INTEGRITY | INFRASTRUCTURE | INVESTMENT | INNOVATION | INCLUSION | INFLUENCE

YEAR IN REVIEW

2022



Essential Utilities, Inc. 2022 Annual Report NYSE: WTRG





Dear Fellow Shareholders:

As I reflect on 2022, I'm proud of our team and the progress we made in our continuous quest to improve. Throughout the year, we adeptly navigated external challenges including rising interest rates and inflation, continued societal change, evolving public sentiment on free enterprise, and supply chain issues. By remaining agile, adjusting our plans and leaning on our experienced management team, we continued to make incremental and meaningful progress in our pursuit of excellence.

Our remarkable 136-year heritage of dependable service, consistent innovation and high performance has been guided by our core values of integrity, respect and excellence. We remained focused throughout this period of vast change on our core mission – delivering high quality water, wastewater and natural gas service to our customers.

A key component of our commitment is our expansive capital investment program. In 2022, we invested more than \$1 billion to replace aging water, wastewater and natural gas infrastructure. This investment improves quality and safety, increases reliability and enhances compliance for our customers.

We continue to execute our growth strategy by offering solutions to municipal governments overwhelmed by the financial, operational and compliance challenges associated with running water and wastewater utilities. Across the country, there are nearly 50,000 water systems and 16,000 wastewater systems, presenting an opportunity for Essential as we offer a fair market price, compliance and excellent service following an acquisition.

In 2022, we continued to acquire and sign asset purchase agreements for new water and wastewater systems that will add new customers to our footprint. We do not intend to acquire additional natural gas utilities, but our strong gas platform in western Pennsylvania will play an important role in our acquisition strategy as we expand our water and wastewater footprint into the same area.

In the nearly three years since our milestone transaction to become Essential Utilities, our natural gas segment has outperformed our financial, operational and safety expectations thanks to the laser focus of our dedicated workforce and strong management team. This strong performance is an asset to the company as we expand our water segment by acquisition.

As we look to the future, we firmly believe energy independence in the United States will require that natural gas remains a key component of our energy mix. With our gas segment's ideal location and innovative focus, we're proud to participate in the development of a regional energy hub. The importance of reliable and accessible natural gas is more evident as we watch the European Union grapple with its dependence on Russian reserves, and we know natural gas will play a crucial role in communities across the country for decades to come.

A Word from Our Chairman & CEO



Throughout this report, you will read in detail about the innovative solutions we bring to the problems and opportunities our country faces, now and into the future. We pride ourselves on meaningful innovation and believe real operational excellence is achieved through continuous improvement.

Lastly, we continue to be an industry leader in our environmental, social and governance (ESG) efforts, setting and achieving ambitious goals to ensure we are well-positioned to solve our nation's infrastructure challenges while protecting our natural environment.

We are committed to reducing our carbon footprint by 60 percent from a 2019 baseline by 2035, which we will achieve through extensive gas pipeline replacement, renewable energy purchasing, methane leak detection and remediation, and natural gas and electric-powered vehicle replacement. By the close of 2022, we achieved a more than 23 percent reduction in emissions.

We are also dedicated to creating a culture of inclusion at Essential, valuing differences as a competitive advantage and ensuring our workforce accurately represents the communities we serve. We committed to 15 percent of our overall controllable spend procured from diverse suppliers, and I am thrilled to report our achievement of this target. In addition, we are nearing achievement of our target to reach 17 percent employees of color.

There is always more work to do, but I am encouraged by our progress and proud to reach our first-stage growth milestones as Essential. We are well positioned to ensure our customer and employee experiences are uniformly high, and we continue to grow in 2023.

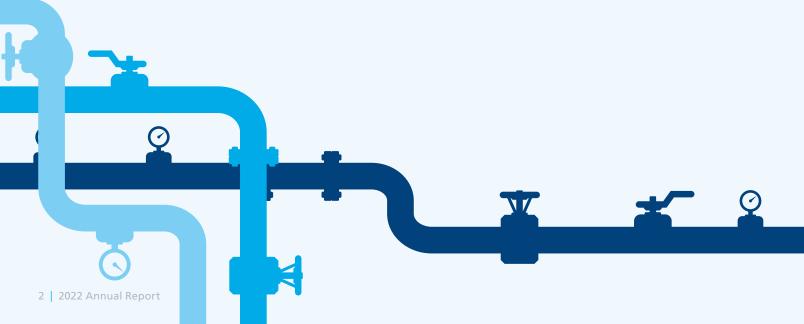
On behalf of the entire Essential leadership team, board of directors and our employees, we thank you for your confidence and ongoing support.

Clarth H Junkli

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

2022 FINANCIAL HIGHLIGHTS

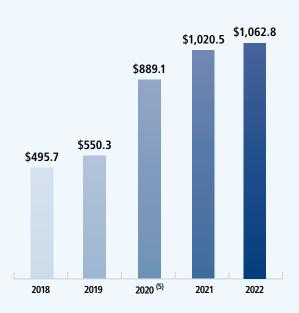
In thousands, except per-share amounts	2022	2021	% Change
Operating Revenues	\$2,288,032	\$1,878,144	21.8%
Regulated Segments:			
Regulated Water Segment Revenues	\$1,082,972	\$980,203	10.5%
Regulated Natural Gas Segment Revenues	\$1,143,362	\$859,902	33.0%
Operations and Maintenance Expense	\$613,649	\$550,580	11.5%
Net income	\$465,237	\$431,612	7.8%
Capital Expenditures	\$1,062,763	\$1,020,519	4.1%
Diluted net income per common share	\$1.77	\$1.67	6.0%
Annualized dividend rate per common share (12/31)	\$1.1480	\$1.0728	7.0%
Total Assets	\$15,719,107	\$14,658,278	7.2%
Number of utility customers served (12/31)	1,851,586	1,820,049	1.7%



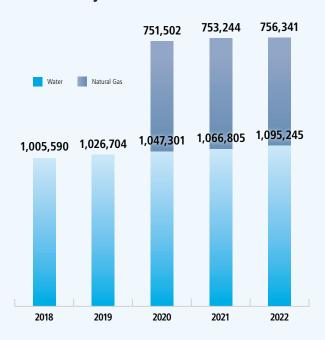
Diluted Adjusted Income per Common Share

\$1.77 \$1.67 \$1.47 \$1.41 \$1.27 2020 (3)(4) 2018 ⁽¹⁾ 2019 ⁽²⁾ 2021 2022

Capital Investment (in millions of dollars)



Utility Customer Connections



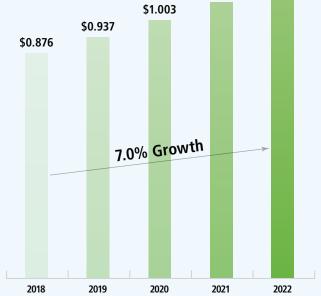
(1) 2018 Net income per share was \$1.08 (GAAP). 2018 adjusted for transaction costs and other items related to the Peoples transaction (Non-GAAP). (2) 2019 Net income per share was \$1.04 (GAAP). 2019 adjusted for transaction costs and other items related to the Peoples transaction (Non-GAAP). (3) 2020 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.

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\$1.148 \$1.073 \$1.003 \$0.937



Dividends per Share (annualized)

Leveraging INtegration for Continued Growth

Our history as a mission-based company spans more than 136 years from our roots as a local Pennsylvania water supplier to where we are today. As we approach the threeyear anniversary of Essential Utilities, we're now one of the country's most significant public utility companies, providing safe drinking water, wastewater services and natural gas to more than 5.5 million people across 10 states.

We've had a foundational year, with 2022 marking important milestones that furthered our ambitious growth strategy and built on the excellence of our operations as protectors and providers of the Earth's most essential resources.

While the benefits of combining natural gas and water are not always obvious, the integration of these businesses has positioned us for growth as a much stronger company in a multitude of ways.

The focus for our gas operations has always been on efficient, safe operation and emissions reduction, which we'll achieve through ongoing and extensive pipeline replacement, renewable energy purchasing, accelerated methane leak detection and repair and other planned initiatives. As a leading infrastructure investment company, Essential provides easier access to capital, enabling our regulated gas segment, which is relatively concentrated to the Pittsburgh, Pennsylvania area, to accelerate critical infrastructure projects. The investment in these projects largely accounts for pipe replacement, increasing the safety and reliability of our operations and reducing our carbon footprint – important benchmarks in our success and future growth.

Additionally, the strength of our gas operations is an asset to our long-term growth strategy, providing a solid operational and financial foundation that further enables us to prudently expand our water and wastewater footprint through acquisition.

In late 2022, we announced our intention to sell the small, West Virginia portion of our natural gas utility assets. The small size of these assets, combined with operational and regulatory challenges, diverted management attention from higher priority strategic initiatives. This transaction will ultimately enable us to focus on operational excellence and organic growth of our gas segment in states where we have the scale to positively impact the lives of our customers. Our gas operations are an essential part of our company, and we're reaping the benefits of integration more each day.

With its presence on top of the Marcellus shale formation, Pittsburgh and the Western Pennsylvania Tri-State region is poised to be at the forefront of energy innovation. Thanks to the long-standing relationships we've built in Pittsburgh with our gas segment, Essential has been able to expand our brand to nearly 750,000 new potential water customers.

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STEADY LEADERSHIP DRIVING FUTURE SUCCESS

With a strong track record of municipal acquisitions, financial performance and operational excellence, Essential Utilities is well prepared for sustainable and consistent growth.

A key component of that growth to date, and why our outlook remains so strong for the future, is our tenured executive leadership team. A large majority of Essential leadership has worked together for several years, offering innovative and new ideas to solve some of our nation's most complex infrastructure challenges and shepherd the company toward future success.

As we advance in our commitment to replace infrastructure and safeguard our communities, we're motivated by the potential ahead – a fractured infrastructure framework with nearly 70,000 water and wastewater systems across the country. The opportunity for continued environmental and community impact is what propels our leadership team forward. In 2022, we expanded our leadership to bring in new diverse voices including executive leaders to help shape our communications and technology for the future.



Vice President.

Communications



Sumit Nair Vice President, Chief Information Officer





Essential's steady growth is a testament to the strength and depth of our leadership team, and our customers directly benefit as a result of their collective experience, knowledge and innovative thinking. I am extremely confident in our future growth and success thanks to this first-rate management team."

Christopher Franklin Chairman, Chief Executive Officer and President

SUSTAINABLE GROWTH HIGHLIGHTS

In 2022, Essential acquired three water and wastewater systems and added approximately \$120 million in rate base and more than 23,000 new customers. In addition, we signed two agreements to purchase three water and wastewater systems that collectively are expected to add over 6,700 new customers or equivalent dwelling units and total nearly \$27 million in purchase price.



Operating with INtention

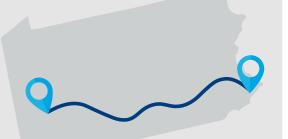
As utility infrastructure experts, we pride ourselves on efficiency, safety, operational excellence and continuous improvement. We are making a difference in the lives of our customers and communities, and everyone, at every level across Essential, understands the importance of our mission.

Our top priority remains providing safe and reliable access to water, wastewater and natural gas service to sustain the lives of our customers and communities. With that comes the ability to strengthen our communities through responsible investment, improved infrastructure, environmental stewardship and community involvement.

We don't just provide resources for today – we strive to make critical improvements and further innovation so our resources will be protected for generations to come. It's through this innovative approach that true operational excellence can be achieved.

Each year, we replace more pipe than the distance traveling from Philadelphia to Pittsburgh, making critical improvements along the way.

- Safety
- Reliability
- Compliance
- Environmental
 Protection



INNOVATING TO SOLVE A NATIONAL CRISIS

The ongoing presence of harmful Per and Poly-fluoroalkyl Substances (also known as PFAS, or "forever chemicals"), requires a unique treatment approach, and one that we are proud to lead among our peers. For more than seven years, Essential has been working to mitigate the presence of PFAS in our water, investing more than \$40 million in treatment solutions, working alongside regulatory bodies to test new approaches. We look forward to a formal Maximum Contaminant Level (MCL) declaration by the **U.S. Environmental Protection** Agency later this year and are committed to implementing treatment in alignment with it throughout our service territory.

> Essential Utilities has led the way on PFAS remediation through transparent communication, a forwardlooking treatment plan and setting a companywide standard as we await regulatory guidance. To date, we have secured more than \$10 million in grants that will support treatment plant improvements while alleviating the cost of remediation for our customers. We remain committed to delivering the highest guality water for our customers and communities."

Colleen Arnold President, Aqua

THOUGHTFUL CAPITAL INVESTMENT AS A SOLUTION TO AMERICA'S INFRASTRUCTURE CRISIS

America is facing an infrastructure crisis. Across the country, aging pipelines contribute to greenhouse gas emissions and water loss, compromise economic growth and put our communities at risk. While federal funding is being earmarked to tackle this growing challenge, it's simply not enough. As a regulated utility, Essential is poised to play a key role in modernizing our nation's infrastructure and safeguarding public health, our environment and economic prosperity.

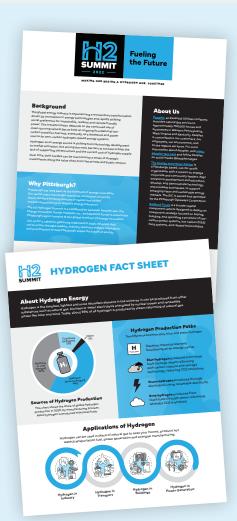
In 2022, we invested more than \$1 billion in critical infrastructure projects to replace over 430 miles of aging pipeline across our service territory for both our water and gas divisions. That's more than the equivalent of driving from Philadelphia to Pittsburgh, and then back again the next year. Our capital program is crucial to improving quality, safety and reliability for our customers, and enhancing compliance.

These projects are also a key factor in our ability and commitment to reduce our greenhouse gas emissions. In 2017, we set an ambitious goal in our natural gas segment to replace 3,000 miles of aging and leak-prone gas distribution pipes over the next 20 years. The ongoing, long-term infrastructure improvement plan will enable us to ensure that environmental protection remains among our highest operational objectives. As of year-end, we had replaced more than 800 miles of pipeline, and anticipate completing this project by 2033.

AN INNOVATIVE APPROACH

As one of the largest utilities in the country, Essential is uniquely positioned to play a key role in bringing innovative solutions to address energy challenges. The energy economy is changing, and we're closely evaluating our role in a renewable energy future, knowing natural gas will be a crucial fuel to help us achieve this.

With its ideal location in Pittsburgh, home to the Marcellus Shale formation, our gas operations have a long history of innovation. In April 2022, we helped establish the inaugural H2 Summit: Fueling the Future to advance Pittsburgh as a regional hydrogen energy hub. We also announced a partnership with the University of Pittsburgh to evaluate the transport of hydrogen in natural gas systems. We're proud to continue exploring this innovative approach to hydrogen as a future energy source and the role natural gas will play.



Peoples has a long history of innovation and we're excited to partner with experts from the University of Pittsburgh to stay on the leading edge of energy industry development. Hydrogen has the potential to transform the way we heat our homes and power our businesses, using the existing natural gas distribution system. Pitt and the Swanson School of Engineering have the expertise we need to test and study its feasibility as a transformative energy resource."

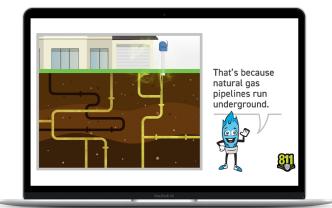
Mike Huwar President, Peoples

INtegrity and the Customer Experience

Essential is light years away from our humble beginnings as a small operation borne of community spirit to provide safe drinking water. But one thing has remained constant: our deep commitment to our customers that fuels our purpose.

Our deep-rooted intention is based on the essential role we play in everyday life – water and natural gas touch just about everything around us – and we are guided by our core values of integrity, respect and excellence to deliver those resources, and a superior experience for our customers.

We can see tangible progress in our customer experience through responsible capital investment, which ultimately yields a safer and more reliable product. But providing a comprehensive quality customer experience is an ongoing process, and one that we are committed to keeping in our line of sight as we grow as a company.



CARING FOR OUR CUSTOMERS

We view safe, reliable and affordable access to water, wastewater and natural gas service as fundamental human rights. While the work we do as utility infrastructure experts will help us ensure this becomes a reality, there is much more that we do behind the scenes to care for the people who matter most.

AQUA

Need help with your water or wastewater bills? We're here to help.

See reverse for details on Aqua's Customer Assistance Program 🕨



Across our water and gas segments, we established educational programs to provide our customers with practical tools and resources focused on pipeline and digging safety, pipe protection, conservation tips and more. We strive every day to operate efficiently and invest responsibly, but we understand there may be customers who have difficulty paying their utility bills. We are proud to support these customers through our universal **Customer Assistance Programs and** other financial aid resources for both our water and gas segments across our service territory.



AN ESSENTIAL EMERGENCY RESPONSE

In the early morning hours on a bitter cold January day in 2022, Pittsburgh's 50-year-old Fern Hollow bridge collapsed, bringing trees and vehicles down with it in a devastating spectacle. While this incident shined an intense spotlight on the crucial need for infrastructure replacement in America, it also underscored Essential's commitment to our customers. Among the first responders to the scene of the collapse were Peoples crews, cutting the flow of natural gas to a distribution pipe that was severed in the accident and quickly shifting gas from other distribution lines to customers to mitigate the impact of the accident.

Emergency preparedness across both our water and gas segments is critical to ensuring we provide safe and reliable access to life-sustaining utilities even when disaster strikes. We not only prepare our operations to withstand emergencies, but also share important safety and preparedness information with our customers. We're committed to constantly updating our contingency plans to ensure we deliver uninterrupted service for our customers.



We're proud to make a difference in people's lives, and even more proud to empower our team members to continue this work themselves.

Long before environmental, social and governance (ESG) targets became buzzwords, we were intentional about setting and publicly announcing important benchmarks to ensure a diverse and inclusive culture where everyone feels valued and where we accurately represent the communities we serve. Because we know when our people are empowered and motivated, we are more likely to achieve long-term sustainable growth.

Although Essential is one of the most significant utilities in the country, our presence is felt locally in each community where we operate. We are your neighbors; we live and work in these communities, and we are passionate about making a true impact where it matters most.

ESSENTIAL'S COMMUNITY IMPACT



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WWW.SOLVEHUNGER





ONOMIC GROWTH



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\$113,665



\$551,407

In 2022, we proudly continued the important work of investing in our communities through volunteering and charitable donations to organizations that support our customers. We provided \$4.5 million to deserving organizations in line with our primary giving pillars, \$3.9 million of which to 501c3 organizations as disclosed in our updated ESG reporting to be published later this year. In addition, our dedicated employees logged more than 4,000 hours of volunteering - 3,800 during working hours and an additional 200+ on their own time at night and on weekends.

Through Essential's company-wide United Way campaign, we contributed more than \$760,000 to 500 deserving organizations, comprised of employee donations that were matched by Essential. We also saw a more than 56% increase in employee participation year over year, with more than 1,850 employees donating in 2022.

We believe that doing the right thing for our people, customers and communities is integral to our company's success. We're proud of our progress to date and pleased to share numerous merits and recognitions from organizations that feel similarly:

- Renamed to Newsweek's Most Responsible Companies
- Renamed to 3BL Media's 100
 Best Corporate Citizens
- Renamed as a Champion of Board Diversity by the Forum of Executive Women
- Recognized as a "3+" Company by 50/50 Women on Boards to highlight the diversity of our board
- Named "Business of the Year" by the Delaware County Chamber of Commerce
- Across-the-board ratings enhancements (MSCI, Sustainalytics, ISS, CDP), placing Essential at or near the top of its proxy peer group



Essential CEO Chris Franklin moderates a panel discussion with board members L to R: Ellen Ruff, Edwina Kelly and Elizabeth Amato.

MEASURING PROGRESS TOWARD OUR TARGETS

In 2021, Essential announced a multi-year plan to increase diverse supplier spend to 15% of controllable spend and added a supplier diversity component to our short-term executive compensation incentive plan metrics. We are excited to announce that, as of year-end 2022, we achieved our target sooner than anticipated.



W. Bryan Lewis Essential Board of Directors

Procuring from diverse suppliers is critical for our communities as well as for our business; we want to source from and partner with businesses owned by individuals representing the diverse communities where we live, work, and operate each day. This also enriches and strengthens local economies, increases sourcing options and fosters collaboration and innovation.

At the same time, we also set an important multi-year goal to reach 17% racial diversity in our workforce, based on a zip code-level demographic analysis of our service territory. Our fundamental belief is that our utility should reflect the communities we serve, and we're proud of our progress to date. As of year-end 2022, we have reached 16 percent employees of color. We look forward to sharing updated progress at ESG.Essential.co later this year.

We are encouraged by this progress and will continue engaging our customers and partners in our DEI efforts. Diversity of backgrounds, ideas, thoughts and experiences is critical to our culture and the way we do business.

The gains we have achieved in our Diversity, Equity & Inclusion (DEI) efforts are not limited to our employees; we acknowledge that representation is also critical at the board level. As of year-end, three of Essential's nine board of directors were women and two were people of color, improving diversity of thought as a result. We're proud to reflect the diversity of our operations and communities beginning at the highest level of governance.

BOARD INFLUENCE

We're not only building a diverse board, but also one to help expand our diversity efforts as a company. In October, we welcomed Bryan Lewis to our board of directors. Bryan has been dedicated to increasing the financial literacy and leadership presence in underrepresented populations, serving on several nonprofit boards including the John Rex Endowment, AIF/National Institute of Public Finance and the Robert Toigo Foundation, among others. We look forward to the insight and experience he will bring to our board.

In August, we engaged our women board members in a panel discussion, moderated by CEO Chris Franklin, about their careers, perspectives on overcoming challenges, including underrepresentation, and ways they promote gender parity. This conversation provided everyone at Essential the tools to guide, mentor and ensure a culture of empowerment every day.



ENVIRONMENTAL STEWARDSHIP

In April 2022, we kicked off our inaugural Essential Earth Month celebration as part of our year-round commitment to environmental stewardship. Across the company, 400 volunteers supported more than 30 environmental organizations at stream clean-ups, tree plantings and other events in every state where we operate.

2022 FINANCIAL DATA

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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:

- 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;
- 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 or reduced or elevated natural gas consumption;
- 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, and risks associated with new systems implementation or integration;
- impacts from public health threats, such as the COVID-19 pandemic, including on consumption, usage, supply chain, and collections.
- 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, including the potential impact of high commodity prices on usage or rate case outcomes;
- civil disturbance or terroristic threats or acts;

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES Management's Discussion and Analysis of Financial Condition and Results of Operations (continued)

(In thousands of dollars, except per share amounts)

- 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, 2022.

OVERVIEW

The following discussion and analysis of our financial condition and results of operations should be read together with our Consolidated Financial Statements and accompanying Notes included in this Annual Report. 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, 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. In December 2022, we entered into a definitive agreement to sell our regulated natural gas utility assets in West Virginia, which serve approximately 13,000 customers. This sale is conditioned on regulatory approval and is expected to close in mid-2023. The completion of this transaction will conclude our regulated utility operations in West Virginia. 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.

Recent Developments

In 2022, we experienced inflationary cost increases in our materials, labor and other operating costs, higher interest rates, as well as supply chain pressures, primarily as a result of the COVID-19 pandemic and global uncertainties associated with the current conflict in Ukraine and sanctions imposed in response to this conflict. The price of natural gas substantially increased and resulted in the significant increase in the revenue and expenses of our Regulated Natural Gas business in 2022, as compared to last year. We expect these pressures to continue throughout 2023. We continue to review the adequacy of our rates as approved by public utility commissions in relation to the increasing cost of providing services and the inherent regulatory lag in adjusting those rates. We also 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 continue to monitor the COVID-19 pandemic and take steps to mitigate the potential risks to our business. To date, there has not been a significant impact on our ability to serve our customers or secure necessary supplies. 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, 2022, the Company has not experienced any material financial or operational impacts related to the COVID-19 pandemic. 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.

On August 16, 2022, the Inflation Reduction Act of 2022 ("IRA") was enacted into law, which among other things, implements a 15% minimum tax on book income of certain large corporations, and a 1% excise tax on net stock repurchases after December 31, 2022. The alternative minimum tax would not be applicable in our next fiscal year because it is based on a three-year average annual adjusted financial statement income in excess of \$1,000,000. Also included in the IRA is a provision to implement an annual waste emissions charge beginning with calendar year 2024 (to be paid in 2025) on applicable oil and gas facilities that exceed certain methane emission thresholds. Currently, the Company has gathering facility assets that could exceed the minimum thresholds and potentially be subject to the waste emissions charge. We are continuing to assess the future impact of the provisions of the IRA on our consolidated financial statements and on the Company's gathering assets. As a regulated utility, required capital expenditures and operating costs, including taxes, have been traditionally recognized by state utility commissions as appropriate for inclusion in establishing rates.

In December 2022, the Company signed an agreement to sell its regulated natural gas utility assets in West Virginia, which are used to serve approximately 13,000 customers or less than two percent of the Company's regulated natural gas customers. This sale is conditioned on regulatory approval and is expected to close in mid-2023. The completion of this transaction will conclude our regulated utility operations in West Virginia and allow the Company to focus on the growth of its utilities in states where it has scale.

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 employed in the business helps determine the profitability of the Company.

As of December 31, 2022, the Company's rate base is estimated to be \$9,300,000, which is comprised of:

- \$6,400,000 in the Regulated Water segment; and
- \$2,900,000 in the Regulated Natural Gas segment.

As of December 31, 2022, the regulatory status of the Company's rate base is estimated to be as follows:

- \$8,100,000 filed with respective state utility commissions or local regulatory authorities; and
- \$1,200,000 not yet filed with respective state utility commissions or local regulatory authorities.

Our water and wastewater operations are composed of 47 rate divisions, and our natural gas operations are comprised of four 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 \$81,610 in 2022 resulting from seven base rate decisions, \$3,390 in 2021 resulting from six base rate decisions, and \$4,480 in 2020 resulting from five base rate decisions. Annualized revenues in aggregate from all of the rate increases realized in the year of grant were \$51,163 in 2022, \$2,995 in 2021, and \$1,594 in 2020.

Revenue Surcharges – Each of our states in which we operate water, wastewater, and 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. Prior to allowing for such surcharges, utilities absorbed 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, chemicals, purchased power, and labor inflation resulted in increased costs in fiscal 2022, and we expect this trend will continue in fiscal 2023. 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, 2023, the annual portion of a typical Peoples Natural Gas residential bill related to gas costs is approximately 56%. In periods when we experience market increases in natural gas costs, such as in 2022, 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 - In March 2020 and in June 2022, the Company changed the method of tax accounting for certain qualifying infrastructure investments at its Peoples Natural Gas and Peoples Gas Company subsidiaries, respectively. In December 2022, the Company made a similar change for its Aqua New Jersey subsidiary beginning with the current tax year. These changes allow a tax deduction for qualifying utility asset improvement costs that were formerly capitalized for tax purposes. The Company is utilizing the flow-through method to account for these timing differences. For Peoples Natural Gas, 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 May 2021, the Pennsylvania Public Utility Commission approved a settlement petition that allows Peoples Natural Gas to continue to use flow-through accounting for the current tax repair benefit and allows for the catchup adjustment be given to its customers. These benefits are being provided back to customers over a five-year period through a credit on customer bills which commenced in August 2021. In addition, the settlement petition required the contribution of \$500 to a customer-bill payment assistance program, completed in July 2021, and \$5,000 in relief to pastdue accounts for natural gas customers impacted by the COVID-19 pandemic, completed in December 2021. For Peoples Gas, the Company calculated the catch-up adjustment for periods prior to the 2021 tax year and recognized a regulatory liability of \$13,808 for these income tax benefits. The Company will maintain this regulatory liability on its consolidated balance sheet until the accounting treatment is determined in its next base rate case.

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 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 2022, we completed three acquisitions of water and wastewater systems, which along with the organic growth in our existing systems, represents 31,537 new customers. 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.

The Company currently has eight signed purchase agreements for additional water and wastewater systems that are expected to serve approximately 218,600 equivalent retail customers or equivalent dwelling units and total approximately \$380,000 in purchase price in four 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, 2022, 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;
- water and wastewater operating revenues;
- gas operating revenues, net of purchased gas costs;
- earnings before interest, taxes, and depreciation (EBITD);
- earnings before income taxes;

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES

Management's Discussion and Analysis of Financial Condition and Results of Operations (continued) (In thousands of dollars, except per share amounts)

- 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 Regulated 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 gas operating revenues, net of purchased gas costs, 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 are more comparable to measures reported by other companies. 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.

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. Management uses gas operating revenues, net of purchased gas costs, a non-GAAP financial measure, to analyze the financial performance of our Regulated Natural Gas segment. Management believes this measure 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 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. 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, 2022, our operating revenues for our Regulated Water segment were derived principally from the following states: approximately 56% in Pennsylvania, 11% 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, 2022, we experienced actual HDDs of 5,648 days, which was colder by 3.9% 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, 2022, 2021 and 2020 are presented below. For discussion of our results of operations and cash flows for 2021 compared with 2020, 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, 2021, filed with the SEC on March 1, 2022.

								2021 vs.
Years ended December 31,		2022		2021	2020	2	2022 vs. 2021	2020
Operating revenues:								
Regulated water segment	\$	1,082,972	\$	980,203	\$ 938,540	\$	102,769	\$ 41,663
Regulated gas segment		1,143,362		859,902	506,564		283,460	353,338
Other and eliminations		61,698		38,039	17,594		23,659	20,445
Consolidated operating revenues	\$	2,288,032	\$:	1,878,144	\$ 1,462,698	\$	409,888	\$ 415,446
Operations and maintenance expense	\$	613,649	\$	550,580	\$ 528,611	\$	63,069	\$ 21,969
Net income (1)	\$	465,237	\$	431,612	\$ 284,849	\$	33,625	\$ 146,763
Capital expenditures	\$	1,062,763	\$	1,020,519	\$ 835,642	\$	42,244	\$ 184,877
Operating Statistics								
Selected operating results as a percentage of operating								
revenues:								
Operations and maintenance		26.8%		29.3%	36.1%		-2.5%	-6.8%
Depreciation and amortization		14.0%		15.9%	17.6%		-1.9%	-1.7%
Taxes other than income taxes		3.9%		4.6%	5.2%		-0.7%	-0.6%
Interest expense, net of interest income		10.2%		10.9%	12.5%		-0.7%	-1.6%
Net income (1)		20.3%		23.0%	19.5%		-2.7%	3.5%
Return on Essential Utilities stockholders' equity (1)		8.7%		8.3%	6.1%		0.4%	2.2%
Ratio of capital expenditures to depreciation expense		3.4		3.5	3.3		-0.1	0.2
Effective tax rate	_	(3.2%)		(2.3%)	(7.5%)		(0.9%)	5.2%

(1) Reflects Peoples Gas Acquisition transaction-related expenses of \$20,925 (\$25,573 pre-tax) in 2020 and utility customer rate credits issued in 2020 of \$23,004 (or \$16,357 net of tax).

(2) Peoples Gas' operating results are included since its acquisition on March 16, 2020.

Consolidated Results of Operations Comparison for 2022 and 2021

Operating revenues - Operating revenues increased by \$409,888 or 21.8% for the year ended December 31, 2022 compared to the year ended December 31, 2021. Revenues from our Regulated Water segment increased by \$102,769, Regulated Natural Gas segment by \$283,460 and other revenues by \$23,659. A detailed discussion of the factors contributing to the changes in segment net revenue is included below under the section, Segment Results of Operations.

Our other revenues consist of market-based revenues at Aqua Resources, Aqua Infrastructure, and our non-regulated natural gas operations amounting to \$61,698 in 2022, \$38,435 in 2021, and \$17,776 in 2020. The increase in other revenues is primarily due to higher revenues from our non-regulated natural gas operations driven by higher gas prices.

Operating expenses - Operations and maintenance expenses increased in 2022, as compared to 2021, by \$63,069 or 11.5%, primarily due to:

- increase in employee related costs of \$17,129 driven by an increase in labor rates, other compensation, including a one-time compensation payment for non-officer level employees, and benefits to employees;
- increase in production costs for water and wastewater operations of \$6,339, primarily due to higher chemical prices and an increase in wholesale water costs;
- additional operating costs associated with acquired and pending acquisitions of water and wastewater utility systems and higher customer base of \$6,872;
- increase in customer assistance surcharge costs of \$12,778 in our Regulated Natural Gas segment, which has an equivalent offsetting amount in revenues. These revenues and offsetting expenses increased mainly due to the increase in average gas prices during 2022 compared to last year;
- increase in insurance expense of \$6,911 due to higher insurance claims, which includes the impact of a favorable insurance reserve adjustment of \$2,426 during the first quarter of 2021;
- increase in legal expenses of \$2,779;
- increase in materials and supplies of \$3,417, and outside services and maintenance expenses of \$22,175 largely due to inflationary cost pressures and increased maintenance activity; offset by,
- reduction of expenses in 2022 of \$454 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 2023;
- decrease in repairs expense of \$2,820 as 2021 included costs incurred to restore and repair the property damaged by Hurricane Ida;
- lower asset impairment charge of \$2,900 associated with the write down of the right of use assets of our Regulated Natural Gas segment's leased office space to fair value in 2022 as compared with 2021; and,
- a decrease in expenses of \$7,386 in our Regulated Gas segment due to higher capitalization as a result of greater capital spend in the current year.

Purchased gas increased by \$261,733 or 76.9% in 2022 compared to 2021. 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 \$237,619 and \$24,114, respectively, as a result of the increase in natural gas prices.

Depreciation and amortization expense increased by \$23,225 or 7.8%, in 2022 over 2021, principally due to continued capital expenditures to expand and improve our utility facilities, upgrade our information systems, 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 \$90,024 in 2022 and \$86,641 in 2021, and has increased by \$3,383 or 3.9% in 2022 as compared to 2021 principally due to increase in pumping fees of \$2,120.

Other expense, net - Interest expense was \$238,116 in 2022 and \$207,709 in 2021. Interest expense increased in 2022 primarily due to an increase in average borrowings, and an increase in average interest rates. The weighted average cost of fixed rate long-term debt was 3.78% at December 31, 2022 and 3.61% at December 31, 2021. The weighted average cost of fixed and variable rate long-term debt was 3.94% at December 31, 2022 and 3.49% at December 31, 2021.

Allowance for funds used during construction (AFUDC) was \$23,665 in 2022 and \$20,792 in 2021, 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 term-debt, and changes in the amount of AFUDC related to equity. The increase in 2022 is primarily due to an increase in the average balance of utility plant construction work in progress, to which AFUDC related to equity. The increase in 2022 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 \$17,618 in 2022 and \$16,282 in 2021.

Gain on sale of other assets totaled \$991 in 2022 and \$976 in 2021, and consists of the sales of property, plant and equipment.

Other totaled \$494 in 2022, and \$(2,848) in 2021, and largely consists of the non-service cost component of our net benefit cost for pension benefits and unrealized gains and losses on investments associated with our non-qualified pension plan. In 2022, the fair values of our investments associated with our non-qualified plan declined and we recognized a loss of \$895 in 2022 compared to a gain of \$(607) in 2021.

Income tax benefit - Our effective income tax rate was (3.2)% in 2022, and (2.3)% in 2021. The Company's provision for income taxes represents an income tax benefit due to the effects of tax deductions recognized for certain qualifying infrastructure investments. The decrease in the effective tax rate is primarily attributed to the increase in our income tax benefit associated with the tax deduction for qualifying infrastructure investments.

Net income -

	Years ended December 31,					
	 2022	2021	2020			
Operating income	\$ 661,187 \$	602,709 \$	434,686			
Net income	465,237	431,612	284,849			
Diluted net income per share	1.77	1.67	1.12			

The changes in diluted net income per share in 2022 over the previous year were due to the aforementioned changes.

Although we have experienced increased income in the recent past, continued adequate rate increases reflecting increased operating costs and new capital improvements are important to the future realization of improved profitability.

Segment Results of Operations Comparison for 2022 and 2021

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 selected operating results and customers served for our Regulated Water segment, for and as of the year ended December 31,:

		2022	2021	2020	2022 vs. 2021	2021 vs. 2020
Sendout (in millions of gallons)						
Pennsylvania		42,666	42,198	41,683	468	515
Ohio		14,604	13,971	14,020	633	(49)
Illinois		8,784	8,764	8,651	20	113
Texas		8,606	7,212	7,393	1,394	(181)
North Carolina		5,934	5,984	5,780	(50)	204
Other states		6,272	6,191	6,299	81	(108)
Subtotal		86,866	84,320	83,826	2,546	494
Elimination		(141)	(154)	(65)	13	(89)
Total sendout by state		86,725	84,166	83,761	2,559	405
Utility customers:						
Residential water		850,673	842,200	832,902	8,473	9,298
Commercial water		43,119	42,864	42,535	255	329
Industrial water		1,286	1,331	1,338	(45)	(7)
Other water		18,446	17,932	18,561	514	(629)
Wastewater		181,721	162,478	151,965	19,243	10,513
Total water and wastewater utility customers		1,095,245	1,066,805	1,047,301	28,440	19,504
Operating revenues:						
Residential water	\$	607,473 \$	561,996 \$	567,485	\$ 45,477	\$ (5,489)
Commercial water	+	168,460	151,071	143,479	17,389	7,592
Industrial water		32,581	30,230	29,764	2,351	466
Other water		94,359	89,472	67,712	4,887	21,760
Wastewater		165,312	132,316	121,117	32,996	11,199
Customer rate credits		-	-	(4,080)	-	4,080
Other utility		14,787	15,118	13,063	(331)	2,055
Total operating revenues	\$	1,082,972 \$	980,203 \$	938,540		
Operating expenses:			,	,	,	,
Operations and maintenance expense	\$	370,850 \$	332,598 \$	309,608	\$ 38,252	\$ 22,990
Depreciation and amortization	\$	201,392 \$	182,074 \$	171,152	\$ 19,318	\$ 10,922
Taxes other than income taxes	\$	64,472 \$	63,264 \$	60,505	\$ 1,208	\$ 2,759
Other expense, net	\$	84,396 \$	81,931 \$	91,001	\$ 2,465	\$ (9,070)
Provision for income tax	\$	47,510 \$	26,633 \$	22,481		
Segment net income	\$	314,352 \$	293,703 \$	283,793	\$ 20,649	\$ 9,910

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 \$63,367 in 2022, \$27,421 in 2021, and \$32,660 in 2020. The number of customers increased at an annual compound rate of 2.2% 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 \$16,145 in 2022, \$6,750 in 2021, and \$10,951 in 2020.

Our Regulated Water segment also includes operating revenues of \$11,477 in 2022 and \$13,358 in 2021, and \$8,781 in 2020, 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, 2022 was \$370,850 compared to \$332,598 in the prior period. The increase of 38,252 or 11.5% was primarily due to the following:

- increase in employee related costs of \$7,279 driven by an increase in labor rates, other compensation and benefits to employees;
- increase in production costs for water and wastewater operations of \$6,339;
- additional operating costs resulting from acquired water and wastewater utility systems and higher customer base of \$6,872;
- increase in legal expenses of \$3,059;
- increase in outside services and maintenance expenses of \$17,196 in our Regulated Water segment as compared with the prior period; offset by,
- reduction of expenses in 2022 of \$454 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 2023; and,
- offset by a decrease in repairs expense of \$2,820 as 2021 included costs incurred to restore and repair the property damaged by Hurricane Ida.

Depreciation and amortization increased by \$19,318 or 10.6% primarily due to continued capital spend.

Other expense, net – Interest expense, net, increased by \$3,582 or 3.3% primarily due to the increase in average borrowings and higher interest rate on our revolving line of credit in 2022.

AFUDC increased by \$1,692 or 8.8% due to the increase in the average balance of utility plant construction work in progress, to which AFUDC is applied.

Provision for income tax – The effective income tax rate for our Regulated Water segment was 13.1% in 2022, compared to 8.3% in 2021. The change in the effective tax rate is primarily due to a decrease in the amortization of certain regulatory liabilities associated with deferred taxes.

Regulated Natural Gas Segment

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

		2022	2021	2020	2022 vs. 2021	2021 vs. 2020
Gas utility customers:						
Residential gas		695,198	692,174	690,642	3,024	1,532
Commercial gas		59,684	59,595	59,424	89	171
Industrial gas		1,459	1,475	1,436	(16)	39
Total gas utility customers		756,341	753,244	751,502	3,097	1,742
Delivered volumes (thousand cubic feet)						
Residential gas		61,093,372	56,542,038	33,675,963	4,551,334	22,866,075
Commercial gas		37,240,382	33,403,899	20,082,555	3,836,483	13,321,344
Industrial gas		49,017,036	49,726,237	37,936,661	(709,201)	11,789,576
Total delivered volumes		147,350,790	139,672,174	91,695,179	7,678,616	47,976,995
Heating Degree Days ^(b)		5,648	5,139	3,013	509	2,126
Average Heating Degree Days (c)		5,438	5,466	2,973	(28)	2,493
		2022	2021	2020	2022 2021	
Operating revenues:		2022	2021	2020	2022 vs. 2021	2021 vs. 2020
Residential gas	\$	720,490 \$	530,338 \$	314,274	\$ 190,152	\$ 216,064
Commercial gas	Φ	149,653	99,596	50,239	50,057	49,357
Industrial gas		5,636	3,427	6,923	2,209	(3,496)
Gas transportation		205,825	198,195	133,685	7,630	64,510
Customer rate credits		205,825	(5,000)	(18,924)	5,000	13,924
Other utility		61,758	33,346	20,367	28,412	12,979
Total operating revenues	\$	1,143,362 \$	859,902 \$			
Operating expenses:	Ψ	1,115,502 Φ	059,902 φ	500,501	φ 205,100 1	\$ 555,550
Operations and maintenance expense	\$	239,506 \$	226,194 \$	198,383	\$ 13.312	\$ 27,811
Purchased gas	\$	551,009 \$	313,390 \$	154,103	· · · · · ·	
Depreciation and amortization	\$	118,955 \$	113,238 \$	84,201		
Taxes other than income taxes	\$	22,642 \$	20,801 \$	13,307		. ,
Other expense, net	\$	87,916 \$	78,099 \$	25,252		
Income tax benefit	\$	(61,942) \$	(40,013) \$	(25,133)		
Segment net income	\$	185,276 \$	148,193 \$	56,451		

^(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 \$283,460 or 33.0% due to:

- impact of higher gas cost of \$237,619 in 2022 as compared to 2021;
- higher gas usage of \$27,237;
- increase of \$13,682 due to higher rates and other surcharges; and,
- increase in customer assistance surcharge of \$12,778, which has an equivalent offsetting amount in operations and maintenance expense. These revenues and offsetting expenses increased mainly due to the increase in average gas prices in 2022 compared to the last year; and,
- offset by the increase in tax repair surcredits to customers of \$18,304.

Operating expenses – Operations and maintenance expense for the year ended December 31, 2022 increased by \$13,312 or 5.9% primarily due to the following:

- increases in employee related costs of \$5,413 driven by an increase in labor rates, other compensation and benefits to employees;
- increase in customer assistance surcharge costs of \$12,778, which has an equivalent offsetting amount in revenues;
- increase in outside services and maintenance expenses of \$4,841; offset by,
- lower asset impairment charge of \$2,900 associated with the write down of the right of use assets of our Regulated Natural Gas segment's leased office space to fair value in 2022 as compared with 2021; and,
- a decrease in expenses of \$7,386 in our Regulated Gas segment due to higher capitalization as a result of greater capital spend in the current year.

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. Purchased gas increased by \$237,619 or 75.8% due to an increase of 78.2% in the average gas commodity prices in 2022 as compared to the prior year.

Depreciation and amortization increased by \$5,717 or 5.0% primarily due to continued capital spend.

Taxes other than income taxes increased by \$1,841 or 8.9% mainly due to to an increase in sales and use taxes and regulatory fees in 2022.

Other expense, net – Interest expense, net, increased by \$11,558 or 15.3% for 2022 compared to 2021 due to additional borrowings and a higher interest rate on our revolving line of credit in 2022.

AFUDC increased by \$1,181 or 77.0% due to the increase in the average balance of utility plant construction work in progress, to which AFUDC is applied.

Income tax benefit – The effective income tax rate was a benefit of 50.2% in 2022, compared to a benefit of 37.0% in 2021. The change in the effective tax rate is primarily attributed to an increase in the income tax benefit associated with the tax deduction for qualifying infrastructure investment and an increase in the amortization of the tax repair catch-up adjustment in our Regulated Natural Gas segment.

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 were as follows for the years ended December 31:

	Net	Operating Cash				
		Flows	Dividends	Capita	l Expenditures	Acquisitions
2020	\$	508,024	\$ 232	2,571 \$	835,642	\$ 3,501,835
2021		644,679	258	3,650	1,020,519	36,326
2022		600,306	288	3,632	1,062,763	116,891
	\$	1,753,009	\$ 779	9,853 \$	2,918,924	\$ 3,655,052

Net cash flows from operating activities decreased from 2021 to 2022 largely due to the increase in accounts receivable, unbilled revenues and inventory- gas stored. Average cost of gas stored in inventories and associated recoveries of gas costs from customers was higher in 2022 than in 2021.

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 \$36,563 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 \$1,965,289 and have refunded \$21,068 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 2023 capital program, excluding the costs of new mains financed by advances and contributions in aid of construction is estimated to be approximately \$1,123,000 in infrastructure improvements for the communities we serve. The 2023 capital program is expected to include approximately \$747,000 for infrastructure rehabilitation surcharge qualified projects. Our planned 2023 capital program in Pennsylvania for our water and natural gas utilities is estimated to be approximately \$761,000, a portion of which is expected to be eligible as a deduction for qualifying utility asset improvements for Federal income tax purposes. Our overall 2023 capital program along with \$199,356 of debt repayments and \$365,432 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 and equity.

Future utility construction in the period 2024 through 2025, 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 \$2,115,000. We anticipate that approximately one-half of these expenditures will require external financing. We expect to refinance \$221,345 of long-term debt during this period as it becomes due with funds from new issues of long-term debt, issuances of equity, 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. 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, 2022, 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 approximately \$380,000. 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 in 2023 or early 2024, which is subject to the timing of the various regulatory approval processes. These acquisitions are expected to add approximately 218,600 equivalent retail customers in four of the states in which the Company operates.

In November 2022, the Company acquired the water system of Oak Brook, DuPage County, Illinois, which serves 2,037 customers, for a cash purchase price of \$12,500. In August 2022, the Company acquired the municipal wastewater assets of East Whiteland Township, Chester County, Pennsylvania, which serves 4,018 customers, for a cash purchase price of \$54,374. In March 2022, the Company acquired the wastewater system of Lower Makefield Township, which serves 11,323 customer connections in Lower Makefield, Falls, and Middletown townships, and Yardley Borough, Bucks County, Pennsylvania, for a cash purchase price of \$53,000.

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 four of the states in which we operate, adding 10,585 customers.

Excluding the Peoples Gas Acquisition, during the past three years, we have expended cash of \$216,496 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.

Assets Held for Sale and Disposition

We routinely review and evaluate areas of our business and operating divisions and, over time, may sell utility systems or portions of systems. In December 2022, the Company signed an agreement to sell its regulated natural gas utility assets in West Virginia which serve less than two percent of the Company's regulated natural gas customers. This sale is conditioned on regulatory approval and is expected to close in mid-2023. The completion of this transaction will conclude our regulated utility operations in West Virginia.

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 – *Asset Held for Sale and Disposition* 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 \$5,542,246 of long-term debt, and obtained other short-term borrowings during the past three years. At December 31, 2022, we have a \$1,000,000 unsecured long-term revolving credit facility that expires in December 2027, of which \$19,041 was designated for letter of credit usage, \$490,959 was available for borrowing, and \$490,000 of borrowings were outstanding at December 31, 2022. This credit facility was established in December 2022, replacing a similar facility that was expiring in December 2023, and was used to repay all indebtedness and fees under our prior unsecured revolving credit facility, and for other general corporate purposes. In addition, we have short-term lines of credit of \$435,500 of which \$207,000 was available as of December 31, 2022. 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 \$300,000 364 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.

In January 2023 and October 2022, Aqua Pennsylvania issued \$75,000 and \$125,000 of first mortgage bonds, due in 2043 and 2052, and with interest rates of 5.60% and 4.50%, respectively. The proceeds from these bonds were used to repay existing indebtedness and for general corporate purposes.

On October 14, 2022, the Company entered into at-the market sales agreements ("ATM") with third-party sales agents, under which the Company may offer and sell shares of its common stock, from time to time, at its option, having an aggregate gross offering price of up to \$500,000 pursuant to the Company's effective shelf registration statement on Form S-3 (File No. 333-255235). The Company intends to use the net proceeds from the sales of shares through the ATM for working capital, capital expenditures, water and wastewater utility acquisitions and repaying outstanding indebtedness. As of December 31, 2022, the Company has issued 1,321,994 shares for net proceeds of \$63,040 under the ATM. In January 2023, the Company has issued 399,128 shares for net proceeds of \$19,294 under the ATM.

On June 30, 2022, the Peoples Natural Gas Companies amended its 364-day revolving credit agreement primarily to increase the amount of the facility from \$100,000 to \$300,000 and to update the termination date of the facility to June 29, 2023. Aqua Pennsylvania also amended its \$100,000 364-day revolving credit agreement primarily to update the termination date to June 29, 2023 to coincide with the term of the Peoples Natural Gas Companies' facility.

On May 20, 2022, the Company issued \$500,000 of long-term debt (the "Senior Notes"), less expenses of \$5,815, due in 2052 with an interest rate of 5.30%. The Company used the net proceeds from the issuance of Senior Notes to (1) to repay \$49,700 of borrowings under Aqua Pennsylvania's 364-day revolving credit facility and \$410,000 of borrowings under the Company's existing five year unsecured revolving credit facility, and (2) for general corporate purposes.

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.

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 2022, 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. The balance remaining available for use under the acquisition shelf registration as of December 31, 2022 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 2022 dividend payment, holders of 5.1% 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 1,132,080 original issue shares of common stock for net proceeds of \$49,940 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 2022, 2021 and 2020, we sold 368,278, 374,824 and 388,978 original issues shares of common stock for net proceeds of \$16,619, \$16,799 and \$16,522, respectively, through the dividend reinvestment portion of the plan.

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.

Contractual Obligations

The following table summarizes our contractual cash obligations as of December 31, 2022:

	Payments Due By Period						
		More than 5					
		Total	year	1-3 years	3-5 years	years	
Long-term debt	\$	6,617,395 \$	199,356	221,345	751,512	5,445,182	
Interest on fixed-rate, long-term debt (1)		250,143	8,149	9,953	39,570	192,471	
Operating leases (2)		60,348	8,923	17,233	13,429	20,763	
Unconditional purchase obligations (3)		18,216	4,716	9,142	3,238	1,120	
Gas purchase obligations (4)		2,813,168	234,950	485,784	485,507	1,606,927	
Other purchase obligations (5)		84,632	84,632	-		-	
Pension plan obligations (6)		20,343	20,343	-		-	
Other obligations (7)		11,825	3,719	2,737	3,293	2,076	
Total	\$	9,876,070 \$	564,788	\$ 746,194	\$1,296,549	\$ 7,268,539	

- (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 2031 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 \$18,217. 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, 2022 and 2021:

December 31,	2022	2021
Long-term debt (1)	55.2%	53.4%
Essential Utilities stockholders' equity	44.8%	46.6%
	100.0%	100.0%

(1) Includes current portion, as well as our borrowings under a variable rate revolving credit agreement of \$490,000 at December 31, 2022, and \$300,000 at December 31, 2021.

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.

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES Management's Discussion and Analysis of Financial Condition and Results of Operations (continued) (In thousands of dollars, except per share amounts)

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 is 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. 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, 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 further information.

In 2022, we changed our annual goodwill impairment test date from July 31 to October 1, which is a change in accounting principle that management believes is preferable as the new test date better aligns with our long-term planning and forecasting process. The change did not delay, accelerate or avoid an impairment charge nor did it change our requirement to assess goodwill on an interim date between scheduled annual testing dates if triggering events are present. To ensure that no lapse in an assessment occurred since the prior period, we performed an impairment test as of July 31, 2022, during the third quarter of 2022 for all reporting units and noted no impairment.

During the fourth quarter of 2022, as part of the October 1, 2022 annual goodwill assessment, we elected to perform a quantitative goodwill impairment assessment on the goodwill attributable to our Regulated Natural Gas reporting unit and a qualitative assessment for our Regulated Water and Other reporting units. Based on our analysis, we determined that none of the goodwill of our reporting units was impaired. The headroom, which we defined as the percentage difference between the excess of fair value over carrying value, of our Regulated Natural Gas reporting unit was 15% as of the date of the most recent estimated fair value determination. We generally assumed operating margins in future years would

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES Management's Discussion and Analysis of Financial Condition and Results of Operations (continued) (In thousands of dollars, except per share amounts)

increase as we continue to integrate and implement our rate base growth strategy. However, if overall market conditions further deteriorate, or market interest rates increase, future non-cash impairment charges may result which could be material. If we were to assume changes in certain of our key assumptions used to determine the fair value of our Regulated Gas reporting unit, the following would be the effect on headroom:

Sensitivity Analysis ⁽¹⁾	Percentage points (ppts) decrease in Regulated Gas
	Reporting Unit Headroom
Increase in discount rate by 100 basis points	6 ppts
Decrease in Market Multiples by 1x	7 ppts
Reduction in terminal value EBITDA ⁽²⁾ by 10%	8 ppts

⁽¹⁾ Each assumption used in the sensitivity analysis is independent of the other assumptions ⁽²⁾ Defined as earnings before interest, taxes, depreciation and amortization

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 postretirement 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 5.51% for our pension plan, and 5.45% for our other post-retirement benefit plans as of December 31, 2022, which represent a 260 and 249 basis-point increase as compared to the discount rates selected at December 31, 2021, respectively. Our post-retirement benefits expense under these plans is determined using the discount rate as of the beginning of the year, which was 2.91% for our pension plan and 2.96% for our otherpostretirement benefit plan for 2022. As of September 30, 2022, settlement accounting was triggered by the amount of lump-sum payments by our qualified pension plan to retirees and other separated employees exceeding the threshold of service and interest cost for the period. As a result, we remeasured our qualified pension plan assets and liabilities using a discount rate of 5.58%, and the remeasurement did not have a material impact to our consolidated financial statements.

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 2022, we used a 5.4% expected return on plan assets assumption, and are currently reviewing this assumption for 2023 and expect it may remain unchanged in 2023.

ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES Management's Discussion and Analysis of Financial Condition and Results of Operations (continued) (In thousands of dollars, except per share amounts)

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 2023 our pension contribution is expected to be \$20,343. 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 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 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, 2022, the Company's internal control over financial reporting was effective.

The effectiveness of our internal control over financial reporting as of December 31, 2022 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which is included herein.

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Christopher H. Franklin Chairman, President and Chief Executive Officer

March 1, 2023

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Daniel J. Schuller Executive Vice President and Chief Financial Officer

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, 2022 and 2021, 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, 2022, including the related notes and schedule of condensed parent company financial statements as of December 31, 2022 and 2021 and for each of the three years in the period ended December 31, 2022 and 2021 and for each of the three years in the period ended December 31, 2022 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, 2022, 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, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022 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, 2022, 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 audits also included obtaining an understanding of internal control over financial reporting included obtaining 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, 2022, 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 controls 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.

Fricewaterhouse Coopers LLP

Philadelphia, Pennsylvania March 1, 2023

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)

		,			
		2022	2021		
Assets					
Property, plant and equipment, at cost	\$	13,737,387 \$	12,610,376		
Less: accumulated depreciation		2,606,441	2,358,510		
Net property, plant and equipment		11,130,946	10,251,866		
Current assets:					
Cash and cash equivalents		11,398	10,567		
Accounts receivable, net		206,324	141,025		
Unbilled revenues		170,504	119,896		
Inventory – materials and supplies		46,592	33,756		
Inventory – gas stored		153,143	75,804		
Current assets held for sale		11,167	-		
Prepayments and other current assets		39,759	36,597		
Regulatory assets		19,272	20,150		
Total current assets		658,159	437,795		
Regulatory assets		1,342,753	1,429,840		
Deferred charges and other assets, net		166,653	141,955		
Funds restricted for construction activity		1,342	1,313		
Goodwill		2,340,792	2,340,815		
Non-current assets held for sale		32,124	-		
Operating lease right-of-use assets		41,734	48,930		
Intangible assets		4,604	5,764		
Total assets	\$	15,719,107 \$	14,658,278		

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

	Decemb	er 31,
	2022	2021
Liabilities and Equity		
Essential Utilities stockholders' equity: Common stock at \$0.50 par value, authorized 600,000,000 shares, issued 266,973,321 and 256,102,388 as of December		
31, 2022 and December 31, 2021	\$ 133,486	. ,
Capital in excess of par value	3,793,262	3,705,814
Retained earnings	1,534,331	1,434,201
Treasury stock, at cost, 3,236,237 and 3,234,765 shares as of December 31, 2022 and December 31, 2021	(83,693)	(83,615)
Total stockholders' equity	5,377,386	5,184,450
Long-term debt, excluding current portion	6,418,039	5,815,211
Less: debt issuance costs	46,982	35,707
Long-term debt, excluding current portion, net of debt issuance costs	6,371,057	5,779,504
Commitments and contingencies (See Note 9)		
Current liabilities:		
Current portion of long-term debt	199,356	132,146
Loans payable	228,500	65,000
Accounts payable	238,843	192,932
Book overdraft	28,694	81,722
Accrued interest	47,063	40,815
Accrued taxes	34,393	37,924
Liabilities related to assets held for sale	3,263	-
Regulatory liabilities	35,276	384
Dividends payable	75,808	-
Other accrued liabilities	130,673	124,140
Total current liabilities	1,021,869	675,063
Deferred credits and other liabilities:		
Deferred income taxes and investment tax credits	1,345,766	1,406,537
Customers' advances for construction	114,732	103,619
Regulatory liabilities	778,754	769,617
Asset retirement obligations	843	1,256
Operating lease liabilities	37,666	48,230
Non-current liabilities related to assets held for sale	974	-
Pension and other postretirement benefit liabilities	31,244	50,226
Other	28,562	43,666
Total deferred credits and other liabilities	2,338,541	2,423,151
Contributions in aid of construction	610,254	596,110
Total liabilities and equity	<u>\$ 15,719,107 </u>	\$14,658,278

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

	Years ended December 31,					
		2022		2021		2020
Operating revenues	\$	2,288,032	\$	1,878,144	\$	1,462,698
Operating expenses:						
Operations and maintenance		613,649		550,580		528,611
Purchased gas		601,995		340,262		165,745
Depreciation		315,811		292,191		251,443
Amortization		5,366		5,761		5,616
Taxes other than income taxes		90,024		86,641		76,597
Total operating expenses		1,626,845		1,275,435		1,028,012
Operating income		661,187		602,709		434,686
Other expense (income):						
Interest expense		238,116		207,709		188,435
Interest income		(3,675)		(2,384)		(5,363)
Allowance for funds used during construction		(23,665)		(20,792)		(12,687)
Gain on sale of other assets		(991)		(976)		(661)
Equity loss in joint venture		-		-		3,374
Other		494		(2,848)		(3,383)
Income before income taxes		450,908		422,000		264,971
Income tax benefit		(14,329)		(9,612)		(19,878)
Net income	<u>\$</u>	465,237	\$	431,612	\$	284,849
Comprehensive income	\$	465,237	\$	431,612	\$	284,849
Net income per common share:						
Basic	\$	1.77	\$	1.68	\$	1.14
Diluted	\$	1.77		1.67	\$	1.12
Average common shares outstanding during the period:						
Basic		262,246		257,487		249,768
Diluted		262,868		258,180		254,629

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

		December 31	,
		2022	2021
Essential Utilities stockholders' equity:			
Common stock, \$0.50 par value		\$ 133,486 \$	128,050
Capital in excess of par value		3,793,262	3,705,814
Retained earnings		1,534,331	1,434,201
Treasury stock, at cost		 (83,693)	(83,615)
Total stockholders' equity		 5,377,386	5,184,450
Long-term debt of subsidiaries (substantially collateralized by	utility plant):		
Interest Rate Range	Maturity Date Range		
0.00% to 0.99%	2023 to 2033	1,875	2,341
1.00% to 1.99%	2023 to 2039	8,369	9,341
2.00% to 2.99%	2022 to 2058	209,755	312,751
3.00% to 3.99%	2022 to 2056	1,351,432	1,359,284
4.00% to 4.99%	2023 to 2059	1,403,313	1,286,024
5.00% to 5.99%	2023 to 2052	14,357	16,119
6.00% to 6.99%	2022 to 2036	31,000	32,475
7.00% to 7.99%	2022 to 2027	28,378	28,980
8.00% to 8.99%	2025	2,116	2,772
9.00% to 9.99%	2026	11,800	11.800
		 3,062,395	3,061,887
Notes payable to bank under revolving credit agreement, varia	ble rate, due 2027	490,000	300,000
Unsecured notes payable:			20 470
Amortizing notes at 3.00% due 2022		-	20,470
Notes at 2.40% due 2031		400,000	400,000
Notes at 2.704% due 2030		500,000	500,000
Notes ranging from 3.01% to 3.57%, due 2029 through 2050		1,125,000	1,125,000
Notes at 4.28%, due 2049		500,000	500,000
Notes at 5.30%, due 2052		500,000	-
Notes at 5.95%, due 2023 through 2034		 40,000	40,000
Total long-term debt		6,617,395	5,947,357
Current portion of long-term debt		 199,356	84,353
Long-term debt, excluding current portion		6,418,039	5,863,004
Less: debt issuance costs		 46,982	35,707
Long-term debt, excluding current portion, net of debt issuance	e costs	 6,371,057	5,827,297
Total capitalization		\$ 11,748,443 \$	11,011,747

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

		Common		Capital in excess of par		Retained		Treasury		T 1
D 1 01 0010	<u>_</u>	stock		value		earnings	ħ	stock	¢	Total
Balance at December 31, 2019	\$	111,935	\$	2,636,555	\$	1,210,072	5	(77,702)	\$	3,880,860
Net income		-		-		284,849		-		284,849
Dividends declared and paid (\$0.97 per share)		-		-		(232,571)		-		(232,571)
Issuance of common stock from private placement (21,661,095)	10.001		-10 1-0						
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 and paid (\$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		0.		(0.)						
(374,824 shares)		187		16,612		-		_		16,799
Issuance of common stock from forward equity sale agreement		107		10,012						10,777
(6,700,000 shares)		3,350		296,389		_		_		299,739
Repurchase of stock (76,732 shares)		5,550		270,507				(3,291)		(3,291)
Equity compensation plan (206,163 shares)		103		(103)		-		(3,271)		(3,271)
Exercise of stock options (122,297 shares)		61		4,111		-		-		4.172
		01		4,111 9,998		-		-		4,172 9,375
Stock-based compensation		-				(623)		1 002		· · ·
Other	\$	-	¢	(186)	¢	-		1,003	¢	<u> </u>
Balance at December 31, 2021	\$	128,050	\$	3,705,814	\$	1,434,201 \$		(83,615)	\$	5,184,450
Net income		-				465,237		-		465,237
Dividends declared and paid (\$1.1104 per share)		-				(288,632)		-		(288,632)
Dividends of March 1, 2023 declared (\$0.287 per share)		-				(75,808)		-		(75,808)
Issuance of common stock from stock purchase contracts										
(9,029,461 shares)		4,515		(4,515)		-		-		-
Issuance of common stock under dividend reinvestment plan										
(368,278 shares)		184		16,435		-		-		16,619
Issuance of common stock from at-the-market sale agreements										
(1,321,994 shares)		661		62,379		-		-		63,040
Repurchase of stock (25,037 shares)		-		-		-		(1,192)		(1,192)
Equity compensation plan (81,516 shares)		41		(41)		-		-		-
Exercise of stock options (69,684 shares)		35		2,440		-		-		2,475
Stock-based compensation		-		12,094		(667)		-		11,427
Other		-		(1,344)		. ,		1,114		(230)
Balance at December 31, 2022	\$	133,486	\$	3,793,262	\$	1,534,331 \$	5	(83,693)	\$	5,377,386
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ESSENTIAL UTILITIES, INC. AND SUBSIDIARIES CONSOLIDATED STATEMENTS OF CASH FLOWS (In thousands of dollars, except per share amounts)

	Years ended December 31,			
		2022	2021	2020
Cash flows from operating activities:				
Net income	\$	465,237 \$	431,612 \$	284,849
Adjustments to reconcile net income to net cash flows from operating activities:				
Depreciation and amortization		321,177	297,952	257,059
Deferred income taxes		(23,045)	(8,514)	(17,782)
Provision for doubtful accounts		27,631	27,336	32,325
Stock-based compensation		12,206	10,078	8,160
Gain on sale of utility system and other assets		(991)	(1,589)	(642)
Net change in receivables, deferred purchased gas costs, inventory and prepayments		(223,335)	(109,605)	(35,348)
Net change in payables, accrued interest, accrued taxes and other accrued liabilities		53,761	5,190	(1,819)
Pension and other postretirement benefits contributions		(22,027)	(15,135)	(20,282)
Other		(10,308)	7,354	1,504
Net cash flows from operating activities		600,306	644,679	508,024
Cash flows from investing activities:)	-)	/ -
Property, plant and equipment additions, including the debt component of allowance for				
funds used during construction of \$6,047, \$4,510 and \$4,434		(1,062,763)	(1,020,519)	(835,642)
Acquisitions of utility systems and other, net		(116,891)	(36,326)	(3,501,835)
Net proceeds from the sale of utility systems and other assets		1,081	1,819	2,115
Other		271	(1,032)	1,696
Net cash flows used in investing activities		(1,178,302)	(1,056,058)	(4,333,666)
Cash flows from financing activities:		(1,170,502)	(1,050,050)	(1,555,000)
Customers' advances and contributions in aid of construction		11,714	15,264	9,585
Repayments of customers' advances		(5,006)	(7,725)	(8,337)
Net proceeds (repayments) of short-term debt		163,500	(13,350)	(129,407)
Proceeds from long-term debt		1,646,742	1,095,171	3,366,838
Repayments of long-term debt		(977,175)	(769,546)	(1,820,571)
Change in cash overdraft position		(53,028)	37,719	33.059
Proceeds from issuance of common stock under dividend reinvestment plan		16,619	16,799	16,522
Proceeds from issuance of common stock from private placement		10,019	10,799	729,301
Proceeds from issuance of common stock from forward equity sale agreement		-	299,739	729,501
		63,040	299,759	-
Proceeds from issuance of common stock from at-the-market sale agreement Proceeds from exercised stock options		2,475	-	1 590
			4,172	1,589
Repurchase of common stock		(1,192)	(3,291)	(4,365)
Dividends paid on common stock		(288,632)	(258,650)	(232,571)
Other		(230)	817	(96)
Net cash flows from financing activities		578,827	417,119	1,961,547
Net increase (decrease) in cash and cash equivalents		831	5,740	(1,864,095)
Cash and cash equivalents at beginning of year		10,567	4,827	1,868,922
Cash and cash equivalents at end of year	\$	11,398 \$	10,567 \$	4,827
Cash paid during the year for:				
Interest, net of amounts capitalized	\$	225,820 \$	201,792 \$	169,048
Income taxes		11,269	5,692	4,853
Non-cash investing activities:				
Property, plant and equipment additions purchased at the period end, but not yet paid	\$	102,129 \$	95,945 \$	98,569
Non-cash utility property contributions		35,698	36,882	36,181

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 56% of our Regulated Water segment's operating revenues and approximately 73% of our Regulated Water segment's income for 2022. As of December 31, 2022, 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, 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. In December 2022, the Company entered into a definitive agreement to sell its regulated natural gas utility assets in West Virginia, which serve approximately 13,000 customers. This sale is conditioned on regulatory approval and is expected to close in mid-2023. The completion of this transaction will conclude our regulated utility operations in West Virginia. 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. Agua Resources offers, through a thirdparty, 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.

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 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 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.

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, 2022 and 2021, utility plant includes a net credit acquisition adjustment of \$6,076 and \$9,055, respectively, which is generally being amortized from 10 to 53 years. Amortization of the acquisition adjustments totaled \$2,788 in 2022, \$2,842 in 2021, and \$2,895 in 2020.

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, 2022, \$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, 2022, \$41,400 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 years ended December 31, 2022 and 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 2022 was \$17,618, 2021 was \$16,282, and 2020 was \$8,253. 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 for the years ended December 31,:

2022	Wat	Water Revenues		Wastewater Revenues		Natural Gas Revenues	Othe	r Revenues
Revenues from contracts with customers:								
Residential	\$	607,473	\$	122,612	\$	720,490	\$	-
Commercial		168,460		30,340		149,653		-
Fire protection		38,970		-		-		-
Industrial		32,581		1,755		5,636		-
Gas transportation		-		-		205,825		-
Other water		55,389		-		-		-
Other wastewater		-		10,676		-		-
Other utility		-		-		61,393		11,478
Revenues from contracts with customers		902,873		165,383		1,142,997		11,478
Alternative revenue program		3,309		(71)		365		-
Other and eliminations		-		-		-		61,698
Consolidated	\$	906,182	\$	165,312	\$	1,143,362	\$	73,176

2021	Wat	Water Revenues		Wastewater Revenues		Natural Gas Revenues	Other Revenues
Revenues from contracts with customers:		er ite venues		Kevenues		Revenues	Kevenues
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

	Wastewater						Other
2020	Wat	er Revenues		Revenues	N	Natural Gas	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

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 business, the performance obligations are allowing the use of our logo to a third-party water and sewer service line protection business, the performance obligations 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 \$28,694 and \$81,722 at December 31, 2022 and 2021, 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 in the joint venture was reported in the consolidated statements of operations and comprehensive income as equity loss in joint venture. During 2020, we received distributions of \$2,137.

Assets Held for Sale – When the Company makes a decision to sell an asset or to stop some part of its business, the Company assesses if such assets should be classified as an asset held for sale. Assets held for sale are measured at the lower of their carrying amount or fair value less cost to sell. For long-lived assets or disposal groups that are classified as held for sale but do not meet the criteria for discontinued operations, the assets and liabilities are presented separately on the consolidated balance sheet of the initial period in which it is classified as held for sale. The major classes of assets and liabilities classified as held for sale are disclosed in the notes to the consolidated financial statements. See "*Note 3* – *Assets Held for Sale and Disposition*".

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 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 reporting unit's 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.

Determining the fair value of our reporting units involves the use of significant estimates and assumptions and considerable management judgment. We base our fair value estimates on assumptions we believe to be reasonable at the time, but such assumptions are subject to inherent uncertainty. We estimated the fair value of reporting units by weighting results from the market approach and the income 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. Changes in market conditions, changes in the regulatory environment, pending or new legislation that could impact the ability to recover costs through regulated rates or other factors outside of our control, could cause us to change key assumptions and our judgment about a reporting unit's prospects. Similarly, in a specific period, a reporting unit could significantly underperform relative to its historical or projected future operating results. Either situation could result in a meaningfully different estimate of the fair value of our reporting units, and a consequent future impairment charge.

In 2022, we changed the date of our annual goodwill impairment test date from July 31 to October 1, which is a change in accounting principle, that management believes is preferable as the new test date better aligns with our long-term planning and forecasting process. The change did not delay, accelerate or avoid an impairment charge nor did it change our requirement to assess goodwill on an interim date between scheduled annual testing dates if triggering events are present.

To ensure that no lapse in an assessment occurred since the prior period, during the third quarter of 2022, we performed qualitative tests as of July 31, 2022, for all reporting units and determined that it was more likely than not that the fair value of each of the reporting unit's fair values exceeded their carrying values at the time of the change in impairment test date.

During the fourth quarter of 2022, as part of the annual goodwill assessment as of October 1, 2022, we elected to perform a quantitative goodwill impairment assessment on the goodwill attributable to our Regulated Natural Gas reporting unit and a qualitative assessment for our Regulated Water and Other reporting units. Based on our analysis, we determined that none of the goodwill of our reporting units was impaired.

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

	Regulated	Regulated Natural		
	 Water	Gas	Other 0	Consolidated
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
Goodwill acquired	-	-	-	-
Reclassifications to utility plant acquisition adjustment	(23)	-	-	(23)
Balance at December 31, 2022	\$ 58,504 \$	\$ 2,277,447 \$	4,841 \$	2,340,792

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 postretirement benefit plans assets, and the non-current portion of Peoples' financing notes receivable, which amounted to \$24,962, \$43,827 and \$63,204 as of December 31, 2022; and \$28,576, \$25,978, and \$65,744 as of December 31, 2021, 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 20year 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 2021, when construction was completed and the plants became on-line and began generation activity, the accumulated balance 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 \$2,517 and \$2,423 as of December 31, 2022 and 2021, respectively. 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, 2022 and 2021, interest income on financing note receivable amounted to \$2,639 and \$1,971, respectively.

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, 2022 and 2021.

Recent Accounting Pronouncements –

Pronouncements to be adopted upon the effective date:

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 adopted this guidance effective January 1, 2023, and will apply it prospectively to business combinations occurring on or after that date.

Pronouncements adopted during the fiscal year:

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. As permitted, we adopted this updated guidance on January 1, 2022, 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		Amounts
	Previously	Measurement	Recognized as of
	Recognized as of	Period	Acquisition Date
	 Acquisition Date (a)	Adjustments	(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, primarily representing expenses associated with investment banking fees, including bridge financing, employee related costs, obtaining regulatory approvals, legal expenses, and integration planning. There were no further transaction-related expenses for the Peoples Gas Acquisition after the first quarter of 2020.

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. 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.

Water and Wastewater Utility Acquisitions – Pending Completion

In January 2023, the Company entered into a purchase agreement to acquire the water utility assets of La Rue, an Ohio municipality, which serves approximately 300 customers for \$2,250.

In December 2022, the Company entered into a purchase agreement to acquire the wastewater utility assets of Union Rome Sewer, which serves approximately 5,300 customers in the southeast corner of Lawrence County, Ohio, for \$25,500.

In August 2022, the Company entered into a purchase agreement to acquire a portion of the water and wastewater utility assets of the Village of Frankfort, an Illinois municipality, which serves approximately 1,400 customers for \$1,400.

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 in Texas 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 approximately 2,930 customers for \$12,000. In January 2021, the Company entered into purchase agreement to acquire the wastewater utility system assets of Willistown Township, Pennsylvania, which consist of approximately 2,300 customers for \$17,500.

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. These pending acquisitions are expected to close in 2023 and in early 2024. Closing for our utility acquisitions are subject to the timing of the regulatory approval process.

DELCORA Purchase Agreement

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) the establishment of the customer trust was valid. Delaware County appealed this decision to Commonwealth Court of Pennsylvania. On March 3, 2022, the Commonwealth Court issued a decision finding that Delaware County can dissolve the Authority if it so chooses, but the purchase agreement must be upheld regardless of who is operating the system. The case was remanded back to the trial court for the entry of an order consistent with the Commonwealth Court's opinion. This order was issued on September 8, 2022 ("Remand Order). Since then, the County has challenged the Remand Order through two separate actions:

- First, Delaware County filed an Application for Determination of Finality ("Application") on October 13, 2022. The Company filed its opposition to the Application on October 27, 2022, and on November 2, 2022, the Delaware County Court of Common Pleas denied Delaware County's Application for Determination of Finality indicating that its previous order already constituted a final order that addressed the claims of all parties. On December 2, 2022, following the denial of its Application, Delaware County filed a Petition for Permission to Appeal ("Petition") the Remand Order in the Commonwealth Court of Pennsylvania. On December 16, 2022, the Company filed an Answer in opposition to the Petition, and the matter is currently pending before Commonwealth Court.
- Second, on November 2, 2022, Delaware County filed a Notice of Appeal ("Notice of Appeal") from the Remand Order. On December 2, 2022, the Delaware County of Common Pleas issued an Opinion concluding that the County Court did not err in issuing the Remand Order. On January 13, 2023, Delaware County filed an Application in Commonwealth Court seeking confirmation of briefing deadlines with respect to the Notice of Appeal. In response, by Order dated January 24, 2023, the Commonwealth Court stated that "the record received from the Court of Common Pleas of Delaware County is currently under review for finality. A briefing schedule will be issued upon completion of this review."

On January 25, 2023, DELCORA filed in the Delaware Court of Common Pleas a complaint for Declaratory Judgment seeking resolution of whether the County Ordinance dissolving DELCORA is a final action prohibiting DELCORA from carrying out the material transaction of the Asset Purchase Agreement and, in the event that DELCORA retains the ability to close the transaction, whether DELCORA is permitted to exist as a trust.

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 30, 2021, the Pennsylvania Public Utility Commission ("PUC") ruled that the case be remanded back to the Office of Administrative Law Judge ("ALJ") and vacated the original administrative law judges' recommended decision ("2021 Order"). This 2021 Order was also appealed to the Commonwealth Court by Delaware County. The County appealed the 2021 Order on April 29, 2022. A decision was issued by the Commonwealth Court on September 12, 2022 which dismissed the appeal of the County.

After the PUC issued the 2021 Order, on April 16, 2021, the administrative law judge issued an order staying the proceeding until the Delaware County Court lawsuit is final and unappealable. On March 25, 2022, the Company sent a letter notifying the PUC of the March 3, 2022 Commonwealth Court decision (that originated in Delaware County Court of Common Pleas) and requested that the PUC move forward with processing the application. On July 14, 2022, the Commission moved to lift the stay imposed by the ALJ, and required the ALJ to establish a schedule on remand for the proceeding. The published procedural schedule has the proceeding concluding in June 2023.

On January 26, 2023, several parties involved in the PUC case filed a joint motion for stay based on DELCORA's filing of the January 25, 2023 complaint for Declaratory Judgment filed by DELCORA, and referenced the City of Chester's bankruptcy filing in which the City of Chester has asserted reversionary contract interests regarding to DELCORA's wastewater assets. On February 6, 2023, the ALJ stayed the PUC DELCORA application proceedings again. The Company will be filing a Petition for Interlocutory Review to the PUC asking to review the ALJ's February 6, 2023 decision to stay the current proceedings.

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 2023, subject to the timing of the regulatory approval process and Delaware County's on-going litigation.

Water and Wastewater Utility Acquisitions - Completed

In November 2022, the Company acquired certain water utility assets of Oak Brook, Illinois, which serves 2,037 customers for a cash purchase price of \$12,500. In August 2022, the Company acquired the municipal wastewater assets of East Whiteland Township, Chester County, Pennsylvania, which serves 4,018 customers, for a cash purchase price of \$54,374. Additionally, in March 2022, the Company acquired the wastewater system of Lower Makefield Township, which serves 11,323 customer connections in Lower Makefield, Falls, and Middletown townships, and Yardley Borough, Bucks County, Pennsylvania, for a cash purchase price of \$53,000. 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 these utility systems acquired in 2022 are \$11,393.

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 were \$7,421 in 2022 and \$2,462 in 2021.

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 \$10,717 in 2022, \$8,365 in 2021 and \$3,569 in 2020.

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

Note 3 – Assets Held for Sale and Disposition

In the fourth quarter of 2022, the Company decided to market for sale the assets of its regulated natural gas system in West Virginia that serves approximately 13,000 customers and is part of the Company's Regulated Natural Gas segment. On December 31, 2022, the Company entered into a definitive agreement with Hope Gas, Inc. for the sale of its membership interests in its West Virginia assets for cash at closing of \$37,000. The purchase price is subject to certain adjustments at closing and is subject to applicable regulatory approvals. Closing on the sale is expected in mid-2023, and completion of this transaction will conclude the Company's operations in West Virginia. Based on an assessment of the sale price and the carrying value of the planned disposition, there is no anticipated impairment expected to be recognized because of this sale agreement. These assets and liabilities do not qualify as discontinued operations, are reported as held for sale in the Company's consolidated balance sheet, and consist of the following as of December 31, 2022:

Inventory - gas stored Other current assets Regulatory assets Current assets held for sale	3,2	807 284 076 167
Property, plant and equipment, net Regulatory assets and other Non-current assets held for sale	30,2 1,5 <u>\$ 32,</u> 7	857
Current liabilities related to assets held for sale	<u>\$</u> 3,2	263
Regulatory liabilities Other long-term liabilities Non-current liabilities related to assets held for sale		649 325 974

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. This disposition has not been presented as discontinued operations in the Company's consolidated financial statements as it does not qualify as discontinued operations, since the disposal does not represent a strategic shift that has a major effect on our operations or financial results.

Note 4 – Property, Plant and Equipment

		Decen	nbe	er 31,	_	
					Approximate	Weighted
		2022		2021	Range of Useful Lives	Average Useful Life
		2022		2021	Oserui Lives	Oserui Lite
Regulated Water segment:						
Utility plant and equipment						
• • • •	\$	4,213,197	\$	4,014,507	26-90 years	72 years
Services, hydrants, treatment plants and reservoirs		2,910,496		2,672,186	5-89 years	56 years
Operations structures and water tanks		388,596		376,880	15-80 years	47 years
Miscellaneous pumping and purification equipment		1,131,975		1,011,487	7-76 years	41 years
Meters, transportation and other operating equipment		1,045,053		980,208	5-84 years	28 years
Land and other non-depreciable assets		133,618		116,888	-	-
Utility plant and equipment - regulated water segment		9,822,935		9,172,156	-	-
Utility construction work in progress		366,777		304,373	-	-
Net utility plant acquisition adjustment		(6,076))	(9,055)	10-53 years	22 years
Non-utility plant and equipment		20,561		21,098	17-64 years	58 years
Property, Plant and Equipment - Regulated Water segment	1	0,204,197		9,488,572		
Regulated Natural Gas segment:						
Natural gas transmission		398,658		365,051	24-93 years	68 years
Natural gas storage		61,639		60,985	5-85 years	45 years
Natural gas gathering and processing		144,337		131,237	5-77 years	59 years
Natural gas distribution		2,206,434		1,874,040	25-78 years	63 years
Meters, transportation and other operating equipment		568,305		588,716	5-65 years	24 years
Land and other non-depreciable assets		4,187		3,872	-	-
Utility plant and equipment - Regulated Natural Gas						
segment		3,383,560		3,023,901		
Utility construction work-in-progress		149,630		97,903	-	-
Property, plant and equipment - Regulated Natural Gas						
segment		3,533,190		3,121,804		
Total property, plant and equipment	\$ <u>1</u>	3,737,387	\$	12,610,376		

Note 5 – Accounts Receivable

		December 31,						
		2022	2021					
Billed utility revenue	\$	265,504 \$	197,815					
Other		4,801	1,283					
		270,305	199,098					
Less allowance for doubtful accounts		63,981	58,073					
Net accounts receivable	<u>\$</u>	206,324 \$	141,025					

As of December 31, 2022, 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, 2022, 2021, and 2020. The following table summarizes the changes in the Company's allowance for doubtful accounts:

	2022	2021	2020
Balance at January 1,	\$ 58,073	\$ 40,099	\$ 7,353
Amounts charged to expense	27,631	27,336	32,325
Accounts written off	(22,507)	(19,731)	(12,613)
Recoveries of accounts written off and other	784	10,369	13,034
Balance at December 31,	\$ 63,981	\$ 58,073	\$ 40,099

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, 2022				Decembe	r 31	, 2021
	Regulatory Regulatory			Regulatory	I	Regulatory	
		Assets		Liabilities	 Assets		Liabilities
Income taxes	\$	1,164,294	\$	571,110	\$ 1,219,924	\$	595,185
Purchased gas costs		15,435		28,955	13,798		-
Utility plant retirement costs		36,440		64,212	47,683		56,479
Post-retirement benefits		51,810		142,390	60,640		115,283
Accrued vacation		3,231		-	3,760		-
Water tank painting		10,385		-	7,553		-
Fair value adjustment of long-term debt assumed in acquisition		49,954		-	62,722		-
Debt refinancing		13,906		-	19,083		-
Rate case filing expenses and other		16,570		7,363	14,827		3,054
	\$	1,362,025	\$	814,030	\$ 1,449,990	\$	770,001

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. Regulatory liabilities are 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. 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. In 2022, the Company made a similar change for its Peoples Gas and Aqua New Jersey subsidiaries, resulting in the recognition of a regulatory liability for each of these subsidiaries for the tax benefits prior to the year of adoption.

On July 8, 2022, Pennsylvania enacted House Bill 1342 into law, which among other things, reduces Pennsylvania's corporate income tax rate from 9.99% to 8.99% beginning January 1, 2023, and an additional 0.5% annually through 2031, when it reaches to 4.99%. The Company evaluated the impacts of the tax rate change and recorded, in the third quarter of 2022, a reduction to our deferred tax liabilities of \$244,537 with a corresponding reduction primarily to our regulatory assets.

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 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 2023 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,										
	202	2022			2020							
Current:												
Federal	\$	- \$	(5,132)	\$	(1,831)							
State		8,716	4,034		(265)							
		8,716	(1,098)		(2,096)							
Deferred:												
Federal		(8,258)	3,036		(11,527)							
State	(1	4,787)	(11,550)		(6,255)							
	(2	23,045)	(8,514)		(17,782)							
Total income tax benefit	\$ (1	4,329) \$	(9,612)	\$	(19,878)							

The statutory Federal tax rate is 21% for 2022, 2021, and 2020. 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 2022, 2021, and 2020 was (3.2)%, (2.3)%, and (7.5)%, respectively. The Company remains subject to examination by federal and state tax authorities for the 2019 through 2022 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 End	ed December	r 31,
		2022	2021	2020
Computed Federal tax expense at statutory rate	\$	94,691 \$	88,620 \$	55,644
Decrease in Federal tax expense related to the flow through of plant related timing	5			
differences		(99,741)	(76,534)	(53,532)
State income taxes, net of Federal tax benefit		2,456	(1,681)	(6,896)
Increase in tax expense for depreciation expense to be recovered in future rates		159	925	140
Stock-based compensation		(242)	(611)	(1, 484)
Deduction for Essential Utilities common dividends paid under employee benefit				
plan		(333)	(330)	(315)
Amortization of deferred investment tax credits		(290)	(314)	(319)
Amortization of excess deferred income taxes		(8,425)	(11,715)	(15,352)
Impact of acquisitions and reorganizations		-	(4,632)	-
Other, net		(2,604)	(3,340)	2,236
Actual income tax benefit	\$	(14,329) \$	(9,612) \$	(19,878)

In 2012, in response to a rate order, Aqua Pennsylvania changed its tax method of accounting for qualifying utility system repairs, which provides for a tax deduction for qualifying utility asset improvement costs that were previously being capitalized and depreciated for book and tax purposes. The rate order requires a flow-through method of income tax benefits, which results in a reduction in current income tax expense through the recognition of income tax benefits due to the income tax accounting method change. The Company recognized a tax deduction on its 2012 Federal tax return of \$380,000 for prior year qualifying costs and based on a 2012 rate order, Aqua Pennsylvania began to amortize this benefit over ten years beginning in 2013. As a result of the May 2022 rate order, this amortization period was extended for an additional three years and the Company's utility rates now include these tax benefits.

In 2019, the Pennsylvania Public Utility Commission issued a rate order to Aqua Pennsylvania and commencing in 2020 the base rates were designed to include annual tax benefits for qualifying utility system improvement costs equal to a deduction of \$158,865, subject to a \$3,000 collar either above or below this target amount. In May 2022, Aqua Pennsylvania received a rate order that adjusted this target to \$159,060 and revised the collar amount to \$4,000, beginning with the 2022 fiscal year. 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.

In March 2020 and in June 2022, the Company changed the method of tax accounting for certain qualifying infrastructure investments at its Peoples Natural Gas and Peoples Gas Company subsidiaries, respectively. 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 in Pennsylvania in its other regulated subsidiaries, the Company uses the flow-through method to account for these timing differences.

For Peoples Natural Gas, the Company calculated the income tax benefits for qualifying capital expenditures made prior to the date of its acquisition on March 16, 2020 ("catch-up adjustment") and recognized a regulatory liability of \$160,655 for these income tax benefits. On May 6, 2021, the Pennsylvania Public Utility Commission approved a settlement order which stipulates, among other points, that the catch-up adjustment be provided by a surcredit to utility customers over a five-year period beginning August 2021, and the Company can continue to use flow-through accounting for the current tax repair benefit until its next base rate case. During 2022 and 2021, \$29,431 and \$11,127, respectively, of income tax benefits were amortized as refunds to Peoples Natural Gas customers. For Peoples Gas Company, the Company calculated the catch-up adjustment from periods prior to the 2021 tax year and recognized a regulatory liability of \$13,808 for these income tax benefits. The Company will maintain this regulatory liability on its consolidated balance sheet until accounting treatment is determined in its next base rate case.

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

	2022 2021			2020		
Balance at January 1,	\$ 20,201	\$	19,194	\$	18,671	
Impact of current year activity	(900)		1,007		523	
Effect of Pennsylvania tax rate change	(1,084)		-		-	
Balance at December 31,	\$ 18,217	\$	20,201	\$	19,194	

The Company recognizes 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. During the years ended December 31, 2022, 2021 and 2020, there were expenses of \$118, \$409, and \$24 for interest and penalties related to uncertain tax positions. As of December 31, 2022 and 2021, the Company has accrued liabilities of \$620 and \$502 for interest and penalties related to its uncertain tax position.

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, 2022 and 2021, \$35,267 and \$34,980, 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,				
		2022	2021		
Deferred tax assets:					
Customers' advances for construction	\$	27,009	28,845		
Costs expensed for book not deducted for tax, principally accrued expenses		23,585	28,211		
Post-retirement benefits		-	5,186		
Tax effect of regulatory liabilities for post-retirement benefits		26,453	16,080		
Tax attribute and credit carryforwards		235,838	243,131		
Operating lease liabilities		13,558	16,064		
Unrecovered purchased gas costs		4,654	-		
Other		10,248	7,586		
		341,345	345,103		
Less valuation allowance		(38,940)	(36,662)		
		302,405	308,441		
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		1,495,526	1,510,752		
Deferred taxes associated with the gross-up of revenues necessary to recover, in rates,					
the effect of temporary differences		128,975	179,825		
Post-retirement benefits		6,130	-		
Utility plant acquisition adjustment basis differences		198	222		
Deferred investment tax credit		5,092	5,406		
Operating lease right-of-use assets		12,250	14,034		
Over-recovered purchased gas costs		-	4,739		
		1,648,171	1,714,978		
Net deferred tax liability	\$	1,345,766 \$	1,406,537		

At December 31, 2022, the Company has a cumulative Federal NOL of \$625,988. 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, 2022, the Company has a cumulative state NOL of \$1,832,795 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, 2022, the Company's Federal and state NOL carryforwards are reduced by an unrecognized tax position, on a gross basis, of \$79,368 and \$85,759, 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 \$705,356 and \$1,918,555, respectively. The Company records its unrecognized tax benefit as a component of its net deferred income tax liability.

On August 16, 2022, the Inflation Reduction Act of 2022 ("IRA") was enacted into law, which among other things, implements a 15% minimum tax on book income of certain large corporations, and a 1% excise tax on net stock repurchases after December 31, 2022. The alternative minimum tax would not be applicable in our next fiscal year because it is based on a three-year average annual adjusted financial statement income in excess of \$1,000,000. Also included in the IRA is a provision to implement an annual waste emissions charge beginning with calendar year 2024 (to be paid in 2025) on applicable oil and gas facilities that exceed certain methane emission thresholds. Currently, the Company has gathering facility assets that could exceed the minimum thresholds and potentially be subject to the waste emissions charge. We are continuing to assess the future impact of the provisions of the IRA on our consolidated financial statements and on the Company's gathering assets. As a regulated utility, required capital expenditures and operating costs, including taxes, have been traditionally recognized by state utility commissions as appropriate for inclusion in establishing rates.

On July 8, 2022, Pennsylvania enacted House Bill 1342 into law, which among other things, reduces Pennsylvania's corporate income tax rate from 9.99% to 8.99% beginning January 1, 2023, and an additional 0.5% annually through 2031, when it reaches to 4.99%. The Company evaluated the impacts of the tax rate change and recorded a reduction to our deferred tax liabilities of \$244,537 with a corresponding reduction primarily to our regulatory assets.

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,							
		2022	2021	2020				
Property	\$	33,703	33,946 \$	32,054				
Gross receipts, excise and franchise		16,828	15,777	14,462				
Payroll		21,343	21,789	19,053				
Regulatory assessments		6,771	6,968	3,130				
Pumping fees		7,881	5,761	6,028				
Other		3,498	2,400	1,870				
Total taxes other than income taxes	\$	90,024 \$	86,641 \$	76,597				

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 2027 are expected to average \$3,419, and the aggregate of the years remaining approximates \$1,120.

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:

2023	2024	2025	2026	2027	Thereafter
\$ 1,111	\$ 1,131	\$ 1,156	\$ 1,182\$	1,208	\$ 1,708

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 2027 are expected to average \$241,248, and the aggregate of the years remaining beyond 2027 approximates \$1,606,927.

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

	Years Ended December 31,					
	2022	2021	2020			
Purchased water under long-term agreements	\$ 5,559 \$	5,867 \$	5,931			
Water treatment expense under contractual agreement	1,061	1,017	1,006			
Purchased natural gas under long-term agreements	601,995	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, 2022, the aggregate amount of \$19,658 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, 2022, estimates that approximately \$1,530 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. The do not consume advisory was lifted in 2019, and, in 2022, the water system was determined to be in compliance with the federal Lead and Copper Rule. During the second quarter of 2021, an 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. During the third quarter of 2022, the Company established an accrual for the amount of loss asserted in the complaint that we determined to be probable and estimable of being incurred. The Company is vigorously defending against this claim. The Company submitted a claim for the expenses incurred to its insurance carrier for potential recovery of a portion of these costs and is currently in litigation with one of its carriers seeking to enforce its claims. 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 \$2,327 and \$2,470 at December 31, 2022 and 2021, respectively, 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 to 72 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.

On January 6, 2022, the Company entered into an amendment to an office lease that provided for the partial termination of the Company's obligations with respect to a portion of the leased premises of approximately 37,000 rentable square feet. The Company paid a termination fee of \$2,812, reduced its remaining lease payments by \$1,753 and recognized a loss on the partial termination of the lease of \$1,801.

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 no longer used by the Company in its 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.

	Years Ended December 31,						
	 2022	2021	2020				
Components of lease expense were as follows:							
Operating lease cost	\$ 9,359 \$	9,716 \$	8,496				

		Years Ended Decemb 2022	per 31, 2021
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	\$	9,270 \$	9,612
		December 31, 2022	2021
Supplemental balance sheet information related to leases was as follows: Operating leases:			
Operating lease right-of-use assets	\$	41,734 \$	48,930
Other accrued liabilities	\$	9,316	7,841
Operating lease liabilities	<u></u>	37,666	48,230
Total operating lease liabilities	<u>\$</u>	46,982 \$	56,071
		December 31,	
		2022	2021
Weighted average remaining lease term: Operating leases		9.7 years	10.6 years
Weighted average discount rate:		3.42%	3.62%
Operating leases		3.4270	5.0270

Maturities of operating lease liabilities and a reconciliation of the operating lease liabilities reported on our consolidated balance sheets as of December 31, 2022 are as follows:

	Operat	ing Leases
2023	\$	8,923
2024		8,643
2025		8,591
2026		6,671
2027		6,757
Thereafter		20,763
Total operating lease payments	\$	60,348
Total operating lease payments	\$	60,348
Less operating lease liabilities		46,982
Present value adjustment	\$	13,366

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, 2022 and 2021. 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 on minimum net assets. As of December 31, 2022, restrictions on the net assets of the Company were \$4,284,813 of the total \$5,377,386 in net assets. Included in this amount were restrictions on Aqua Pennsylvania's net assets of \$1,678,703 of their total net assets of \$2,462,533. As of December 31, 2022, \$2,158,502 of Aqua Pennsylvania's retained earnings of \$2,178,502 and \$277,036 of the retained earnings of \$445,076 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	2023	2024	2025	2026	2027	Thereafter
0.00% to 0.99%	\$ 464	\$ 256	\$ 197	\$ 179	\$ 146	\$ 633
1.00% to 1.99%	872	712	766	776	787	4,456
2.00% to 2.99%	2,182	1,268	1,427	1,305	1,113	1,102,460
3.00% to 3.99%	32,025	53,318	782	746	210,889	2,178,672
4.00% to 4.99%	151,649	4,527	122,310	1,562	1,567	1,621,698
5.00% to 5.99%	11,472	10,728	630	237	27	531,263
6.00% to 6.99%	-	-	-	5,000	20,000	6,000
7.00% to 7.99%	-	-	23,000	-	5,378	-
8.00% to 8.99%	692	976	448	-	-	-
9.00% to 9.99%	 -	-	-	11,800	-	-
Total	\$ 199,356	\$ 71,785	\$ 149,560	\$ 21,605	\$ 239,907	\$ 5,445,182

In January 2023 and October 2022, Aqua Pennsylvania issued \$75,000 and \$125,000 of first mortgage bonds, due in 2043 and 2052, and with interest rates of 5.60% and 4.50%, respectively. The proceeds from these bonds were used to repay existing indebtedness and for general corporate purposes.

On May 20, 2022, the Company issued \$500,000 of long-term debt (the "Senior Notes"), less expenses of \$5,815, due in 2052 with an interest rate of 5.30%. The Company used the net proceeds from the issuance of Senior Notes to (1) to repay \$49,700 of borrowings under Aqua Pennsylvania's 364-day revolving credit facility and \$410,000 of borrowings under the Company's existing five year unsecured revolving credit facility, and (2) for general corporate purposes.

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.

The weighted average cost of long-term debt at December 31, 2022 and 2021 was 3.94% and 3.49%, respectively. The weighted average cost of fixed rate long-term debt at December 31, 2022 and 2021 was 3.78% and 3.61%, respectively.

On December 14, 2022, the Company entered into a five year \$1,000,000 unsecured revolving credit facility, which replaced the Company's prior five year \$1,000,000 unsecured revolving credit facility. The Company's new unsecured revolving credit facility was used to repay all indebtedness and fees under our prior unsecured revolving credit facility, and for other general corporate purposes. The facility includes a \$100,000 sublimit for daily demand loan. 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, 2022, the Company has the following sublimits and available capacity under the credit facility: \$100,000 letter of credit sublimit, \$80,959 of letters of credit available capacity, \$0 borrowed under the swing-line commitment, \$490,959 was available for borrowing and \$490,000 of funds borrowed under the agreement. Interest under the facility is equal to either (i) Term simple secured overnight financing rate (SOFR), plus applicable margin; or (ii) an Alternate Base Rate (which is based at the highest of the (a) New York Federal Reserve Bank rate, plus 0.5%, (b) the prime rate, and, (c) the daily SOFR, plus 1.0%,) plus applicable margin. The applicable margin for an Alternate Base Rate loan will be up to 0.5% and for a SOFR loan will be up to 1.5%, in each case depending on the debt ratings in effect as of such date. The Company may elect either the Term SOFR or the Alternate Base Rate at the time of the drawdown, and loans may be converted from one rate to another at any time, subject or certain conditions. A facility fee is charged on the total commitment amount of the agreement. Under these facilities the average cost of borrowings was 3.11% and 1.31%, and the average borrowing was \$297,021 and \$174,026, during 2022 and 2021, 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 2022, 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 June 2022, Aqua Pennsylvania amended its \$100,000 364-day revolving credit agreement primarily to update the termination date of the facility to June 29, 2023. The funds borrowed under this agreement are classified as loans payable and used to provide working capital. As of December 31, 2022 and 2021, funds borrowed under the agreement were \$20,000 and \$35,000, respectively. 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 2.40% and 0.78%, and the average borrowing was \$31,555 and \$40,312, during 2022 and 2021, respectively. The maximum amount outstanding at the end of any one month was \$55,000 and \$70,000 in 2022 and 2021, respectively.

In June 2022, Peoples Natural Gas Companies amended its 364-day revolving credit agreement primarily to increase the amount of the facility from \$100,000 to \$300,000 and to update the termination date of the facility to June 29, 2023. The funds borrowed under this agreement are classified as loans payable and used to provide working capital. 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. As of December 31, 2022 and 2021, funds borrowed under the agreement were \$208,500 and \$30,000, respectively. The average cost of borrowing under the facility was 2.30% and 1.02%, and the average borrowing was \$97,458 and \$23,750, during 2022 and 2021, respectively. The maximum amount outstanding at the end of any one month was \$234,000 and \$30,000 in 2022 and 2021, respectively.

At December 31, 2022 and 2021, the Company had other combined short-term lines of credit of \$35,000. Funds borrowed under these lines are classified as loans payable and are used to provide working capital. As of December 31, 2022 and 2021, funds borrowed under the short-term lines of credit were \$0. The average borrowing under the lines was \$0 and \$0 during 2022 and 2021, respectively. The maximum amount outstanding at the end of any one month was \$0 and \$0 in 2022 and 2021, 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 2022 and 2021 was 0% and 0%, respectively.

Interest Income and Expense– Interest income of \$3,675, \$2,384, and \$5,363 was recognized for the years ended December 31, 2022, 2021, and 2020, respectively. Interest expense was \$238,116, \$207,709, and \$188,435 in 2022, 2021, and 2020, including amounts capitalized for borrowed funds of \$6,047, \$4,510, and \$4,434, respectively.

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, 2022 and 2021, the carrying amount of the Company's loans payable was \$228,500 and \$65,000, 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, 2022 and 2021, the carrying amounts of the Company's cash and cash equivalents were \$11,398 and \$10,567, 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, 2022 and \$28,576, respectively, which equates to their 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, 2022 and \$28,576, respectively, which equates to their 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, 2022 and 2021, the carrying amount of these securities was \$24,962 and \$28,576, 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				
	2022 202		021	2020	
Net gain (loss) recognized during the period on equity securities Less: net gain (loss) recognized during the period on equity securities sold during the	\$ (895)	\$	607	\$	492
period Unrealized gain (loss) recognized during the reporting period on equity securities still held			-		-
at the reporting date	<u>\$ (895)</u>	\$	607	\$	492

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,					
		2022	2021			
Carrying amount	\$	6,617,395 \$	5,947,357			
Estimated fair value		5,528,131	6,482,499			

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 \$114,732 and \$103,619 at December 31, 2022 and 2021, 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, 2022, 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,					
	2022	2021	2020			
Shares outstanding	263,737,084	252,867,623	245,390,468			
Treasury shares	3,236,237	3,234,765	3,180,887			

At-the-Market Offering

On October 14, 2022, the Company entered into at-the market sales agreements ("ATM") with third-party sales agents, under which the Company may offer and sell shares of its common stock, from time to time, at its option, having an aggregate gross offering price of up to \$500,000 pursuant to the Company's effective shelf registration statement on Form S-3 (File No. 333-255235). The Company intends to use the net proceeds from the sales of shares through the ATM for working capital, capital expenditures, water and wastewater utility acquisitions, and repaying outstanding indebtedness. During the fourth quarter of 2022, the Company issued 1,321,994 shares of common stock under the ATM for proceeds of \$63,040, net of expenses. In January 2023, the Company issued 399,128 shares of common stock under the ATM for proceeds of \$19,294, net of expenses.

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 completely settled forward equity sale agreements 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. There are no remaining 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. 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.

Each Unit consisted of a prepaid stock purchase contract and an amortizing note, each issued by the Company. The amortizing notes had an initial principal amount of \$8.62909, or \$119,081 in aggregate, and yielded interest at a rate of 3.00% per year, and paid 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 constituted a payment of interest and a partial repayment of principal. This cash payment in the aggregate was equivalent to 6.00% per year with respect to each \$50 stated amount of the Units. The amortizing notes represented unsecured senior obligations of the Company.

Certain holders of the tangible equity units had early settled their prepaid stock purchase contracts prior to the due date, and, in exchange, the Company issued shares of its common stock. During 2022, 981,919 stock purchase contracts were early settled by the holders of the contracts prior to the mandatory settlement date, resulting in the issuance of 1,166,107 shares of the Company's common stock. On May 2, 2022, the remaining 6,621,315 stock purchase contracts were each mandatorily settled for 1.18758 shares of the Company's common stock, and in the aggregate the Company issued 7,863,354 shares of its common stock. Additionally, the final quarterly installment payment was made, which resulted in the complete pay-off of the amortizing notes.

At December 31, 2022, 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, 2022 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 2022, 2021 and 2020, the Company sold 368,278, 374,824 and 388,978 original issue shares of common stock through the dividend reinvestment portion of the Plan, for net proceeds of \$16,619, \$16,799 and \$16,522, respectively.

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 weighted average minimum number of shares 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. 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 common share. The dilutive effect of stock-based compensation and shares issuable under the forward equity sale agreement are used to purchase 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. The treasury stock method assumes that the proceeds from 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,			
	2022	2021	2020	
Average common shares outstanding during the period for basic computation	262,246	257,487	249,768	
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	622	504	423	
Average common shares outstanding during the period for diluted computation	262,868	258,180	254,629	

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.

The number of outstanding employee stock options that were not included in the diluted earnings per share calculation because the effect would have been anti-dilutive was 77,506 for the year ended December 31, 2022. For the years ended December 31, 2021 and 2020, 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.

On May 2, 2022, all of the remaining stock purchase contracts under the tangible equity units were mandatorily settled. For the year ended December 31, 2022, the weighted average impact of 2,932,010 shares were included in the basic computation of the average common shares outstanding based on the number of shares that were issued upon settlement of the stock purchase contracts under the tangible equity units. For the years ended December 31, 2021 and 2020, the minimum settlement amount of the stock purchase contracts under the tangible equity units of 9,041,687 and 9,370,646 shares, respectively, were considered outstanding for the basic computation of the average common shares outstanding.

Equity per common share was \$20.39 and \$20.50 at December 31, 2022 and 2021, 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 Company 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, 2022, 1,754,295 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 2022, 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 performance goals of the 2022, 2021 and 2020 PSU grants consisted of the following metrics:

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

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

	Years ended December 31,				
		2022	2021	2020	
Stock-based compensation within operations and maintenance expense	\$	7,950 \$	7,150 \$	3,630	
Income tax benefit		1,997	2,038	957	

The following table summarizes nonvested PSU transactions for the year ended December 31, 2022:

		V	Veighted
	Number of	Av	erage Fair
	Share Units		Value
Nonvested share units at beginning of period	355,384	\$	42.19
Granted	161,968		42.33
Performance criteria adjustment	100,227		46.21
Forfeited	(61,117)		43.89
Nonvested share units at end of period	556,462		42.77

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,					
		2022		2021		2020
Expected term (years)		3.0		3.0		3.0
Risk-free interest rate		1.75%		0.24%		0.66%
Expected volatility		31.9%		32.1%		24.2%
Weighted average fair value of PSUs granted	\$	42.33	\$	43.18	\$	55.25
Intrinsic value of vested PSUs	\$	-	\$	6,050	\$	9,030
Fair value of vested PSUs	\$	-	\$	5,321	\$	5,215

As of December 31, 2022, \$9,752 of unrecognized compensation costs related to PSUs is expected to be recognized over a weighted average period of approximately 1.79 years. The aggregate intrinsic value of PSUs as of December 31, 2022 was \$17,594. 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,				
		2022	2021	2020	
Stock-based compensation within operations and maintenance expense	\$	2,927 \$	3,360 \$	2,180	
Income tax benefit		736	953	585	

The following table summarizes nonvested RSU transactions for the year ended December 31, 2022:

	Number of Stock Units	Weighted Average Fair Value
Nonvested stock units at beginning of period	193,687	\$ 43.76
Granted	72,092	44.74
Stock units vested and issued	(65,839)	38.42
Forfeited	(19,634)	45.30
Nonvested stock units at end of period	180,306	45.94

The following table summarizes the value of RSUs:

	Years ended December 31,					
	2022	2021		2020		
Weighted average fair value of RSUs granted	\$ 44.74 \$	44.44	\$	49.19		
Intrinsic value of vested RSUs	3,090	2,108		2,130		
Fair value of vested RSUs	2,483	1,726		1,203		

As of December 31, 2022, \$3,246 of unrecognized compensation costs related to RSUs is expected to be recognized over a weighted average period of approximately 1.7 years. The aggregate intrinsic value of RSUs as of December 31, 2022 was \$8,606. 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 2022 and 2019 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,				
		2022	2021	2020	
Stock-based compensation within operations and maintenance expenses	\$	451 \$	480 \$	1,322	
Income tax benefit		140	136	374	

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:

	 2022
Expected term (years)	5.48
Risk-free interest rate	1.92%
Expected volatility	26.5%
Dividend yield	2.37%
Grant date fair value per option	\$ 9.34

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, 2022:

	ai	Weighted Average Exercise	Weighted Average Remaining	Aggregate
	Shares	Price	Life (years)	Intrinsic Value
Outstanding, beginning of year	813,492	35.37		
Granted	85,527	45.19		
Forfeited	(9,149)	44.32		
Expired / Cancelled	(125)	35.94		
Exercised	(69,684)	35.52		
Outstanding at end of year	820,061 \$	<u> </u>	6.2 \$	9,383
Exercisable at end of year	745,000 \$	35.39	5.9 \$	9,191

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,					
	2022			2021	2020	
Intrinsic value of options exercised	\$	960	\$	1,709	\$	1,849
Fair value of options vested		1,203		1,485		1,673

The following table summarizes information about the options outstanding and options exercisable as of December 31, 2022:

	Options Outstanding				Option	s Exercisable	
		Weighted					
		Average					
		Remaining Weighted Average		verage		Weighted Ave	rage
	Shares	Life (years)	Exercise P	rice	Shares	Exercise Pri	ce
Range of prices:							
\$30.00 - 33.99	54,467	4.1	\$	30.47	54,467	\$ 3	0.47
\$34.00 - 34.99	90,194	5.2		34.51	90,194	3	4.51
\$35.00 - 35.99	597,894	6.2		35.93	597,894	3	5.93
\$36.00 and above	77,506	9.1		45.17	2,445	45	.19
	820,061	6.2	\$	36.29	745,000	\$ 3	5.39

As of December 31, 2022, there was \$322 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 1.5 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 following table provides the compensation cost and income tax benefit for stock-based compensation related to restricted stock:

	Years ended December 31,					
	2022 2021			2020		
Stock-based compensation within operations and maintenance expense	\$	50 \$	130 \$	333		
Income tax benefit		15	37	96		

The following table summarizes restricted stock transactions for the year ended December 31, 2022:

		W	Veighted Average
	Number of Shares		Fair Value
Nonvested shares at beginning of period	1,068	\$	46.83
Granted	1,170		42.75
Vested	(1,068)		(46.83)
Nonvested shares at end of period	1,170	\$	42.75

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 end	ed Decembe	er 3	1,
	2022	2021		2020
Stock-based compensation within operations and maintenance expense	\$ 715 \$	700	\$	695
Income tax benefit	207	202		201

The following table summarizes the value of stock awards:

	Years ende	ed December 3	31,
	 2022	2020	
Intrinsic and fair value of stock awards vested	\$ 715 \$	700 \$	695
Weighted average fair value of stock awards granted	46.44	47.46	41.97

The following table summarizes stock award transactions for year ended December 31, 2022:

	Number of Stock Awards	Weighted Average Fair Value
Nonvested stock awards at beginning of period	-	\$ -
Granted	15,397	46.44
Vested	(15,397)	46.44
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.

The Company's qualified defined benefit pension plan has a permanent lump sum option to the form of benefit payments offered to participants upon retirement or termination. The plan paid \$17,757 and \$11,069 to participants who elected this option during 2022 and 2021, respectively. During 2022, we made lump-sum pension benefit distributions exceeding the cumulative amount of service and interest cost components of the net periodic pension cost for the year, which is the settlement accounting threshold. The settlement loss of \$3,300 was recorded as a regulatory asset, as it is probable of recovery in future rates, and will be amortized into pension benefit costs. A settlement loss is the recognition of unrecognized pension benefit costs that would have been incurred in subsequent periods.

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:				
2023	\$	27,351	\$	5,498
2024		27,154		5,464
2025		27,723		5,636
2026		27,497		5,965
2027		29,007		6,252
2028-2032		129,413		32,750

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			er Post-retire	ment	nt Benefits	
	 2022	2021		2022		2021	
Change in benefit obligation:							
Benefit obligation at January 1,	\$ 452,947 \$	486,219	\$	114,651	\$	125,375	
Service cost	2,587	3,503		1,911		2,793	
Interest cost	13,806	13,018		3,369		3,358	
Actuarial loss/(gain)	(105,107)	(17,378)		(31,995)		(12,001)	
Plan participants' contributions	-	-		145		36	
Benefits paid	(19,339)	(32,415)		(4,580)		(4,910)	
Plan amendments	2,121	-		-		-	
Participants' directed transfer of benefit to other plans	(4,568)	-		-		-	
Settlements	 (17,757)	-		-		-	
Benefit obligation at December 31,	 324,690	452,947		83,501		114,651	
Change in plan assets:							
Fair value of plan assets at January 1,	433,121	426,801		107,308		98,995	
Actual return on plan assets	(83,297)	23,901		(19,589)		12,484	
Employer contributions	20,390	14,834		1,636		598	
Participants' contributions	-	-		145		36	
Benefits paid	(19,281)	(32,415)		(3,506)		(4,805)	
Settlements	(17,757)	-		-		-	
Fair value of plan assets at December 31,	 333,176	433,121		85,994		107,308	
Funded status of plan:							
Net asset / (liability) recognized at December 31,	\$ 8,486 \$	(19,826)	\$	2,493	\$	(7,343)	

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

	Pension I	Bene	fits	Other Post-retirement Benefits				
	2022 2021			2022	2021			
Non-current asset	\$ 24,389	\$	2,474	\$	19,438 \$	23,504		
Current liability	(761)		(1,144)		(843)	(1,777)		
Noncurrent liability	(15,142)		(21,156)		(16,102)	(29,070)		
Net asset / (liability) recognized	\$ 8,486	\$	(19,826)	\$	2,493 \$	(7,343)		

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

	December 31, 2022				December 31, 2021			
	 Pension P Benefits		Other st-retirement Benefits	Pension Benefits			Other -retirement Benefits	
Selected information for plans with projected benefit obligation in excess of plan assets: Projected benefit obligation Fair value of plan assets Selected information for plans with accumulated benefit	\$ 16,041	\$	N/A N/A	\$	23,601	\$	N/A N/A	
obligation in excess of plan assets: Accumulated benefit obligation Fair value of plan assets	\$ 12,126	\$	29,009 12,064	\$	17,129	\$	42,463 11,616	

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

	 Pensi	on Benefits		Other Post-retirement Benefits				
	2022	2021	2020		2022	2021	2020	
Service cost	\$ 2,587 \$	3,503 \$	3,775	\$	1,911 \$	2,793 \$	2,276	
Interest cost	13,806	13,018	13,710		3,369	3,358	3,687	
Expected return on plan assets	(22,004)	(23,165)	(21,249)		(4,502)	(4,155)	(4,079)	
Amortization of prior service cost (credit)	536	559	591		-	(432)	(464)	
Amortization of actuarial loss (gain)	2,043	2,907	7,967		(1,336)	219	622	
Net periodic benefit cost (credit)	\$ (3,032) \$	(3,178) \$	4,794	\$	(558) \$	1,783 \$	2,042	

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 Bene	efits	Other Post-retirement Benefits					
	 2022	2021		2022	2021			
Net actuarial loss (gain)	\$ 56,737 \$	64,247	\$	\$ (19,894)		(16,323)		
Prior service cost	2,550	965		-		-		
Total recognized in regulatory assets	\$ 59,287 \$	65,212	\$ (19,894)		\$	\$ (16,323)		

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 Be	nefits	Other I retirement	
	2022 2021		2022	2021
Weighted Average Assumptions Used to Determine Benefit Obligations as of December 31,				
Discount rate	5.51%	2.91%	5.45%	2.96%
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	6.50%	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	2029	2027

n/a – Assumption is not applicable.

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

	Pensio	n Benefits		Other Post	-retirement E	Benefits
—	2022	2021	2020	2022	2021	2020
Weighted Average Assumptions Used to Determine Net Periodic Benefit Costs for Years Ended December 31,						
Discount rate	2.91%	2.57%	3.35%	2.96%	2.68%	3.42%
Expected return on plan assets	5.40%	5.60%	6.00%	3.4%-5.4%	5.60%	6.00%
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 Rate to which the cost trend is assumed to decline	n/a	n/a	n/a	6.25%	6.3%	6.3%
(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	2027	2025	2025
n/a – Assumption is not applicable.						

* In September 2022, the Company remeasured its qualified pension plan assets and liabilities in accordance with settlement accounting rules. The discount rate used for the remeasurement and for the calculation of the net periodic benefit cost for the remainder of the year was 5.58%.

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 2022, the Company used a 5.4% expected return on plan assets decreases. For 2022, the Company used a 5.4% 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	2022	2021				
Return seeking assets	50 to 70%	56%	53%				
Liability hedging assets	30 to 50%	44%	47%				
Total	100%	100%	100%				

The fair value of the Company's pension plans' assets at December 31, 2022 by asset class are as follows:

	Level 1	Level 2	Level 3	Assets measured at NAV (a)	Total
Common stock	\$ 18,037	\$ -	\$ -	\$ -	\$ 18,037
Return seeking assets:					
Global equities	-	-	-	15,163	15,163
Hedge / diversifying strategies	-	-	-	102,038	102,038
Credit	-	-	-	52,048	52,048
Liability hedging assets	-	-	-	114,220	114,220
Cash and cash equivalents	 31,670	-	-	-	 31,670
Total pension assets	\$ 49,707	\$ -	\$ -	\$ 283,469	\$ 333,176

(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, 2021 by asset class are as follows:

				Assets measured at	
	Level 1	Level 2	Level 3	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

Equity securities include our common stock in the amounts of \$18,037 or 5.4% and \$20,290 or 4.7% of total pension plans' assets as of December 31, 2022 and 2021, 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	2022	2021				
Return seeking assets	50 to 70%	62%	68%				
Liability hedging assets	30 to 50%	38%	32%				
Total	100%	100%	100%				

The fair value of the Company's other post-retirement benefit plans' assets at December 31, 2022 by asset class are as follows:

				Assets measured at	
	Level 1	Level 2	Level 3	NAV (a)	Total
Return seeking assets:					
Global equities	\$ 27,258	\$ -	\$ - \$	16,024	\$ 43,282
Real estate securities	6,386	-	-	3,311	9,697
Liability hedging assets	15,131	-	-	9,159	24,290
Cash and cash equivalents	8,725	-	-	-	8,725
Total other post-retirement assets	\$ 57,500	\$ -	\$ - \$	28,494	\$ 85,994

(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, 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

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 securities (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 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 2023 our pension contribution is expected to be \$20,343.

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 \$21,758, \$19,569, and \$15,445, for the years ended December 31, 2022, 2021, and 2020, respectively.

Note 17 – Rate Activity

On December 30, 2022, our water and wastewater utility operating divisions in Ohio filed an application with the Public Utilities Commission of Ohio designed to increase rates by \$9,816 annually.

On September 21, 2022, our regulated water and wastewater utility operating divisions in Ohio received an order from the Public Utilities Commission of Ohio which will increase operating revenues by \$5,483 annually. New rates for water and sewer service went into effect on September 21, 2022.

On June 30, 2022, the Company's regulated water and wastewater operating subsidiary in North Carolina, Aqua North Carolina, filed an application with the North Carolina Utilities Commission designed to increase rates by \$18,064 in the first year of new rates being implemented, then an additional \$4,303 and \$4,577 in the second and third years, respectively.

On May 16, 2022, the Company's regulated water and wastewater operating subsidiary in Pennsylvania, Aqua Pennsylvania, received an order from the Pennsylvania Public Utility Commission that allowed base rate increases that would increase total annual operating revenues by \$69,251. New rates went into effect on May 19, 2022. At the time the rate order was received, the rates in effect also included \$35,470 in Distribution System Improvement Charges ("DSIC"), which was 7.2% above prior base rates. Consequently, the aggregate annual base rates increased by \$104,721 since the last base rate increase and DSIC was reset to zero.

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. On June 7, 2022, an additional \$260 was approved and made effective by the Commission, resulting from a rehearing requested by the operating division.

In addition to the Ohio, Pennsylvania, and Kentucky rate awards noted above, the Company's operating subsidiaries were allowed annualized rate increases of \$1,378 in 2022, \$3,390 in 2021, and \$4,480 in 2020, represented by two, six, and five rate decisions, respectively. Annualized revenues in aggregate from all of the rate increases realized in the year of grant were approximately \$51,163, \$2,995, and \$1,594 in 2022, 2021, and 2020, respectively.

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. During 2022, the Company received approval to bill infrastructure

rehabilitation surcharges designed to increase total operating revenues on an annual basis by \$7,571 in its water and wastewater utility operating divisions in Pennsylvania, North Carolina, Illinois and Virginia. The surcharge for infrastructure system replacements and rehabilitations provided revenues in 2022, 2021, and 2020 of \$26,902, \$33,771, and \$13,039, respectively.

Note 18 – Segment Information

The Company has identified twelve operating segments and has two reportable segments, the Regulated Water segment and the Regulated Natural Gas segment. 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. The operating results of Peoples are included in the consolidated financial statements for the period since the completion of its acquisition on March 16, 2020.

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 segment, corporate costs that have not been allocated to the Regulated Water and Regulated Natural Gas segments, and intersegment eliminations. 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:

2022	Regulated Water	Regulated Natural Gas	Other and Eliminations	Consolidated
Operating revenues	\$ 1,082,972	\$ 1,143,362	\$ 61,698	\$ 2,288,032
Operations and maintenance expense	\$ 370,850	\$ 239,506	\$ 3,293	\$ 613,649
Purchased gas	\$ -	\$ 551,009	\$ 50,986	\$ 601,995
Depreciation and amortization	\$ 201,392	\$ 118,955	\$ 830	\$ 321,177
Interest expense, net ^(b)	\$ 111,938	\$ 87,186	\$ 35,317	\$ 234,441
Allowance for funds used during construction	\$ (20,950)	\$ (2,715)	\$ -	\$ (23,665)
Provision for income taxes (benefit)	\$ 47,510	\$ (61,942)	\$ 103	\$ (14,329)
Net income (loss)	\$ 314,352	\$ 185,276	\$ (34,391)	\$ 465,237
Capital expenditures	\$ 576,314	\$ 479,335	\$ 7,114	\$ 1,062,763
Total assets	\$ 8,792,633	\$ 6,528,654	\$ 397,820	\$ 15,719,107

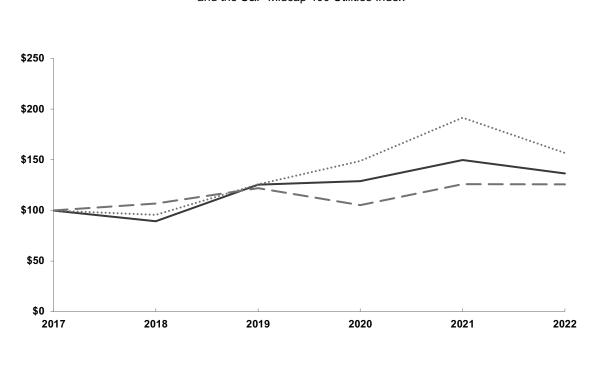
		Regulated		Regulated	Other and		
2021		Water		Natural Gas	Eliminations		Consolidated
Operating revenues	\$	980,203	\$	859,902	\$ 38,039	\$	1,878,144
Operations and maintenance expense	\$	332,598	\$	226,194	\$ (8,212)	\$	550,580
Purchased gas	\$	-	\$	313,390	\$ 26,872	\$	340,262
Depreciation and amortization	\$	182,074	\$	113,238	\$ 2,640	\$	297,952
Interest expense, net ^(b)	\$	108,356	\$	75,628	\$ 21,341	\$	205,325
Allowance for funds used during construction	\$	(19,258)	\$	(1,534)	\$ -	\$	(20,792)
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

	Regulated	Regulated		Other and	
2020 ^(a)	 Water	Natural Gas	-	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
Interest expense, net ^(b)	\$ 101,810	\$ 29,016	\$	52,246	\$ 183,072
Allowance for funds used during construction	\$ (11,231)	\$ (1,456)	\$	-	\$ (12,687)
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

^(a) Includes 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.

^(b) 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, and in the peer group (including reinvestment of dividends) was \$100 on 12/31/2017 and tracks it through 12/31/2022.



COMPARISON OF FIVE YEAR CUMULATIVE TOTAL RETURN* Among Essential Utilities, Inc., the S&P 500 Index, and the S&P Midcap 400 Utilities Index

*\$100 invested on 12/31/17 in stock or index, including reinvestment of dividends. Fiscal year ending December 31.

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Years as of December 31										
	2017	2018	2019	2020	2021	2022				
Essential Utilities, Inc.	100.00	89.32	125.41	129.08	149.78	136.42				
S&P 500 Index	100.00	95.62	125.72	148.85	191.58	156.89				
S&P Midcap 400 Utilities Index	100.00	106.81	122.12	105.18	125.96	125.76				

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 <u>Essential.co</u>. 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, <u>Essential.co</u>. 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 2023 Annual Meeting of Shareholders of Essential Utilities, Inc. will be held virtually via live webcast on Wednesday, May 3, 2023, at 8 a.m. Eastern Time, at www.virtualshareholdermeeting.com/WTRG2023.

Transfer Agent and Registrar Computershare P.O. Box 43006 Providence, RI 02940-3006 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.

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 2023 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 78 consecutive years. The normal Common Stock dividend dates for 2023 and the first six months of 2024 are:

Declaration Date	Ex-Dividend Date	Record Date	Payment Date
December 7, 2022	February 9, 2023	February 10, 2023	March 1, 2023
February 22, 2023	May 11, 2023	May 12, 2023	June 1, 2023
July 31, 2023	August 10, 2023	August 11, 2023	September 1,2023
October 30, 2023	November 8, 2023	November 10, 2023	December 1, 2023
January 29, 2024	February 8, 2024	February 9, 2024	March 1, 2024
April 29, 2024	May 9, 2024	May 10, 2024	June 1, 2024

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 43006 Providence, RI 02940-3006



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

BOARD OF DIRECTORS

As of December 31, 2022



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



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



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



Chairman and Chief Executive Officer Dune View Strategies Director since 2017

Daniel J. Hilferty

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



OFFICERS

Michael A. Huwar President Peoples

Christopher P. Luning Executive Vice President General Counsel

Daniel J. Schuller Executive Vice President Chief Financial Officer



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



Lee C. Stewart Private Financial Consultant Director since 2018



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

Matthew R. Rhodes Executive Vice President Strategy and Corporate Development

> Robert A. Rubin Senior Vice President Chief Accounting Officer

Christopher H. Franklin Chairman, Chief Executive Officer and President

> Colleen M. Arnold President Aqua

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.



Essential Utilities, Inc. 762 W. Lancaster Avenue Bryn Mawr, PA 19010

NYSE: WTRG

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www.Essential.co