the assumptions used in the measurement of the company's benefit obligation are as follows:

	Pension Benefits		Other Post-retirement Benefits	
	2021	2020	2021	2020
Change in benefit obligation:				
Benefit obligation at January 1,	$ 486,219	$ 310,381	$ 125,375	$ 79,542
Service cost	3,503	3,775	2,793	2,276
Interest cost	13,018	13,710	3,358	3,687
Actuarial (gain) loss	(17,378)	37,632	(12,001)	5,181
Plan participants' contributions	-	-	36	795
Benefits paid	(32,415)	(28,150)	(4,910)	(6,287)
Acquisitions	-	148,871		40,181
Benefit obligation at December 31,	452,947	486,219	114,651	125,375
Change in plan assets:				
Fair value of plan assets at January 1,	426,801	266,461	98,995	54,011
Actual return on plan assets	23,901	54,732	12,484	11,910
Employer contributions	14,834	16,274	598	5,034
Participants' contributions	-	-	36	795
Benefits paid	(32,415)	(28,150)	(4,805)	(6,199)
Acquisitions	-	117,484	-	33,444
Fair value of plan assets at December 31,	433,121	426,801	107,308	98,995
Funded status of plan:				
Net liability recognized at December 31,	$ 19,826	$ 59,418	$ 7,343	$ 26,380

The following table provides the net liability recognized on the consolidated balance sheets at December 31,:

	Pension Benefits		Other Post-retirement Benefits	
	2021	2020	2021	2020
Non-current asset	$ 2,474	$ -	$ 23,504	$ 11,446
Current liability	(1,144)	(551)	(1,777)	(895)
Noncurrent liability	(21,156)	(58,867)	(29,070)	(36,931)
Net liability recognized	$ (19,826)	$ (59,418)	$ (7,343)	$ (26,380)

The following table provides selected information about plans with accumulated benefit obligation and projected benefit obligation in excess of plan assets:

	December 31, 2021		December 31, 2020	
	Pension Benefits	Other Post-retirement Benefits	Pension Benefits	Other Post-retirement Benefits
Selected information for plans with projected benefit obligation in excess of plan assets:				
Projected benefit obligation	$ 23,601	$ N/A	$ 486,219	$ N/A
Fair value of plan assets	-	N/A	426,801	N/A
Selected information for plans with accumulated benefit obligation in excess of plan assets:				
Accumulated benefit obligation	$ 17,129	$ 42,463	$ 458,658	$ 96,342
Fair value of plan assets	-	11,616	426,801	63,567

The following table provides the components of net periodic benefit costs for the years ended December 31,:

	Pension Benefits			Other Post-retirement Benefits		
	2021	2020	2019	2021	2020	2019
Service cost	$ 3,503	$ 3,775	$ 2,718	$ 2,793	$ 2,276	$ 819
Interest cost	13,018	13,710	11,817	3,358	3,687	2,999
Expected return on plan assets	(23,165)	(21,249)	(15,272)	(4,155)	(4,079)	(2,482)
Amortization of prior service cost (credit)	559	591	620	(432)	(464)	(464)
Amortization of actuarial loss	2,907	7,967	7,927	219	622	664
Net periodic benefit cost (credit)	$ (3,178)	$ 4,794	$ 7,810	$ 1,783	$ 2,042	$ 1,536

The Company records the underfunded/overfunded status of its pension and other post-retirement benefit plans on its consolidated balance sheets and records a regulatory asset/liability for these costs that would otherwise be charged to stockholders' equity, as the Company anticipates recoverability of the costs through customer rates to be probable. Changes in the plans' funded status will affect the assets and liabilities recorded on the balance sheet. Due to the Company's regulatory treatment, the recognition of the funded status is recorded as a regulatory asset pursuant to the FASB's accounting guidance for regulated operations.

The following table provides the amounts recognized in regulatory assets and regulatory liabilities that have not been recognized as components of net periodic benefit cost as of December 31:

	Pension Benefits		Other Post-retirement Benefits	
	2021	2020	2021	2020
Net actuarial loss (gain)	$ 64,247	$ 83,967	$ (16,323)	$ 7,224
Prior service cost (credit)	965	1,524	-	(432)
Total recognized in regulatory assets (liabilities)	$ 65,212	$ 85,491	$ (16,323)	$ 6,792

Accounting for pensions and other post-retirement benefits requires an extensive use of assumptions about the discount rate, expected return on plan assets, the rate of future compensation increases received by the Company's employees, mortality, turnover and medical costs. Each assumption is reviewed annually with assistance from the Company's actuarial consultant who provides guidance in establishing the assumptions. The assumptions are selected to represent the average expected experience over time and may differ in any one year from actual experience due to changes in capital markets and the overall economy. These differences will impact the amount of pension and other post-retirement benefit expense that the Company recognizes.

The significant assumptions related to the Company's benefit obligations are as follows:

	Pension Benefits		Other Post-retirement Benefits	
	2021	2020	2021	2020
Weighted Average Assumptions Used to Determine Benefit Obligations as of December 31,				
Discount rate	2.91%	2.57%	2.96%	2.68%
Rate of compensation increase	3.0-4.0%	3.0-4.0%	n/a	n/a
Assumed Health Care Cost Trend Rates Used to Determine Benefit Obligations as of December 31,				
Health care cost trend rate	n/a	n/a	6.25%	6.25%
Rate to which the cost trend is assumed to decline (the ultimate trend rate)	n/a	n/a	5.0%	5.0%
Year that the rate reaches the ultimate trend rate	n/a	n/a	2027	2025

n/a – Assumption is not applicable.

The significant assumptions related to the Company's net periodic benefit costs are as follows:

	Pension Benefits			Other Post-retirement Benefits		
	2021	2020	2019	2021	2020	2019
Weighted Average Assumptions Used to Determine Net Periodic Benefit Costs for Years Ended December 31,						
Discount rate	2.57%	3.35%	4.30%	2.68%	3.42%	4.34%
Expected return on plan assets	5.60%	6.00%	6.50%	5.60%	6.00%	4.1-6.5%
Rate of compensation increase	3.0-4.0%	3.0-4.0%	3.0-4.0%	n/a	n/a	n/a
Assumed Health Care Cost Trend Rates Used to Determine Net Periodic Benefit Costs for Years Ended December 31,						
Health care cost trend rate	n/a	n/a	n/a	6.3%	6.3%	6.6%
Rate to which the cost trend is assumed to decline (the ultimate trend rate)	n/a	n/a	n/a	5.0%	5.0%	5.0%
Year that the rate reaches the ultimate trend rate	n/a	n/a	n/a	2025	2025	2023

n/a – Assumption is not applicable.

The Company's discount rate assumption, which is utilized to calculate the present value of the projected benefit payments of our post-retirement benefits, was determined by selecting a hypothetical portfolio of high quality corporate bonds appropriate to match the projected benefit payments of the plans. The selected bond portfolio was derived from a universe of Aa-graded corporate bonds. The discount rate was then developed as the rate that equates the market value of the bonds purchased to the discounted value of the plan's benefit payments. The Company's pension expense and liability (benefit obligations) increases as the discount rate is reduced.

The Company's expected return on plan assets is determined by evaluating the asset class return expectations with its advisors as well as actual, long-term, historical results of our asset returns. The Company's market related value of plan assets is equal to the fair value of the plan's assets as of the last day of its fiscal year, and is a determinant for the expected return on plan assets which is a component of post-retirement benefits expense. The Company's pension expense increases as the expected return on plan assets decreases. For 2021, the Company used a 5.6% expected return on plan assets assumption. The Company believes its actual long-term asset allocation on average will approximate the targeted allocation. The Company's investment strategy is to earn a reasonable rate of return while maintaining risk at acceptable levels. Risk is managed through fixed income investments to manage interest rate exposures that impact the valuation of liabilities and through the diversification of investments across and within various asset categories. Investment returns are compared to a total plan benchmark constructed by applying the plan's asset allocation target weightings to passive index returns representative of the respective asset classes in which the plan invests. The Retirement and Employee Benefits Committee meets quarterly to review plan investments and management monitors investment performance quarterly through a performance report prepared by an external consulting firm.

The Company's pension plan asset allocation and the target allocation by asset class are as follows:

		Percentage of Plan Assets at December 31,	
	Target Allocation	2021	2020
Return seeking assets	50 to 70%	53%	54%
Liability hedging assets	30 to 50%	47%	46%
Total	100%	100%	100%

The fair value of the Company's pension plans' assets at December 31, 2021 by asset class are as follows:

	Level 1	Level 2	Level 3	Assets measured at NAV (a)	Total
Common stock	$ 20,290	$ -	$ -	$ -	$ 20,290
Return seeking assets:					
Global equities	-	-	-	134,394	134,394
Hedge / diversifying strategies	-	-	-	39,163	39,163
Credit	-	-	-	56,191	56,191
Liability hedging assets	-	-	-	177,574	177,574
Cash and cash equivalents	5,509	-	-	-	5,509
Total pension assets	$ 25,799	$ -	$ -	$ 407,322	$ 433,121

(a) Assets that are measured at fair value using the NAV per share practical expedient have not been classified in the fair value hierarchy.

The fair value of the Company's pension plans' assets at December 31, 2020 by asset class are as follows:

	Level 1	Level 2	Level 3	Assets measured at NAV (a)	Total
Common stock	$ 17,620	$ -	$ -	$ -	$ 17,620
Return seeking assets:					
Global equities	-	-	-	120,220	120,220
Hedge / diversifying strategies	-	-	-	38,417	38,417
Credit	-	-	-	53,378	53,378
Liability hedging assets	-	-	-	140,891	140,891
Cash and cash equivalents	56,275	-	-	-	56,275
Total pension assets	$ 73,895	$ -	$ -	$ 352,906	$ 426,801

Equity securities include our common stock in the amounts of $20,290 or 4.7% and $17,620 or 4.1% of total pension plans' assets as of December 31, 2021 and 2020, respectively.

The asset allocation for the Company's other post-retirement benefit plans and the target allocation by asset class are as follows:

		Percentage of Plan Assets at December 31,	
	Target Allocation	2021	2020
Return seeking assets	50 to 70%	68%	64%
Liability hedging assets	30 to 50%	32%	36%
Total	100%	100%	100%

The fair value of the Company's other post-retirement benefit plans' assets at December 31, 2021 by asset class are as follows:

	Level 1	Level 2	Level 3	Assets measured at NAV (a)	Total
Return seeking assets:					
Global equities	$ 36,753	$ -	$ -	$ 22,544	$ 59,297
Real estate securities	9,609	-	-	4,391	14,000
Liability hedging assets	17,241	-	-	12,364	29,605
Cash and cash equivalents	4,406	-	-		4,406
Total other post-retirement assets	$ 68,009	$ -	$ -	$ 39,299	$ 107,308

(a) Assets that are measured at fair value using the NAV per share practical expedient have not been classified in the fair value hierarchy.

The fair value of the Company's other post-retirement benefit plans' assets at December 31, 2020 by asset class are as follows:

	Level 1	Level 2	Level 3	Assets measured at NAV (a)	Total
Return seeking assets:					
Global equities	$ 31,984	$ -	$ -	$ 20,673	$ 52,657
Real estate securities	6,761	-	-	3,453	10,214
Liability hedging assets	17,021	-	-	11,605	28,626
Cash and cash equivalents	7,498	-	-	-	7,498
Total other post-retirement assets	$ 63,264	$ -	$ -	$ 35,731	$ 98,995

Valuation Techniques Used to Determine Fair Value

- *Common Stocks* - Investments in common stocks are valued using unadjusted quoted prices obtained from active markets.
- *Return Seeking Assets* – Investments in return seeking assets consists of the following:
    - Global equities, which consist of common and preferred shares of stock, traded on U.S. or foreign exchanges that are valued using unadjusted quoted prices obtained from active markets, or commingled fund vehicles, consisting of such securities valued using NAV, which are not classified within the fair value hierarchy.
    - Real estate securities, which consist of securities, traded on U.S. or foreign exchanges that are valued using unadjusted quoted prices obtained from active markets, or for real estate commingle fund vehicles that are not publicly quoted, the fund administrators value the funds using the NAV per fund share, derived from the quoted prices in active markets of the underlying securities and are not classified within the fair value hierarchy.
    - Hedge / diversifying strategies, which consist of a multi-manager fund vehicle having underlying exposures that collectively seek to provide low correlation of return to equity and fixed income markets, thereby offering diversification. As a multi-manager fund investment, NAV is derived from underlying manager NAVs, which are derived from the quoted prices in active markets of the underlying securities and are not classified within the fair value hierarchy.
    - Credit, which consist of certain opportunistic, return-oriented credits which primarily include below investment grade bonds (i.e. high yield bonds), bank loans, and securitized debt. Credits are valued using the NAV per fund share, derived from either quoted prices in active markets of the underlying securities, or less active markets, or quotes of similar assets, and are not classified within the fair value hierarchy.
- *Liability Hedging Assets* – Investments in liability hedging assets consist of funds investing in high-quality fixed income (i.e. U.S. Treasury securities and government bonds), and for funds for which market quotations are readily available, are valued at the last reported closing price on the primary market or exchange on which they are traded. Funds for which market quotations are not readily available, are valued using the NAV per fund share, derived from the quoted prices in active markets of the underlying securities and are not classified within the fair value hierarchy.
- *Cash and Cash Equivalents* – Investments in cash and cash equivalents are comprised of both uninvested cash and money market funds. The uninvested cash is valued based on its carrying value, and the money market funds are valued utilizing the net asset value per unit obtained from published market prices.

Funding requirements for qualified defined benefit pension plans are determined by government regulations and not by accounting pronouncements. In accordance with funding rules and the Company's funding policy, during 2022 our pension contribution is expected to be $20,390.

The Company has a 401(k) savings plan, which is a defined contribution plan and covers substantially all employees. The Company makes matching contributions that are based on a percentage of an employee's contribution, subject to specific limitations, as well as, non-discretionary contributions based on eligible hourly wages for certain union employees, discretionary year-end contributions based on an employee's eligible compensation, and employer profit sharing contributions. Participants may diversify their Company matching account balances into other investments offered under the 401(k) savings plan. The Company's contributions, which are recorded as compensation expense, were $19,569, $15,445, and $6,259, for the years ended December 31, 2021, 2020, and 2019, respectively.

Note 17 –*Rate Activity*

On August 20, 2021, Aqua Pennsylvania, filed an application with the Pennsylvania Public Utility Commission designed to increase water and wastewater rates by $97,685 or 17.9% on an annual basis. The Company anticipates a final order to be issued by May 2022.

In May 2019, the Pennsylvania Public Utility Commission granted Aqua Pennsylvania a water and wastewater increase designed to increase total operating revenues by $47,000 on an annual basis, and new rates went into effect on May 24, 2019. The rates in effect at the time of the filing also included $29,493 in Distribution System Improvement Charges ("DSIC"), which was 7.5% above prior base rates. Consequently, the aggregate base rates increased by $76,493 since the last base rate increase and the DSIC was reset to zero. Revenues from this rate increase realized in the year of grant were approximately $28,396. Additionally, in the May 2019 Aqua Pennsylvania rate order, base rates were designed with $158,865 of tax benefits to be flowed-through to income for qualifying utility asset improvement costs, subject to $3,000 either above or below this target amount. To the extent actual tax benefits are outside this range, tax benefits will either be deferred or accrued, and settled in the next rate filing.

On October 26, 2020, the Company's water and wastewater utility operating divisions in North Carolina received an order from the North Carolina Utilities Commission resulting in an increase of $3,426 in annual revenue, and new rates went into effect on October 26, 2020.

In May 2019, the Company's operating subsidiary in New Jersey received an order from the New Jersey Board of Public Utilities, resulting in an increase of $5,000 in annual revenues, and new rates went into effect on June 1, 2019. Revenues from this rate increase realized in the year of grant were approximately $2,917.

In addition to the Pennsylvania, North Carolina, and New Jersey rate awards noted above, the Company's operating subsidiaries were allowed annualized rate increases of $3,390 in 2021, $4,480 in 2020, and $974 in 2019, represented by six, five, and two rate decisions, respectively. Revenues from these rate increases realized in the year of grant were approximately $2,995, $1,594, and $974 in 2021, 2020, and 2019, respectively. On January 3, 2022, the Company's natural gas operating division in Kentucky received an order from the Kentucky Public Service Commission resulting in an increase of $5,238 in annual revenues, and new rates went into effect on January 4, 2022.

Rate cases are also underway for certain of our water and wastewater utility operating divisions in Ohio.

Eight states in which the Company operates permit water and wastewater utilities to add a surcharge to their water or wastewater bills to offset the additional depreciation and capital costs related to infrastructure system replacement and rehabilitation projects completed and placed into service between base rate filings. Additionally, Pennsylvania and Kentucky allow for the use of an infrastructure rehabilitation surcharge for natural gas utility systems. The surcharge for infrastructure system replacements and rehabilitations is typically adjusted periodically based on additional qualified capital expenditures completed or anticipated in a future period, is capped as a percentage of base rates, generally at 5% to 12.75%, and is reset to zero when new base rates that reflect the costs of those additions become effective or when a utility's earnings exceed a regulatory benchmark. The surcharge for infrastructure system replacements and rehabilitations provided revenues in 2021, 2020, and 2019 of $33,771, $13,039, and $16,007, respectively.

Note 18 – *Segment Information*

On March 16, 2020, the Company completed the Peoples Gas Acquisition, marking the Company's entrance into the regulated natural gas business. The operating results of Peoples are included in the consolidated financial statements for the period since the acquisition date. As a result, the Company now has twelve operating segments and two reportable segments. The Regulated Water segment is comprised of eight operating segments representing its water and wastewater regulated utility companies, which are organized by the states where the Company provides water and wastewater services. The eight water and wastewater utility operating segments are aggregated into one reportable segment, because each of these operating segments has the following similarities: economic characteristics, nature of services, production processes, customers, water distribution or wastewater collection methods, and the nature of the regulatory environment. The Regulated Natural Gas segment is comprised of one operating segment representing natural gas utility companies, acquired in the Peoples Gas Acquisition, for which the Company provides natural gas distribution services.

In addition to the Company's two reportable segments, we include three of our operating segments within the Other category below. These segments are not quantitatively significant and are comprised of our non-regulated natural gas operations, Aqua Infrastructure, and Aqua Resources. Our non-regulated natural gas operations consist of utility service line protection solutions and repair services to households and the operation of gas marketing and production entities. Prior to our October 30, 2020 sale of our investment in joint venture, Aqua Infrastructure provided non-utility raw water supply services for firms in the natural gas drilling industry. Aqua Resources offers, through a third party, water and sewer service line protection solutions and repair services to households. In addition to these segments, Other is comprised of business activities not included in the reportable segments, corporate costs that have not been allocated to the Regulated Water and Regulated Natural Gas segments, and intersegment eliminations. Corporate costs include general and administrative expenses, and interest expense. The Company reports these corporate costs within Other as they relate to corporate-focused responsibilities and decisions and are not included in internal measures of segment operating performance used by the Company to measure the underlying performance of the operating segments.

The following table presents information about the Company's reportable segments, including the operating results and capital expenditures of the Regulated Natural Gas segment for the period since the completion of the Peoples Gas Acquisition on March 16, 2020:

2021	Regulated Water	Regulated Natural Gas	Other and Eliminations	Consolidated
Operating revenues	$ 980,203	$ 859,902	$ 38,039	$ 1,878,144
Operations and maintenance expense	332,598	226,194	(8,212)	550,580
Purchased gas	-	313,390	26,872	340,262
Depreciation and amortization	182,074	113,238	2,640	297,952
Taxes other than income taxes	63,264	20,801	2,576	86,641
Operating income	402,267	186,279	14,163	602,709
Interest expense, net [(a)]	108,356	75,628	21,341	205,325
Allowance for funds used during construction	(19,258)	(1,534)	-	(20,792)
Other	(7,167)	4,005	(662)	(3,824)
Income before income taxes	320,336	108,180	(6,516)	422,000
Provision for income taxes (benefit)	26,633	(40,013)	3,768	(9,612)
Net income (loss)	$ 293,703	$ 148,193	$ (10,284)	$ 431,612
Capital expenditures	$ 621,595	$ 397,419	$ 1,505	$ 1,020,519
Total assets	$ 8,403,586	$ 5,960,602	294,090	$ 14,658,278

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements (continued)
(In thousands of dollars, except per share amounts)

2020	Regulated Water	Regulated Natural Gas	Other and Eliminations	Consolidated
Operating revenues	$ 938,540	$ 506,564	$ 17,594	$ 1,462,698
Operations and maintenance expense	309,608	198,383	20,620	528,611
Purchased gas	-	154,103	11,642	165,745
Depreciation and amortization	171,152	84,201	1,706	257,059
Taxes other than income taxes	60,505	13,307	2,785	76,597
Operating income (loss)	397,275	56,570	(19,159)	434,686
Interest expense, net [(a)]	101,810	29,016	52,246	183,072
Allowance for funds used during construction	(11,231)	(1,456)	-	(12,687)
Equity loss in joint venture	-	-	3,374	3,374
Other	422	(2,308)	(2,158)	(4,044)
Income before income taxes	306,274	31,318	(72,621)	264,971
Provision for income taxes (benefit)	22,481	(25,133)	(17,226)	(19,878)
Net income (loss)	$ 283,793	$ 56,451	$ (55,395)	$ 284,849
Capital expenditures	$ 542,199	$ 292,121	$ 1,322	$ 835,642
Total assets	$ 7,838,034	$ 5,303,507	$ 563,736	$ 13,705,277

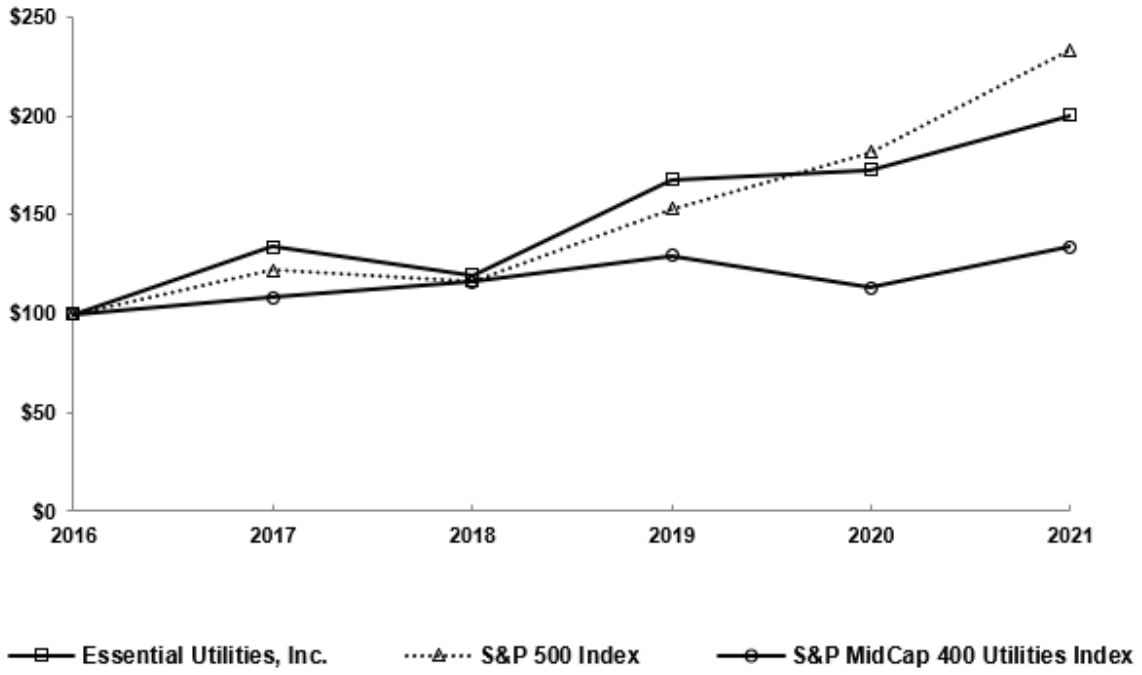
2019	Regulated Water	Other and Eliminations	Consolidated
Operating revenues	$ 886,430	$ 3,262	$ 889,692
Operations and maintenance expense	315,052	18,050	333,102
Depreciation and amortization	155,898	578	156,476
Taxes other than income taxes	59,955	-	59,955
Operating income (loss)	355,525	(15,366)	340,159
Interest expense, net [(a)]	97,941	2,036	99,977
Allowance for funds used during construction	(16,172)	-	(16,172)
Change in fair value of interest rate swap agreements	-	23,742	23,742
Equity earnings in joint venture	-	(2,210)	(2,210)
Other	103	23,193	23,296
Income before income taxes	273,653	(62,127)	211,526
Income tax benefit	(1,267)	(11,750)	(13,017)
Net income (loss)	$ 274,920	$ (50,377)	$ 224,543
Capital expenditures	$ 550,273	$ -	$ 550,273
Total assets	$ 7,269,404	$ 2,092,581	$ 9,361,985

[(a)] The regulated water and regulated natural gas segments report interest expense that includes long-term debt that was pushed-down to the regulated operating subsidiaries from Essential Utilities, Inc.

The graph below matches the cumulative 5-Year total return of holders of Essential Utilities, Inc.'s common stock with the cumulative total returns of the S&P 500 index and the S&P MidCap 400 Utilities index. The graph assumes that the value of the investment in our common stock, in each index (including reinvestment of dividends) was $100 on 12/31/2016 and tracks it through 12/31/2021.

Comparison of Five Year Cumulative Total Return*

Among Essential Utilities, Inc., the S&P 500 Index, and S&P MidCap 400 Utilities Index



*$100 invested on 12/31/16 in stock or index, including reinvestment of dividends. Fiscal year ending December 31.

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	Years as of December 31					
	2016	2017	2018	2019	2020	2021
Essential Utilities, Inc.	**100.00**	**133.76**	**119.47**	**167.75**	**172.66**	**200.35**
S&P 500 Index	**100.00**	**121.83**	**116.49**	**153.17**	**181.35**	**233.41**
S&P MidCap 400 Utilities Index	**100.00**	**108.23**	**116.11**	**129.56**	**112.90**	**133.68**

The stock price performance included in this graph is not necessarily indicative of future stock price performance.

Financial Reports and Investor Relations
Copies of the company's public financial reports, including annual reports and Forms 10–K and 10–Q, are available online and can be downloaded from the investor relations section of our website at Essential.co. You may also obtain these reports by writing to us at:

Investor Relations Department
Essential Utilities Inc.
762 W. Lancaster Avenue
Bryn Mawr, PA 19010-3489

Corporate Governance
We are committed to maintaining high standards of corporate governance and are in compliance with the corporate governance rules of the Securities and Exchange Commission (SEC) and the New York Stock Exchange. Copies of our key corporate governance documents, including our Corporate Governance Guidelines, Code of Ethical Business Conduct, and the charters of each committee of our Board of Directors can be obtained from the corporate governance portion of the investor relations section of our website, Essential.co. Amendments to the Code of Ethical Business, and in the event of any grant of waiver from a provision of the Code of Conduct requiring disclosure under applicable SEC rules will be disclosed on our website.

Annual Meeting
The 2022 Annual Meeting of Shareholders of Essential Utilities, Inc. will be held virtually via live webcast on Wednesday, May 4, 2022, at 8 a.m. Eastern Time, at www.virtualshareholdermeeting.com/WTRG2022.

Transfer Agent and Registrar
Computershare
P.O. Box 505000
Louisville, KY 40233
800.205.8314 or
www.computershare.com/investor

Independent Registered Public Accounting Firm
PricewaterhouseCoopers LLP
Two Commerce Square
Suite 1800
2001 Market Street
Philadelphia, PA 19103-7042

Stock Exchange
The Common Stock of the company is listed on the New York Stock Exchange (NYSE) and under the ticker symbol **WTRG.**

Dividend Reinvestment and Direct Stock Purchase Plan
The company's Dividend Reinvestment and Direct Stock Purchase Plan ("Plan") enables shareholders to reinvest all, or a designated portion of, dividends paid on up to 100,000 shares of Common Stock in additional shares of Common Stock at a discretionary discount from a price based on the market value of the stock. The discount between 0 and 5.0 percent on the shares purchased or issued to meet the dividend reinvestment requirement will be designated by us in our sole discretion prior to the purchase or issuance of such shares. We reserve the right to change, reduce or discontinue any discount at any time without notice. In addition, shareholders may purchase additional shares of Essential Utilities Common Stock at any time with a minimum investment of $50, up to a maximum of $250,000 annually. Individuals may become shareholders by making an initial investment of at least $500. A Plan prospectus may be obtained by calling Computershare at 800.205.8314 or by visiting www.computershare.com/investor. Please read the prospectus carefully before you invest.

IRA, Roth IRA, Education IRA

An IRA, Roth IRA or Coverdell Education Savings Account may be opened through the Plan to hold shares of Common Stock of the company and to make contributions to the IRA to purchase shares of Common Stock. Participants in the Plan may roll over an existing IRA or other qualified plan distribution in cash into an IRA under the Plan to purchase the company's Common Stock. Participants may also transfer the company's Common Stock from an existing IRA into an IRA under the Plan. A prospectus, IRA forms and a disclosure statement may be obtained by calling Computershare at 800.597.7736. Please read the prospectus carefully before you invest.

Direct Deposit

With direct deposit, Essential Utilities cash dividends are deposited automatically on the dividend payment date of each quarter. Shareholders will receive confirmation of their deposit in the mail. Shareholders interested in direct deposit should call the company's transfer agent at 800.205.8314.

Delivery of voting materials to shareholders sharing an address

The SEC's rules permit the Company to deliver a Notice of Internet Availability of Proxy Materials or a single set of proxy materials to one address shared by two or more of the Company's shareholders. This is intended to reduce the printing and postage expense of delivering duplicate voting materials to our shareholders who have more than one Essential Utilities stock account. A separate Notice of Internet Availability or proxy card is included for each of these shareholders. If you received a Notice of Internet Availability you will not receive a printed copy of the proxy materials unless you request it by following the instructions in the notice for requesting printed proxy material.

How to obtain a separate set of voting materials

If you are a registered shareholder who shares an address with another registered shareholder and have received only one Notice of Internet Availability of Proxy Materials or set of proxy material and wish to receive a separate copy for each shareholder in your household for the 2021 annual meeting, you may write or call us to request a separate copy of this material at no cost to you at 610.645.1021 or write us at:

Attn: Investor Relations
Essential Utilities Inc.
762 W. Lancaster Avenue
Bryn Mawr, PA, 19010

Email: investorrelations@essential.co

For future annual meetings, you may request separate voting material by calling Broadridge at 866.540.9095, or by writing to Broadridge Financial Solutions, Inc., Householding Department, 51 Mercedes Way, Edgewood, New York 11717.

Account Access

Essential Utilities shareholders may access their account by visiting www.computershare.com/investor. Shareholders may view their account, purchase additional shares, and make changes to their account. To learn more, visit www.computershare.com/investor or call 800.205.8314.

Dividends

Essential Utilities has paid dividends for 77 consecutive years. The normal Common Stock dividend dates for 2022 and the first six months of 2023 are:

Declaration Date	Ex-Dividend Date	Record Date	Payment Date
January 31, 2022	February 10, 2022	February 11, 2022	March 1, 2022
May 2, 2022	May 12, 2022	May 13, 2022	June 1, 2022
August 1, 2022	August 11, 2022	August 12, 2022	September 1, 2022
October 31, 2022	November 10, 2022	November 11, 2022	December 1, 2022
January 30, 2023	February 9, 2023	February 10, 2023	March 1, 2023
May 1, 2023	May 11, 2023	May 12, 2023	June 1, 2023

To be an owner of record, and therefore eligible to receive the quarterly dividend, shares must have been purchased before the ex-dividend date. Owners of any share(s) on or after the ex-dividend date will not receive the dividend for that quarter. The previous owner – the owner of record – will receive the dividend.

Only the Board of Directors may declare dividends and set record dates. Therefore, the payment of dividends and these dates may change at the discretion of the Board.

Dividends paid on the company's Common Stock are subject to Federal and State income tax.

Lost Dividend Checks, Stock Certificates and Escheatment

Dividend checks lost by shareholders, or those that might be lost in the mail, will be replaced upon notification of the lost or missing check. All inquiries concerning lost or missing dividend checks should be made to the company's transfer agent at 800.205.8314. Shareholders should call or write the company's transfer agent to report a lost certificate. Appropriate documentation will be prepared and sent to the shareholder with instructions.

Escheatment is the act of reporting and transferring property to a state when the rightful owner has an invalid address or has not made contact or initiated a transaction during the state's designated dormancy period. Escheated assets are transferred to the state for safekeeping (and often liquidated) until the rightful owner makes a claim on the asset. To keep your shares of stock and uncashed dividends from being escheated, you must maintain contact (recommended at least once a year) with the company's transfer agent, especially if you recently changed your address, changed your marital status or are managing an estate following a death. Unclaimed property laws vary widely from state to state.

Safekeeping of Stock Certificates

Under the Direct Stock Purchase Plan, shareholders may have their stock certificates deposited with the transfer agent for safekeeping free of charge. Stock certificates and written instructions should be forwarded to:

Computershare, N.A.
P.O. BOX 505000
Louisville, KY 40233

Essential™

AQUA | PEOPLES

OUR MISSION:

To sustain life and improve economic prosperity by safely and reliably delivering Earth's most essential resources to our customers and communities.

OUR VALUES: INTEGRITY RESPECT EXCELLENCE

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Chairman, Chief Executive Officer and President
Essential Utilities Inc.
Director since 2015



Daniel J. Hilferty
Chairman and Chief Executive Officer
Dune View Strategies
Director since 2017



Ellen T. Ruff
Former President
Duke Energy Corporation
Director since 2006



Elizabeth B. Amato
Former Executive Vice President and Chief Human Resources Officer
United Technologies Corporation
Director since 2018



Francis O. Idehen
Former Chief Operating Officer
GCM Grosvenor
Director since 2019



Lee C. Stewart
Private Financial Consultant
Director since 2018



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President, Chief Executive Officer and Director
Lancaster Colony Corporation
President, T. Marzetti Company
Director since 2021



Edwina Kelly
Senior Principal
Canada Pension Plan Investment Board
Director since 2021



Christopher C. Womack
Chairman, President and Chief Executive Officer
Georgia Power
Director since 2019

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General Counsel and Secretary

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Executive Vice President
Chief Operating Officer

Matthew R. Rhodes
Executive Vice President Strategy and Corporate Development

Daniel J. Schuller
Executive Vice President
Chief Financial Officer

FORWARD-LOOKING STATEMENTS

This document contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, which generally include words such as "believes," "expects," "intends," "anticipates," "estimates" and similar expressions. The Company can give no assurance that any actual or future results or events discussed in these statements will be achieved. Any forward-looking statements represent its views only as of today and should not be relied upon as representing its views as of any subsequent date. Readers are cautioned that such forward-looking statements are subject to a variety of risks and uncertainties that could cause the company's actual results to differ materially from the statements contained in this release. There are important factors that could cause actual results to differ materially from those expressed or implied by such forward-looking statements including the factors discussed in our Annual Report on Form 10-K and our Quarterly Reports on Form 10-Q, which are filed with the Securities and Exchange Commission. For more information regarding risks and uncertainties associated with the Company's business, please refer to the Company's annual, quarterly and other SEC filings. The Company is not under any obligation - and expressly disclaims any such obligation - to update or alter its forward-looking statements whether as a result of new information, future events or otherwise.

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Providing natural resources for life.

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