



2022

ANNUAL REPORT





HG&E Board of Commissioners (from left): Francis J. Hoey III, Marcos A. Marrero, and James A. Sutter

TO THE HONORABLE MAYOR, MEMBERS OF THE CITY COUNCIL, AND VALUED CUSTOMERS:

Submitted herewith is the 120th Annual Report of the City of Holyoke Gas & Electric Department (HG&E) for the year ending December 31, 2022.

In 2022, the regional energy sector experienced significant increases in costs, driven by escalating global demand for natural gas and shortages in domestic supply, as well as the impact of supply chain disruptions and volatile economic trends. Despite these challenges and ongoing pandemic impacts, HG&E continued to offer some of the lowest utility rates in the region while delivering a strong financial performance. During the year both Fitch and Moody's affirmed HG&E's credit rating at AA- and A1, respectively.

HG&E's team continued to develop and execute plans that comply with Massachusetts climate legislation that commits the Commonwealth to reducing emissions below 1990 levels by 50% by 2030 and 75% by 2040, and to achieve net-zero emissions by 2050. This bill will have a significant impact on the electric and natural gas businesses over the coming years and will impact building and transportation sectors as well. Since purchasing Holyoke's hydroelectric assets in 2001, HG&E has significantly reduced its collective carbon footprint. With several utility scale solar projects operating within the city and a growing complement of battery storage capacity, HG&E is well positioned to meet the incremental targets laid out in the climate bill.

In addition to developing clean energy resources, HG&E offers a wide array of aggressive energy efficiency programs aimed to help customers save energy and reduce GHG emissions. To achieve Massachusetts 2050 targets, HG&E will continue to explore and expand energy efficiency and electrification program offerings in the residential, commercial, and industrial sectors. In addition, significant efforts toward modernizing the local electric grid continue in order to accommodate the shift toward electrification by the heating and transportation sectors. This work will continue for several years, and we appreciate our customers' patience as we conduct this necessary work.

A natural gas moratorium was imposed in 2019 due to regional natural gas pipeline constraints. The moratorium continues to pose challenges for HG&E customers and adversely impacts economic development opportunities. HG&E submitted a Petition to the Massachusetts Energy Facilities Siting Board in December 2022 for the addition of one 70,000-gallon, liquefied natural gas (LNG) storage tank at the West Holyoke facility LNG storage facility. If approved, this project would increase HG&E's LNG storage capacity by approximately 30% and increase the system reliability by adding a second vaporization system, ensuring that natural gas service is available when customers need it the most. In addition this will allow HG&E to approve certain service requests while continuing a path toward net-zero emissions.

HG&E's Telecom Division continued to support the Department's Information Technology and network operations while expanding wholesale network business with several local communities. Staff kicked off a fiber-to-the-home (FTTH) network design during the year and will continue to review the results of that exercise as well as customer interest in order to determine if there are viable areas within the city to provide FTTH internet service to residential customers.

Customers continue to report a high level of satisfaction with the Department's services and operating practices. In the 2022 customer survey, 95% of HG&E customers identified as having a positive relationship with the utility.



We thank the city officials for their support and HG&E employees for their continued faithful service. We shall continue to work diligently to provide our customers with reliable utility services at competitive rates, backed by an unprecedented dedication to customer service.

Respectfully,

Francis J. Hoey III, Commission Chairman
James A. Sutter, Commission Treasurer
Marcos A. Marrero, Commission Secretary
James M. Lavelle, Manager

GAS DIVISION

LNG INFRASTRUCTURE & RESILIENCY PROJECT

In 2019, the Department was forced to institute a gas moratorium on all requests for new and increased gas load as the regional demand for natural gas is outpacing supply and the gas distribution operates at capacity under peak demand in the winter. In 2022, the Department identified the LNG Infrastructure & Resiliency Project as a potential resource to support system reliability during peak demand periods.

HG&E's natural gas portfolio is made up of both firm pipeline capacity from the Tennessee Gas Pipeline and liquefied natural gas (LNG) which is stored at HG&E's West Holyoke LNG Facility. The Department has safely operated a liquified natural gas (LNG) storage facility for over 50 years to supplement peak demand. The proposed project consists of the installation of a fifth LNG storage tank with a nominal capacity of 70,000 gallons to increase on-site storage by 5,000 dekatherms (Dth) to a total of 21,000 Dth.

The key objective of the project is to enable HG&E to continue to provide reliable service during cold weather periods by maintaining adequate, on-site storage capacity. The project will also help maintain stable rates and reduce environmental impacts of the heating sector throughout the energy transition to net-zero by 2050 by enabling HG&E to selectively add natural gas service with the aim to reduce consumption of higher-emitting fuel when an electric alternative is not feasible. The project application, which was filed in December 2022 and is subject to Massachusetts Energy Facility Siting Board (EFSB) approval, is currently under EFSB review. The Department continues to evaluate additional options that will allow for the moratorium to be lifted; however, it is uncertain when, and if, the moratorium will be lifted in full.

GAS SUPPLY & FLOW CONTROL

The Department distributed 2,211,910 Dth of gas in 2022, with a peak daily send-out of 17,501 Dth on January 15, 2022. Of that, 12,177 Dth was delivered over the pipeline and 5,324 Dth was supplemented by LNG. As mentioned above, HG&E continues to operate its LNG storage and vaporization system, providing the supplemental gas needed during the coldest winter days. LNG also serves as an emergency supply for the city.

This past year, the Department performed infrastructure and safety enhancements at the system interconnect with a neighboring utility on County Road. This interconnection allows both utilities to provide back-up flow during maintenance projects as well as emergency supply due to unforeseen circumstances to help maintain reliable supply and best serve our customers.

The Department also continued its five-year plan to install tertiary protection at all gas regulating stations in the distribution system. This plan, which began in 2020, will further enhance the safety of the distribution system by reducing the risk of over-pressurization of the downstream gas system in the event of equipment failure. Of the Department's 18 regulating stations, 15 locations are now currently equipped with tertiary protection.

GAS MAINS & SERVICES

The Department continued its cast-iron main replacement and abandonment efforts and eliminated over 1¼ miles of cast-iron pipes with new plastic infrastructure on Arlington Street, Blaine Avenue, Briarwood Drive, Brightside Drive, Lincoln Street, Magnolia Avenue, Northampton Street, O'Connor Avenue, Portland Street, Sargeant Street, and Valley Heights. The new plastic mains are generally four, six, and eight inches in diameter.

Per HG&E's Distribution Integrity Management Plan (DIMP), which was implemented in August 2011, the Department is continuing efforts on an accelerated bare steel service replacement program. There are currently less than 600 bare steel gas services remaining in Holyoke, down from approximately 3,200 at the beginning of the program. At the conclusion of this program, all gas services will be constructed of either polyethylene plastic or cathodically protected coated steel. Bare steel services were installed from the early 1900s through the late 1960s.

In all, the Department installed over 11,700 feet of new main infrastructure, 235 replacement services and abandoned 68 services. HG&E's natural gas distribution system now consists of 185 miles of mains and just over 8,250 service lines.

LEAK SURVEYS

The Department helps ensure the safety and reliability of the gas distribution system through an extensive series of compulsory and voluntary comprehensive leak surveys. Each year, the Department conducts public building, mobile and walking flame ionization patrols, special monthly winter patrols, and vegetation observation surveys. The full-length walking survey over each individual gas service covered over 4,700 lines in 2022, or about one-half of the service pipes in the system. The combined surveys accounted for the detection of 52 gas leaks, mostly minor. All leaks were investigated, prioritized, and repaired in accordance with applicable industry standards and regulations. At year end, the Department had zero leaks on file within the gas distribution system.



SERVICE

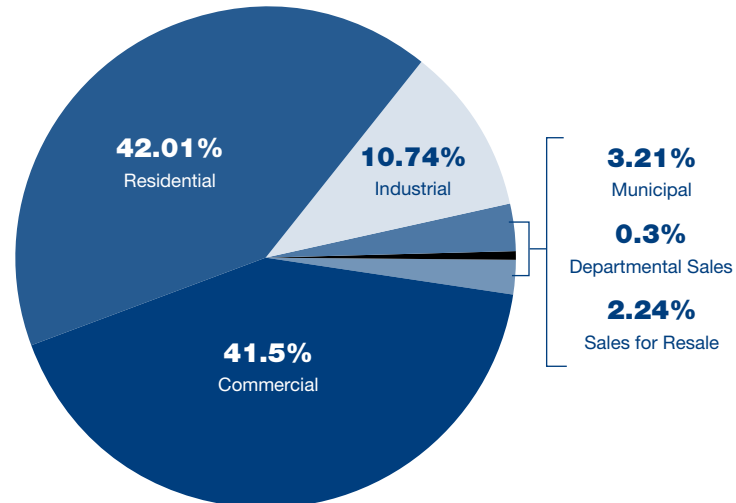
The Department responded to 1,938 service calls for customers in Holyoke and Southampton during the year. These calls include boiler/furnace, water heater, and dryer repairs, as well as thermostat installations. In addition, a total of 3,649 atmospheric corrosion inspections were completed to evaluate the integrity of exposed service piping. The Service team also assisted in mutual aid response for a neighboring utility to perform state-mandated gas meter exchanges.

PIPELINE SAFETY MANAGEMENT SYSTEM

The Department remains committed to establishing a robust Pipeline Safety Management System (PSMS). Safety management systems (SMS) have proven to help other industries and the adoption of API RP1173, Pipeline Safety Management Systems (PSMS), will allow the Department to systematically manage pipeline safety and continuously measure progress to improve overall pipeline safety performance, awareness, and vigilance. This process began in 2019 and the Department continued to work with regional organizations and SMS experts on generating a customized roadmap for implementation and enhancement at HG&E.

In 2022, the Department conducted a natural gas emergency drill exercise with local emergency response officials to continue its journey toward strengthening PSMS and demonstrating our continued commitment to safety with a goal of zero incidents.

2022 GAS REVENUES





ELECTRIC PRODUCTION

Hadley Station at the Holyoke Dam

HYDROELECTRIC

HG&E is the owner and operator of the Holyoke Dam, Canal System, and associated hydroelectric facilities. The Hadley Falls facility contains two hydroelectric generating units with a total installed capacity of approximately 33 megawatts. The Holyoke Canal System is a three-tiered, 4½-mile system that runs throughout downtown Holyoke and provides water to generating stations that have a total combined capacity of approximately 17 megawatts. HG&E received Low Impact Hydropower Institute (LIHI) certification for its hydro system in 2012 and was recertified in 2017. The current LIHI certification extends through January 2030.

In addition to operating a source of carbon-free electrical generation and conducting various environmental studies, HG&E has made significant environmental enhancements since acquiring these assets. Several projects were completed in 2022 that improved or contributed to the future generation capacity and reliability of the Department's hydroelectric facilities, including:

- **Hadley Falls #2 Rehabilitation Project:** Based on the design completed in 2021, approximately 50% of the wicket gates were cast in 2022 for the Hadley Falls 2 Rehabilitation Project with the remainder to be completed in 2023. Construction efforts associated with this project are slated for 2024.
- **Canal System Log Boom:** A new, reinforced floating canal log boom to mitigate canal inlet debris buildup was installed during the summer of 2022.
- **Chemical Station:** Replaced and relocated the intake for Chemical Station cooling water. This allowed for improved flow of the cooling water for both units at the station.
- **Riverside #4, #5, and #7 Station:** HG&E completed various upgrades to its Riverside Station infrastructure and controls. Specifically, these upgrades included:

- Power station roof replacement;
- Installation of an exhaust fan to improve air flow;
- Relocation of the Riverside #7 exciter to a higher elevation within the station, above the prior known high flood level;
- Replacement of the station service and unit bus relays;
- Replacement of electric service panels;
- Replacement of the Riverside #4 exciter Variable Frequency Drive; and
- Repairs to a deteriorated section of concrete wall in the Riverside Forebay, near the Riverside #4 and #5 intake.

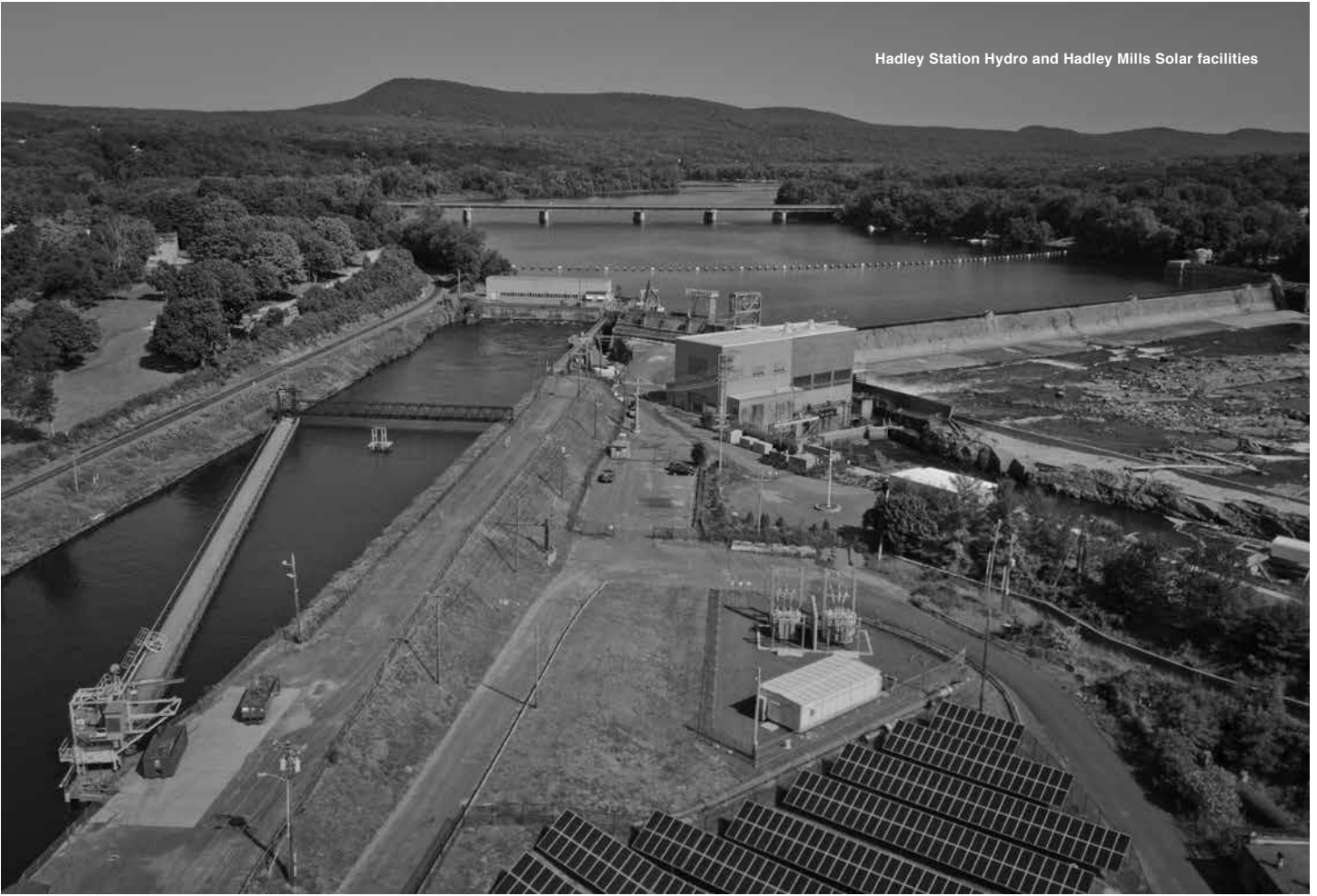
OTHER PROJECTS:

Annually, HG&E performs two canal inspections, one in the spring and another in the fall. During these inspections, the canals were drained and assessments performed along canals and canal walls, including overflows, intakes, penstocks, powerhouses, and tailraces. No significant findings were reported in 2022.

HG&E continued its annual efforts to control the invasive water chestnut infestation at Log Pond Cove. As in recent previous years, this work was completed in partnership with Connecticut River Conservancy and the US Fish and Wildlife Conte Refuge. Efforts consisted of hand pulling by contractors, and herbicide treatment.

In 2022, various repairs were made to the First Level Canal. An approximately 75'-long section of deteriorated canal wall was replaced at the intersection with Cabot Street, near Fin-Mar. In addition, approximately 600 linear feet of shotcrete was applied to the First Level Canal wall in the vicinity of the louvers to minimize the potential for leakage through the canal wall.

New canal water level transmitters were installed at Boatlock and Riverside Stations, and all other level transmitters on the Canal System were calibrated. In addition, the gate operators were replaced on



the Overflow #2 gates. These efforts help to ensure that flows remain balanced within the Canal System. In addition, the Department had the 17-gauge locations throughout the main dam and three level canal system surveyed in summer 2022 to verify benchmark baseline elevation reference points.

Repairs were made to areas of concrete scour on the dam apron. In addition, a new retaining wall was installed to protect the South Hadley eel ramp.

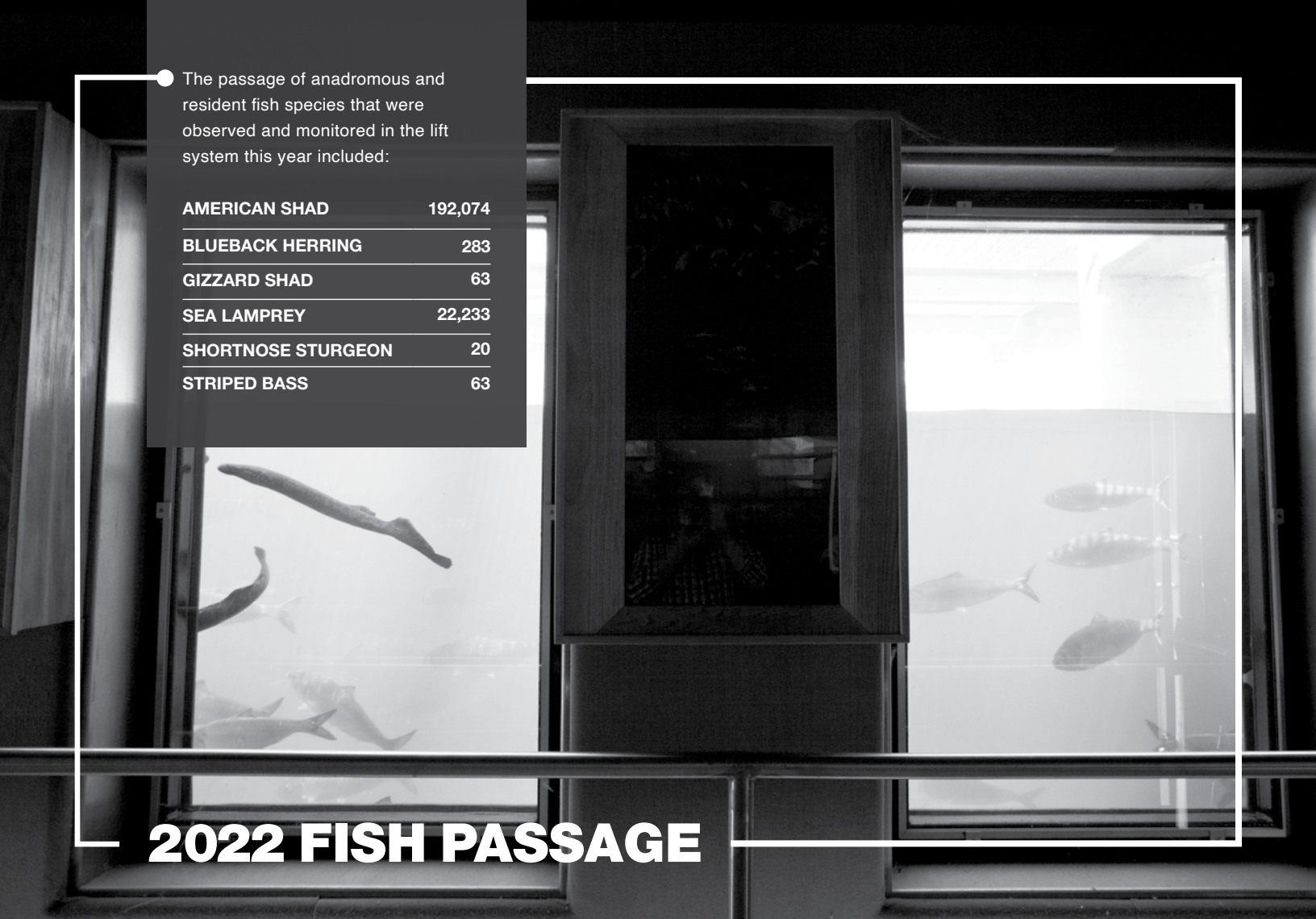
The deformation monitoring field survey report was completed and filed in early 2022. This survey identifies any dam movement to the nearest millimeter and is required every five years as part of HG&E's dam safety program. No significant findings were reported.

The twelfth Part 12 inspection was completed in August 2022 for the Holyoke Hydroelectric Project. This intensive dam safety inspection

is completed once every five years. The Federal Energy Regulatory Commission found the project structures to be in satisfactory condition.

Additional leakage in the vicinity of the Louver Bypass Pipe slope (reconstructed in 2021) was observed in 2022, causing the reconstructed slope to fail. HG&E undertook investigative efforts to identify a potential source for the additional leakage and completed a design for a retaining wall with an enhanced filter system within the slope to mitigate any further leakage. As part of this effort, two abandoned, buried penstocks were plugged and infilled to stop the existing leak, and the slope was reconstructed with the new retaining wall and enhanced filter system. Based on follow-up monitoring, the leak appears to have been resolved.





The passage of anadromous and resident fish species that were observed and monitored in the lift system this year included:

AMERICAN SHAD	192,074
BLUEBACK HERRING	283
GIZZARD SHAD	63
SEA LAMPREY	22,233
SHORTNOSE STURGEON	20
STRIPED BASS	63

2022 FISH PASSAGE

ROBERT E. BARRETT FISHWAY

In 2022, HG&E continued its partnership with Holyoke Community College (HCC) for the collection of data on the number of species passed at the Robert E. Barrett Fishway. There was a reduced HCC staff level due to pandemic-related restrictions. Activities included biological sampling, trapping, and loading of shad; trapping of shortnose sturgeon and Atlantic salmon; and observations of lift operations and eel passage.

In addition to the fishlift, there are a total of three eel ramp passage facilities on both the Holyoke and South Hadley shores below the dam. A total of 8,254 American eels were passed upstream in 2022.

In 2022, the public viewing facility at the Barrett Fishway was open to the public on a limited basis (scheduled tours) due to pandemic-related restrictions and guidance.

HG&E SHAD DERBY

The annual HG&E Shad Derby offers both adult and youth fishing enthusiasts the opportunity to enjoy the recreational benefits of the Connecticut River. The 2022 HG&E Shad Derby was held on May 14, 15, 21, and 22. The event attracted 44 registrants in the Senior Division and 15 registrants in the Junior Division.

Robert Layton of Granby led the Senior Division with a 4 lb. 5 oz. shad. Anesa Rivera of Holyoke led the Junior Division with a 4 lb. shad. The John DiNapoli Award for the first shad caught by a youth went to Justin Rivera of Chicopee.

ELECTRIC DIVISION

ELECTRIC OPERATIONS

In 2022, a number of projects were completed that will increase the reliability of the Department's electric substation and transmission infrastructure, as well as prepare the Department for future grid modernization efforts, including electrification of the housing and transportation sectors.

THESE PROJECTS INCLUDED:

SCADA Master System Replacement – Phase I: A project to upgrade the Department's Supervisory Control and Data Acquisition (SCADA) was initiated in 2022. The new system will enhance operator situational awareness and improve our ability to respond to alarms and system disturbances. The system was specified, procured, and installed, and initial configuration was completed. The new system is running in parallel with the existing system and is slated to be cutover and commissioned in 2023 as part of Phase II.

RTU Replacements – Phase I: Two legacy Remote Terminal Units (RTUs) were replaced as part of a multiyear project. These devices aggregate input and output data from field devices (relays, meters, breakers, etc.) and send it to the SCADA Master for monitoring. The new RTUs have additional features including event retrieval (such as after a trip), a logic engine, and options for advanced communication protocols, which can be leveraged for future distribution automation purposes and improving staff efficiency in identification and response to system disturbances.

Capacitor Replacements – Phase I: The Department performed an engineering analysis to begin the process for upgrading the Department's vintage distribution capacitor banks and associated controls. This involved the implementation of a detailed distribution system model, which provided the basis for a system study in order to optimize the capacitor sizing and placement. This will allow the Department to meet regulatory requirements while maintaining adequate system voltage and minimizing distribution system losses. Installation of the replacement capacitor banks and controls is scheduled to start in 2023 and be completed over a four- to-five-year period.

Distribution Automation Controller (DAC): As part of the Department's Grid Automation Plan, a new Distribution Automation Controller (DAC) was installed and commissioned. This system monitors field breakers, reclosers, and switches, and automatically restores service to as many customers as possible in the event of a fault. The initial scheme covers the recently converted Walnut Substation load and additional schemes are planned to be implemented in 2023.

Transmission Maintenance: Major maintenance on the Department's transmission infrastructure was completed as follows:

- Tree clearing on the 1292 line was performed. This will reduce tree contact outages and reduce response time to this difficult-to-access area.

- Twelve steel transmission poles were repaired. The work involved removing grout and applying protective coatings to the concrete pier, anchor bolts, and portions of the pole shaft/baseplate. For two structures, reinforcing steel collars were welded to the pole to replace minor section loss of the pole shaft due to corrosion.

Substation Preventative Maintenance: As part of the Department's preventative maintenance plan, major maintenance and testing was performed on various substation and plant equipment throughout the year. In summary, 243 maintenance orders were completed, including major maintenance and/or testing on:

- Two 115kV circuit breakers at North Canal Substation;
- Twenty-two medium voltage vacuum circuit breakers at North Canal Substation;
- Four power transformers at North Canal Substation;
- Two station battery systems at North Canal Substation;
- Six 115kV voltage transformers at Holyoke Substation;
- One 115kV voltage transformer was replaced at North Canal Sub after it was found to be leaking oil during routine inspection.

Support for electric distribution and hydro during the year included the preparation of 275 switching orders with clearances and permissions issued for planned and emergency medium and high-voltage work, assistance with the design, testing, and commissioning of eight medium voltage automated switchgears, as well as assistance with the interconnection processes and protection of various diesel, solar, and battery energy storage projects. Maintenance and repair operations were also performed as required on distribution and hydro equipment, including inspections of line reclosers, sectionalizers, and capacitor switching controls. Support was again provided for the city-owned flood control pumping stations in the form of emergency maintenance and pumping operations, as required.

ELECTRIC DISTRIBUTION

In 2022, HG&E continued to make important investments in both the system reliability and electric distribution infrastructure as we prepare for future electrification. One such investment included the replacement of approximately 3,000' of 350 MCM Cu underground primary cable on sections of the 32W1 and 32W2 circuits originating from Walnut Substation including the installation of two new five-way automated padmounted switchgear, located at Walnut Substation and at the intersection of Lyman Street and Front Street. These two switchgears provide automated redundancy from other nearby circuits in the neighborhood during abnormal local system conditions. Additionally, another 3,000' of new underground cable for laterals was installed from existing termination cabinets and/or an automated switchgear to further increase customer reliability by reducing the number of potential outages and interruption durations that customers may

experience. This area included Lyman Street from Walnut Street to Canal Street, St. Kolbe Drive, and associated side streets.

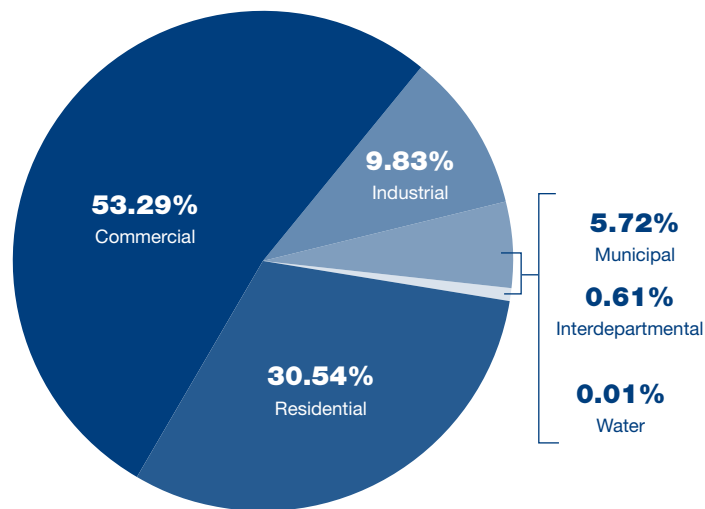
The Department continued with its 4.8 kV conversion completing the H2 and H4 circuits from Highland Substation. This is a multiyear project that will upgrade infrastructure, including the addition of automated switchgear and devices to circuits, provide fault isolation points to all laterals, and increase the operating voltage to 13.8 kV, reducing system losses in preparation for future electrification initiatives. This area included Northampton Street between Sargeant Street and Dwight Street, including side streets, as well as Dartmouth Street and the area between Pleasant Street and Jefferson Street, and Highland Avenue and River Terrace. There were 47 poles replaced, approximately 200' of underground primary cable, 28,050' of overhead primary wire, and 5,760' of overhead secondary wire installed, and numerous termination cabinets and padmounted switchgear installed that will help improve reliability and restoration efforts in these areas.

The Department continued work that began in 2016 involving the removal or replacement of existing vacuum switches in manholes. The project involves replacing all 94 existing 15 kV vacuum switches located in various manholes throughout the city that are used in isolating a circuit for the purposes of load shifting, outage restoration, and/or maintenance work. Ten more vacuum switches were removed or replaced with air break switches and/or padmounted air switchgear throughout the year, bringing the total to 77 since 2016. The Department has been using a combination of automated padmount, oil-filled, and air insulated switchgear to replace some of the remaining vacuum switches in the field. The new switchgear will also provide automation to isolate faulted sections of circuit more quickly and provide control of these devices from remote locations. The Department expects to complete the replacement of remaining vacuum switches over the next few years.

The Department completed the first of a two-phase project involving the replacement of a two-mile section of overhead line between Berkshire Street and Route 5 along the railroad right-of-way on the 44P8 circuit that was relocated down Main Street and up Anderson Hill. The poles were 50+ years old and the existing overhead wire was bare aluminum that had been susceptible to tree contact over the years. Ten poles were replaced along the route with new spacer cable installed.

Backyard pole lines in the areas serviced mainly from Highland Substation were constructed in the 1950s and 1960s. The aging infrastructure has created reliability and access issues, which is a vulnerability to the overall system. Based on reliability data, tree trimming expenses, and known hazard areas, locations with backyard facilities were reviewed in 2018. The Department determined if new facilities are to be installed underground or overhead based on the type of distribution infrastructure existing nearby.

2022 ELECTRIC DIVISION REVENUES



There were 42 services, 36 single family and 6 multifamily, that were relocated from the backyard to the street in locations including Pearl Street, Dartmouth Street, Wellesley Road, Harvard Street, Morgan Street, Lawler Street, Longwood Avenue, Pleasant Street, Oakwood Avenue, and Valley Heights. The Department also trenched approximately 1,350' on Lexington Avenue and Irving Street for new conduit to underground infrastructure that will be used to eliminate existing backyard infrastructure in the nearby area. This work will provide customers with a more reliable electric service, as well as protection from potential safety hazards during extreme weather events. Additionally, these measures will reduce some of the tree trimming and outage costs for the Department.

A new 35 kV line extension was installed between North Canal Substation and the Willimansett Bridge to accommodate future load growth in the South Holyoke area. The extension consisted of installing approximately 2,100' of spacer cable and four new wood poles with provisions for two new switchgear at North Canal Substation for additional redundancy.

Despite ongoing supply chain issues, there were 35 transformers that were replaced as part of our ongoing age-based asset replacement program. This program is a proactive approach to replacing assets in the field that are beyond the expected asset life span before a problem arises that causes an outage. Transformers of at least 40 years in age have been initially targeted to be replaced as part of this project. A net 977.5 kVA was removed from the system as a result of the program.

One vault cover that is used to cover our network transformers was replaced at the entrance to Holyoke Health Center across from

City Hall on High Street. This vault cover will allow for easier access into network vaults, improve manhole ventilation, and make it easier to replace transformers.

This is the first year of a planned multiyear project the city has initiated with funding from various grants to redevelop South Holyoke. The focus of this redevelopment includes the central portion of the South Holyoke neighborhood around the Morgan School specifically located between Hamilton Street and Adams Street, and Clemente Street and South Bridge Street. The first phase included the construction of 12 new rental housing units at the corner of Hamilton Street and South East Street with a new underground service having a 167 kVA connected load. This phase also includes the installation of 75 new decorative street lights and associated underground infrastructure to accommodate this lighting.

A number of preventative maintenance activities continued throughout the year. Testing was performed on 20 used pole-top transformers. HG&E also performed 280 manhole inspections and 660 wood pole inspections throughout various areas of the city. Stray voltage testing of approximately 20% of the city was completed in the Jarvis Avenue, Easthampton Road, Smiths Ferry, and Bemis Road areas as well as Northampton Street between Cherry Street and Hampden Street. There were 185 padmount transformers and 17 termination cabinets on various circuits inspected by the Department line crew. Annual visual inspections on all three transmission lines were performed using drones to ensure reliable operation of the transmission system. Infrared inspections were performed on all distribution circuits throughout the city. There were six services in poor condition that were either upgraded or replaced.

New electric services for Popeye's on Holyoke Street and four new electric vehicle charging stations located at Veterans Park, Holyoke Public Library, Holyoke Train Station, and the Department's Main Office were completed, resulting in a net additional connected load of 85 kVA. Service upgrades were performed at 480 Hampden Street for Girls Inc of the Valley and 602 Main Street for a new cannabis dispensary, resulting in an additional connected load of 225 kVA. There were five new homes constructed on available lots on Beech Street and Jackson Street that required new electric services resulting in a connected load of 25 kVA.

In summary, for 2022, HG&E set 210 poles and removed 110. A net 1,390 kVA connected load was installed onto the distribution system. Some 28,936 circuit feet of underground cable was installed, while 22,651 was removed. Similarly, 106,123 circuit feet of overhead wire was installed, while 114,335 was removed. Approximately 15,590 feet of PVC conduit was installed. There was a net increase of nine contract lights and 67 streetlights.

RELIABILITY

Reliability statistics allow the Department to track service reliability and compare data from year to year with other municipal and private utilities. There are four statistics used to define the length and frequency of interruptions to customers, system availability, and the number of

customers impacted by both unscheduled outages alone, as well as unscheduled and scheduled outages combined (see chart, below).

UNSCHEDULED OUTAGES ONLY		
STATISTIC	2022	2021
ASAI	99.9882%	99.9851%
CAIDI	97.022 min	89.665 min
SAIDI	66.264 min	82.397 min
SAIFI	0.683 outages	0.919 outages

COMBINED OUTAGES		
STATISTIC	2022	2021
ASAI	99.9678%	99.9785%
CAIDI	111.075 min	86.874 min
SAIDI	173.248 min	116.815 min
SAIFI	1.560 outages	1.345 outages

- Average System Availability Index (ASAI)**
Represents how much of the time a customer actually has service available.
- Customer Average Interruption Duration Index (CAIDI)**
Represents the average time expected to restore service after a sustained interruption.
- System Average Interruption Duration Index (SAIDI)**
Defines the average interruption duration per customer served.
- System Average Interruption Frequency Index (SAIFI)**
Defines the average number of times that a customer's service is interrupted during a given year.

The Department has received the American Public Power Associations' (APPA) Reliable Public Power Provider (RP3) designation since 2011. An RP3 designation is a sign of a utility's dedication to operating an efficient, safe, and reliable distribution system. Being recognized by the RP3 program demonstrates to community leaders, governing board members, suppliers, and service providers a utility's commitment to its employees, customers, and community. The Department has been either a Diamond or Platinum member, the highest awarded designations, since 2015.



In addition to the RP3 designation, the Department is also a five-year recipient of the Certificate of Excellence in Reliability award from APPA. This award recognizes the Department for having achieved excellence in reliability by significantly outperforming the electric industry national average and achieving the top quartile of system outage duration from national reliability data collected by the Energy Information Administration (EIA).

METERING

In 2022, the Department continued its advanced metering infrastructure (AMI) system rollout to support commercial and industrial billing and future distribution automation. The Department installed 1,073 AMI meters. In addition, the Department replaced 995 single phase AMR meters with AMI meters for hard-to-access locations and to facilitate the mesh network communication paths back to the field routers. Despite these replacements, the AMR system still maintained an average daily read rate of 99.82%. The Department also developed an accelerated AMI deployment plan to replace the remaining ~12,500 meters with AMI meters over the next five years. This accelerated deployment plan will begin in 2023.

Throughout the year, the metering group continued to support Customer Service, performing delinquent customer on and offs, tagging notifications, meter reads, and collections. In total, 2,094 credit-related duties were performed in 2022.

In summary, there were a net total of 60 electric meters installed, 1,093 electric meters replaced, and 2,075 electric meters retired, having an average age of 17.73 years. A total of 1,972 electric meters were tested and calibrated, 222 turn-ons and 200 turn-offs, 15 electric successions performed, and 35 vacant consumption reports investigated for metering problems and/or theft of service. There were 27 current transformers installed and six current transformers removed. On the gas side, 2,384 meters were removed and tested, 241 meters were installed, 2,255 meters were sealed, and 285 meters were retired.

WHOLESALE POWER

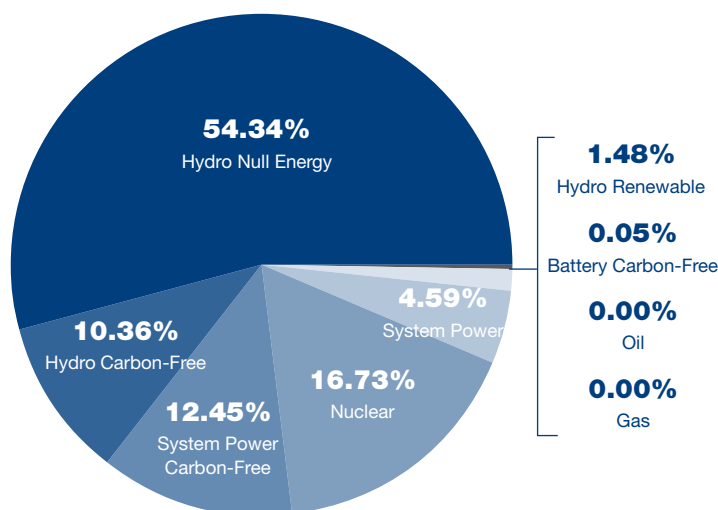
HG&E manages a diverse power supply portfolio. HG&E purchases power to meet the ever-changing electric loads and brings it into Holyoke from all over New England. HG&E monitors possible monthly and annual peak hours and actively institutes load reduction measures to lower its load, and thus costs, during these times. As part of the Energy Purchasing and Risk Management Plan, the Department monitors the available energy supply and sources on a daily basis to stabilize and ensure price certainty for the future cost of power. The Department purchases power on both a short-term and long-term basis to take advantage of the fluctuating market, manage the risk of rising prices, and increase the stability of future energy costs, thereby stabilizing rates for all customers while maintaining a clean energy supply. HG&E is committed to protecting the environment and setting minimum percentages of noncarbon energy sold to its retail end-user customers.

HG&E's goal is to maintain and increase clean energy within the fuel mix through sustainable, long-term business practices. For 2022 through 2035, HG&E is expected to meet and exceed greenhouse gas (GHG) emission targets set by the state and will continue to generate and procure energy with the best interest of the ratepayers in mind.

HG&E developed a voluntary Carbon-Free Electric Pilot Program for commercial and industrial customers who wish to have their electricity come from 100% carbon-free energy sources, made possible through the purchase and retirement of qualifying Massachusetts Class I or Class II Renewable Energy Certificates (RECs). This program will assist HG&E and commercial customers with achieving carbon-free goals. The pilot ran from January 1, 2022, through December 31, 2022, with two customers purchasing a total of 1,904 RECs. Considering the success of the pilot program, the Department made it an official rate schedule in 2023.

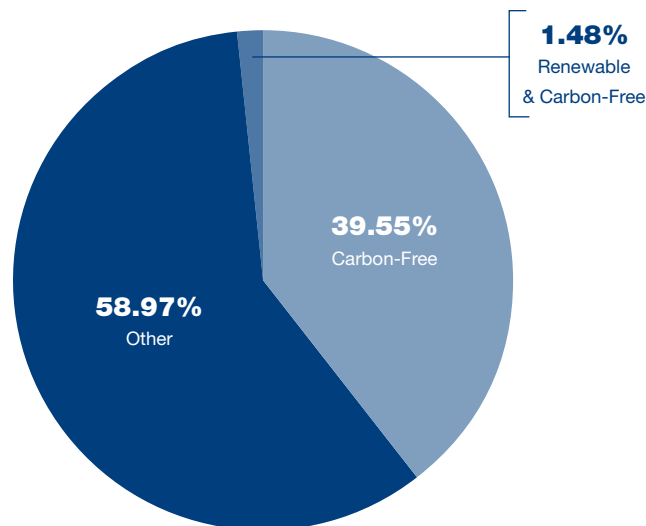
In 2022, 1.48% of HG&E's power supply production came from generation that qualifies as renewable, according to definitions set forth by the Renewable Portfolio Standards within the New England states. Additionally, 59.40% of HG&E's production came from generators that produce solar, hydro, battery storage, and wind power, but that HG&E cannot claim as green energy because the renewable energy certificates (REC) are not owned by or retired with HG&E. The Null Energy Label is used to signify non-REC ownership; 58.97% of Null Energy total production served to meet HG&E's electrical load in 2022. The pie chart on the next page shows Holyoke's supply by fuel type as a percentage of electrical load from retail sales. It can be collapsed into three categories.

2022 ENERGY MIX AS PERCENTAGE OF RETAIL SALES



In 2022, 1.48% is renewable and carbon-free while an additional 39.55% is carbon-free (nuclear, carbon-free system power, and hydro). The Other category comprises 58.97% of carbon-emitting resources. Therefore, 41.03% of HG&E's electrical load for the year was considered carbon-free. This percentage is significantly lower than the 2021 carbon-free percentage primarily because the

2022 ENERGY EMISSIONS CHART



department decided to sell 150,173 hydro RECs to help offset high power supply costs due to the increased gas and oil costs. The revenue from the sale of these RECs allowed HG&E to maintain low electrical rates for our customers. Our load was up approximately 1.17%, and hydro generation was down approximately 27.25% as compared to 2021.

The System Power represents various-term-length bilateral contracts comprising system mix within ISO-NE that were procured during the summer time frame. System Power Carbon-Free represents long-term, on-peak bilateral contracts with nuclear carbon-free certificates attached that will end in December 2035 and a long-term, around-the-clock bilateral contract from Hydro Quebec with carbon-free certificates attached that will end in October 2025.

HG&E currently hosts two battery energy storage systems. One system totals 3 MW/6 MWh, and the other system, which began commercial operation in June 2021, totals 4.99 MW/10 MWh. These clean energy systems were successful in reaching 10 of 12 forecasted monthly hourly peak loads and the one annual hourly summer peak load, resulting in significant transmission and capacity cost savings to rate payers of more than \$700,000 in 2022.

The Department continued to proactively pursue and host low-cost carbon-free projects to secure and further enhance its energy portfolio. In 2021, HG&E contracted with two additional utility-scale battery energy storage systems totaling 4.80 MW/14.40 MWh and 4.75 MW/14.25 MWh. Both of these systems are expected to become commercial in 2024.

HG&E currently hosts 28 solar projects (17 utility-scale, nine residential, and two commercial), with a corresponding output load of 17.886 MW-dc, allowing the Department to purchase power at a lower cost. Utility-scale

projects resulted in 21,394 MWh of load reduction, while residential and commercial customer solar resulted in 105,294 kWh of load reduction on the system in 2022. The harnessing of solar energy from these projects within Holyoke is offsetting the Department's demand and reducing future costs for all customers.

In an effort to help foster the adoption of electric vehicles and meet the needs of many customers and city visitors, HG&E installed four public Level 2 electric vehicle charging stations throughout downtown Holyoke with the help of funding from MA DEP's Massachusetts Electric Vehicle Incentive Program (MA EVIP). This is the first phase of HG&E's public EV charging station plans. Additional locations and funding sources will continue to be analyzed as adoption levels and demand increase as part of Phase 2. HG&E has also begun to work with private charging station owners to determine the feasibility associated with location, installation costs, and rates.

Beginning in February 2017, HG&E developed a Community Solar Program open to all residential customers who have chosen to participate (opt in) to the program. In 2022, 2,379 customers participated in this program. This program allows residential customers to receive the benefits of solar without the expense of installing a system at their location. The Mt. Tom Solar project, totaling 4.988 MW-ac (increased in output during 2019 from prior 4.50 MW-ac rating), and the Kelly Way 2 project, totaling 0.603 MW-ac, were designated as community solar projects. Load reduction from community-shared solar generated a total savings of \$109,638 to those participating in the program. Additionally, in 2021, a total of \$21,711 was provided to the Holyoke Housing Authority from three solar systems (Aegis, Gary Rome, and Hadley Mills) that were set up under the Low or Moderate Income (LMI) Solar Program.

The hydroelectric system, including the Hadley Falls Dam and the Holyoke Canal hydro facilities, maintains Massachusetts Class I and II status, in addition to Maine Existing certifications. HG&E received MA Class I certification for 10.91% of Hadley Falls 1 and 2, and Hadley Falls 1 and 2 were certified as Clean Existing Generation Units in 2021. All of the canal units, with the exception of City 4J (which is 100% MA Class I) are MA Class II certified, and six canal units are certified with small percentages as MA Class I. Sale of these certificates resulted in \$2,236,608 of revenue to the Department in 2022.

HG&E proactively works throughout the year to improve reliability by maintaining and making upgrades to its 9.25 circuit miles of pool transmission facilities (PTF). Ensuring that all transmission lines and processes are up to date allows HG&E to meet its future needs and reduce transmission costs. Transmission Regional Network Service (RNS) rates increased 1.3% from \$140.98/kW-year to \$142.78/kW-year in January 2022. The Department's RNS annual charge of \$8,039,863 was offset by 9.25 circuit miles of transmission infrastructure, with three transmission substations. With PTF revenues of \$4,830,844 and peak shaving solar, energy storage, and hydro offsets of \$1,176,658, in 2022, the Department's annual RNS charge was reduced to \$2,032,361.

Holyoke achieved Green Community status in 2010 and is committed to efficiency, conservation, and sustainability. The Department's replacement of high-pressure sodium lights with more efficient light-emitting diode (LED) lighting technology has, on average, reduced the city's streetlight consumption by 60%. The city has realized about \$300,000 in direct energy savings from these lights in 2022 compared to pre-LED street lighting costs, although, when factoring in additional LED decorative and other lights added by the city to the capital investment list over the past several years, the total resulting savings was about \$128,000 in 2022. This total savings will increase significantly when the initial capital investment has been paid off in 2023.

HG&E earned a Smart Energy Provider (SEP) designation from the American Public Power Association for demonstrating commitment to and proficiency in energy efficiency, distributed generation, and environmental initiatives that support a goal of providing low-cost, quality, safe, and reliable electric service. The SEP designation, which lasts for two years (December 1, 2021, to November 30, 2023), recognizes public power utilities for demonstrating leading practices in four key disciplines: smart energy program structure, energy efficiency and distributed energy programs, environmental and sustainability initiatives, and the customer experience. HG&E is one of only about 100 of approximately 2,000 public power utilities in the nation to receive such designation.

In 2021, HG&E was recognized as one of a handful of utilities nationwide for its leadership in transforming to a carbon-free energy system by the Smart Energy Power Alliance (SEPA) and was listed on the 2021 Utility Transformation Leaderboard. This significant recognition was awarded to only 10 utilities nationwide. SEPA also ranked HG&E third nationally in energy storage per capital.

ENERGY EFFICIENCY & ELECTRIFICATION

In 2019, HG&E issued a natural gas moratorium, effectively discontinuing new or increased requests for natural gas services in HG&E's territory. Through additional efforts to keep Holyoke's carbon footprint low, HG&E continued to expand its energy efficiency and electrification incentives and programs in 2022 by encouraging the installation of cleaner, more efficient alternative electric technologies, such as heat pumps.

HG&E's Green Team, established in 2020, continued to strategize its energy efficiency and electrification efforts and initiatives for both residential and commercial customers. In order to respond to rising costs in equipment and labor, the amount of assistance under the Residential Energy Conservation Program was increased from \$5,000 to \$10,000. This additional amount of assistance has helped cover a significant portion of project installation costs, thus reducing the financial barriers that can otherwise hinder customers from moving forward with various energy efficiency and electrification measures.

Beginning in 2021, HG&E began managing all rebates in-house, a process previously handled by a third-party contractor. This not only reduced administration costs, but also assists with expediting



review and payment times. In 2022, HG&E approved over 300 rebate and assistance requests, totaling approximately \$786,000 in energy efficiency and electrification incentives for customers. Additionally, by processing all applications in-house, HG&E is able to collect the necessary data needed to track the energy and carbon emissions savings resulting from its incentive programs. HG&E will continue to analyze and evaluate the results of these incentive programs and continue to improve existing incentives offered in an effort to better understand how each program benefits the overall goal of reducing emissions.

In 2021, HG&E launched a Whole-Home Air Source Heat Pump (ASHP) Program, designed to support the installation of high-efficiency and optimally designed ASHP systems. Through this program, HG&E offers an enhanced rebate amount toward these systems along with an added incentive to improve weatherization in parallel. In 2022, 15 customers installed whole-home ASHP systems, all of whom took advantage of a total of approximately \$90,000 in incentives through assistance and rebates.

In 2022, HG&E also soft-launched the Beat the Peak program, which is a voluntary peak load reduction program available for residential customers. Through this program, notifications are sent to customers who enroll in the program in the attempt to help reduce consumption during specific peak time frames. Eight customers have enrolled through the end of 2022.

HG&E will continue to revise and improve its energy efficiency programs and initiatives in 2023 to further promote energy savings, electrification, and emissions reduction. Several new and enhanced rebate programs are being explored, which include residential and commercial demand response programs, commercial electrification incentives, and continuous improvements of incentives for energy efficiency and electrification measures.



POWER SUPPLY

2022 POWER SUPPLY RESOURCES

		CONTRACT CAPACITY (kW-AC)			
PROJECT NAME	FUEL TYPE	PROJECT			CONTRACT
		START DATE	WINTER	SUMMER	END DATE
NYPA FIRM	HYDRO	1985	1,989	1,989	9/1/25
MILLSTONE 3 - MIX 1	NUCLEAR	1986	1,334	1,334	11/25/45 *
MILLSTONE 3 - PROJ 3	NUCLEAR	1986	2,325	2,325	11/25/45 *
SEABROOK - MIX 1	NUCLEAR	1990	147	147	3/15/50 *
SEABROOK - PROJ 4	NUCLEAR	1990	3,306	3,306	3/15/50 *
SEABROOK - PROJ 5	NUCLEAR	1990	408	408	3/15/50 *
HYDRO QUEBEC 1	N/A	1986	1,717	1,717	LOU **
HYDRO QUEBEC 2	N/A	1989	3,585	3,585	LOU **
NYPA PEAK	HYDRO	1985	426	426	9/1/25
STONYBROOK GT 2A	#2 OIL	1982	2,476	1,910	10/31/2040 * **
STONYBROOK GT 2B	#2 OIL	1982	2,413	1,850	10/31/2040 * **
HADLEY FALLS 1&2	HYDRO	1949	33,400	33,400	OWNED *
RIVERSIDE 8	HYDRO	1931	4,575	4,575	OWNED *
RIVERSIDE 4-7	HYDRO	1921	3,270	3,270	OWNED *
BOATLOCK	HYDRO	1924	3,313	3,313	OWNED *
HOLYOKE HYDRO/CABOT 1-2	HYDRO	1923	1,856	1,856	OWNED *
HOLYOKE HYDRO/CABOT 3	HYDRO	1940	450	450	OWNED * ****
HOLYOKE HYDRO/CABOT 4	HYDRO	1955	750	750	OWNED * ****
CHEMICAL	HYDRO	1935	1,600	1,600	OWNED *
SKINNER	HYDRO	1924	300	300	OWNED *
VALLEY HYDRO	HYDRO	2004	790	790	OWNED *
OPEN SQUARE	HYDRO	2004	525	525	2/29/16 ****
HANCOCK WIND	WIND	2016	6,032	6,032	12/14/41
LUMINACE, A BROOKFIELD CO. - MUELLER RD	SOLAR	2012	2,693	2,693	12/27/31****
LUMINACE, A BROOKFIELD CO. - MEADOW ST	SOLAR	2012	793	793	12/27/31****
CITIZENS - COUNTY RD	SOLAR	2013	615	615	2/5/33 ****
HPP MA, LLC - RICAR	SOLAR	2015	792	792	10/1/40 ****
C2 ENERGY CAPITAL - DINN	SOLAR	2016	475	475	12/27/36 ****
C2 ENERGY CAPITAL - KELLY WAY I	SOLAR	2016	475	475	12/27/36 ****
JACKSON CANAL, LLC - AEGIS	SOLAR	2017	833	833	1/4/37 ****
GROWING HOLYOKE, LLC - GARY ROME	SOLAR	2017	666	666	1/6/37 ****
MT. TOM SOLAR, LLC - ENGIE	SOLAR	2017	4,988	4,988	2/7/37 ****
SCANNELL SOLAR, LLC - CONKLIN	SOLAR	2017	633	633	2/24/37 ****
GEEPV - RIVERSIDE A/B	SOLAR	2017	133	133	5/8/37 ****
GEEPV - WALNUT	SOLAR	2017	100	100	11/22/37 ****
SUNWEALTH - HADLEY MILLS	SOLAR	2017	336	336	12/31/37 ****
C2 ENERGY CAPITAL - KELLY WAY II	SOLAR	2018	475	475	6/4/38 ****
GEEPV - BOYS & GIRLS CLUB	SOLAR	2018	150	150	4/20/38 ****
GEEPV - JACKSON	SOLAR	2018	120	120	3/15/38 ****
GEEPV - YMCA	SOLAR	2018	167	167	12/17/38 ****
MT. TOM SOLAR, LLC - ENGIE	STORAGE	2019	3,000	3,000	5/31/38 ****
HOLYOKE BESS, LLC	STORAGE	2021	4,999	4,999	7/31/36 ****

All capacity contracts follow the ISO New England calendar system.

* Investments continue for the life of the unit (LOU)

** After 8/31/01, there is no firm energy contract, only capacity and entitlement, which continue for the life of the unit and are based on full rating of the line.

*** In process of retiring assets

**** Load reducer



TELECOMMUNICATIONS

TELECOMMUNICATIONS DIVISION

HG&E’s commercial network, now in its 23rd year of operation, providing high-speed internet and network connectivity through fiber optic lines for business-class customers located in Holyoke, Chicopee, downtown Springfield, and throughout the Pioneer Valley. Both the Department and the city receive services from the network. The service platforms are industry-standard Carrier Ethernet and Internet Protocol (IP), supporting speeds up to 100Gbps (gigabits per second).

TELECOMMUNICATIONS HELP DESK

HG&E administers a centralized help desk, accepting support calls from customers and internal staff. As a telecom utility, HG&E offers 24x7 network monitoring services and an on-call support structure to ensure maximum network uptime, as well as the best possible customer experience.

In 2022, the help desk received 1,386 tickets: 875 for HG&E Department employees and 510 for commercial customers; 1,306 tickets were resolved in 2022.

COMMERCIAL NETWORK UPGRADES

As customers’ needs grow and application requirements evolve, HG&E’s network investments continue as well. In 2022, HG&E completed key improvements in the carrier transport network by adding 100G-capable core transport links to complete a 100G capable internet front end.

COMMERCIAL NETWORK EXPANSION

In 2022, the Department continued fiber-optic wide-area networking (WAN) services throughout the Pioneer Valley. Within this service territory, HG&E is focused on providing fiber-optic WAN services for large, complex institutions. For example, HG&E provides support for a regional institution with six locations, offering 10Gbps of bandwidth and carrier Ethernet over fiber connecting all locations. Local support, network performance, and reliability are some of the factors that contribute to our customer loyalty. HG&E provided professional services support for a large, managed WAN customer to refresh IP routers at 12 branch locations. For this same customer, HG&E commissioned a new disaster recovery site with an IP router upgrade.

CARRIER INTERCONNECTION

In 2022, HG&E further developed interconnection relationships with regional fiber Ethernet carriers in order to service core customers with locations outside of the existing footprint. These interconnections allow HG&E the flexibility to provide additional services outside of the previous service boundaries. Specifically, diverse tunnels and diverse routers were implemented for SHELd’s Big River telephone service.

HG&E is a next-generation provider, having designed, engineered, and implemented full IPv6 internet routing and peering with upstream internet carriers. In 2022, the Telecom Division continued to scale into its primary wholesale internet feeds to 100Gbps capable connections.

A third internet provider feed has been implemented to provide an additional 20Gbps of capacity for a total aggregate capacity of 50Gbps. The headroom capacity is scalable to over 200Gbps. HG&E has plans for a massive overhaul of the carrier transport network to 100% 100G. Unfortunately, continued global supply chain issues are preventing the Department from executing on these objectives as equipment deliveries take 12 to 24 months.

UTILITY OPERATIONS NETWORK UPGRADE

In addition to maintaining commercial network customers, the Division continued its support for the design, operation, and maintenance of HG&E's internal network and information intelligence needs. In 2019, the Department began refreshing the entire utility operations network; this was phase one of a three phase plan. Phase one included the network core switching and routing at HG&E's Main Office (99 Suffolk Street) and Walnut Street facility, with two 100Gbps interconnects, and a data center mesh using a combination of 100Gbps and 40Gbps interconnects. Phase 2 consisted of the distribution areas of the network, substations, larger buildings, etc. Phase 3 included endpoint locations such as hydro wheels. The project is complete.

In 2022, HG&E continued to optimize its new compute, storage, and network platforms. HG&E continued to provision software, and in some cases provided new hardware, in order for employees to work from home through VPN access during the pandemic. Telecommunications is able to provide solutions to accommodate the unique ways in which our employees collaborate with each other, as well as with vendors and contacts outside of HG&E.

The Division supports a wide variety of utility applications, systems, and platforms including computing, internet, telephone, collaboration, video surveillance, SCADA platforms, cybersecurity engineering, and user training and support.

CYBERSECURITY

As cyber-threats continue to evolve, both internally and externally, HG&E remains committed to continually improving its cybersecurity posture. Pursuant to these goals, HG&E maintains an umbrella cyber-threat detection and mitigation system at its internet gateways. This system provides blanket attack protection, in real time, to all HG&E internet subscribers and users. In 2022, Telecommunications introduced disk encryption on its Utility operations computing platforms. HG&E also performs regular user awareness training and vulnerability testing to ensure compliance with cybersecurity policies and best practices.

WHOLESALE BROADBAND SERVICES

HG&E continued its development and execution of a last-mile strategy and wholesale service offerings, including the continued scaling of

the residential wholesale broadband platform. Leveraging its current network infrastructure, HG&E is supporting several communities that sought to build their own networks, but needed an experienced network operator.

In these communities, HG&E does not provide residential internet service, but rather wholesale internet services to internet service providers (ISPs) and those ISPs then sell internet services to residents. These engagements have helped HG&E develop additional expertise in the design, construction, and operation of FTTH networks and have provided additional revenue to HG&E. In 2022, HG&E Telecom assisted a local broadband partner in onboarding Leverett, Massachusetts, and Shutesbury, Massachusetts. As of 2022, HG&E has a network operator or ISP presence in 12 rural and local communities. HG&E utilizes the Massachusetts Broadband Institute (MBI) regional fiber-optic network and Crown Castle Fiber to connect with these rural communities.

FIBER TO THE HOME

In 2021, HG&E performed a test marketing campaign that was designed to better understand current customer demand for municipal fiber-to-the-home broadband service. While HG&E is capable of providing residential FTTH service and is currently providing residential broadband service within Holyoke on a limited basis, there must be sufficient interest in order for a citywide venture to be economically viable and not have an adverse effect on utility rates. Taking the time to fully understand the impact of a potential FTTH build is critical to meeting HG&E's mission to provide competitive rates, innovative and sustainable energy solutions, reliable service, and excellent customer care.

In order to better understand the true cost and key variables associated with a network buildout, including type of delivery (overhead/underground, backyard or street-side), residence type (single family, multifamily, multidwelling unit), and pole make-ready needs, HG&E procured a full network design in 2022. In addition to determining the true cost in today's economic climate, the design will allow HG&E to develop a scalable and cohesive network, ensuring any investment is sustainable long term. The results of the network design and next step will be analyzed in 2023 and next steps will be determined.

In 2021, HG&E submitted an application to the city of Holyoke for American Rescue Plan Act funds in the amount of \$3.5 million. While this application was not selected, HG&E's team continues to monitor and explore available funding opportunities on the local, state, and federal levels.

HG&E will continue to explore and assess all broadband opportunities within the service territory while studying the outcomes of similar projects in neighboring communities.



Public Power & Public Natural Gas Event at Veterans Park

GOODWILL

Community involvement is a central belief of the public power philosophy, and the Department is proud of the role it takes in making Holyoke a better place to call home. Key community events that were underwritten by HG&E in 2022 include the St. Patrick's Day Parade, the Holyoke Fireworks, and the inaugural Fiestas Patronales de Holyoke. In total, \$81,875 in sponsorships and \$5,966 in labor were provided for nonprofit causes.

HG&E invited the local community to the annual Public Power & Public Natural Gas Week on October 5 from 4 – 6 PM at Veterans

Park. This free celebration featured electric vehicles, HG&E's energy efficiency and audit incentives, information on the LNG Project, activities for kids, and several community and state partner organizations. Each October, community-owned utilities throughout the country celebrate Public Power & Public Natural Gas Week, collectively providing electricity and natural gas services to millions of Americans. This annual nationwide event is intended to build public awareness about the value of having a community-owned utility.



NEIL J. MORIARTY JR. SCHOLARSHIP FOR CADET ENGINEERS

The Cadet Engineer program is dedicated to the memory of our late commission Chairperson Cornelius J. Moriarty Jr. He often noted that the admission of new students into the program was one of the most rewarding actions that the commission took each year.

The program offers aid to Holyoke students who are pursuing Bachelor of Science degrees in engineering. Chris Perez and Kyle Lippman were admitted as the 2022 cadets.

ECONOMIC DEVELOPMENT

In 2022, the Department provided \$202,213 in additional discounts to businesses that have relocated or expanded within the city under the Economic Development Discount Program. This program provides an additional 10% off participants’ gas and electric bills for a three-year period.

The Department also offers a similar program for residential customers, under which first-time Holyoke homebuyers can receive 10% off of their first three years of gas and electric bills. In 2022, \$139,784 was provided under this program.

CONTRIBUTION	AMOUNT
Nonprofit Sponsorships	\$81,875
Nonprofit Labor	\$5,966
Cadet Engineer Scholarship	\$48,750
Payment in Lieu of Taxes	\$1,195,614
Municipal Payment Discounts	\$407,506
Discounted Street Lighting	\$215,864
Economic Development Discount	\$202,213
New Homeowner Discount	\$139,784
Energy Conservation Assistance	\$786,000
TOTAL COMMUNITY SUPPORT	\$3,083,572

Holyoke Gas and Electric
(Enterprise and Fiduciary Funds of the
City of Holyoke, Massachusetts)

Financial Statements and
Supplementary Information

December 31, 2022 and 2021

Holyoke Gas and Electric (Enterprise and Fiduciary Funds of the City of Holyoke, Massachusetts)

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December 31, 2022 and 2021

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Independent Auditors' Report

To the Board of Commissioners of
Holyoke Gas and Electric

Opinions

We have audited the financial statements of Holyoke Gas and Electric and Holyoke Gas and Electric OPEB Trust, enterprise and fiduciary funds of the City of Holyoke, Massachusetts, respectively, as of and for the years ended December 31, 2022 and 2021, and the related notes to the financial statements. Hereafter, the funds will collectively be referred to as Holyoke Gas and Electric.

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the financial position of Holyoke Gas and Electric as of December 31, 2022 and 2021, and the changes in financial position and, where applicable, cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinions

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Holyoke Gas and Electric and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America; and for the design, implementation and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinions. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Holyoke Gas and Electric's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings and certain internal control-related matters that we identified during the audit.

Emphasis of Matters

As discussed in Note 1, the financial statements present only the Holyoke Gas and Electric enterprise and fiduciary funds and do not purport to, and do not, present fairly the financial position of the City of Holyoke, Massachusetts, as of December 31, 2022 and 2021 and the respective changes in financial position or cash flows, where applicable, for the years then ended in accordance with accounting principles generally accepted in the United States of America. Our opinions are not modified with respect to this matter.

As discussed in Note 1, Holyoke Gas and Electric adopted the provisions of GASB Statement No. 87, *Leases*, effective January 1, 2022. Accordingly, the accounting changes have been retroactively applied to prior periods presented. Our opinions are not modified with respect to this matter.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the required supplementary information, as listed in the table of contents be presented to supplement the financial statements. Such information is the responsibility of management and, although not a part of the financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the financial statements in an appropriate operational, economic or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the financial statements, and other knowledge we obtained during our audit of the financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Supplementary Information

Our audit was conducted for the purpose of forming opinions on the financial statements as a whole. The supplementary information as listed in the table of contents is presented for purposes of additional analysis and is not a required part of the financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. The information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supplementary information is fairly stated in all material respects, in relation to the financial statements as a whole.

A handwritten signature in black ink that reads "Baker Tilly US, LLP". The signature is written in a cursive, flowing style.

Madison, Wisconsin
April 27, 2023

MANAGEMENT'S DISCUSSION AND ANALYSIS

Holyoke Gas & Electric

Management's Discussion and Analysis (Unaudited)
Years Ended December 31, 2022, and 2021

The management of Holyoke Gas & Electric (HG&E, or utility) offers all persons interested in the financial position of the utility this narrative overview and analysis of the utility's financial performance during the years ending December 31, 2022, and 2021. You are invited to read this narrative in conjunction with the utility's financial statements.

Financial Highlights

Operating Revenue

- Operating revenues for the utility increased by \$10,502,196, or 14%, in 2022.
- Electric operating revenues increased by \$1,670,034, or 3.1% percent. The increase was mainly due to additional commercial sales which were up 3.27% as a result of new cannabis and other business load. Residential and municipal sales were also up over 2021 (.34% and 1.77% respectively) while industrial sales were down 3.13% from 2021. Renewable energy certificate (REC) sales increased by \$645,057 in 2022 which further increased revenues.
- Gas operating revenues increased by \$6,332,163, or 28%. The increase in gas revenues was due to the impacts of 2022 rate increases and a significantly higher purchased gas adjustment (PGA) in 2022. The PGA was up 106% over 2021 due to increases in the market price for gas during the year. Unit (Mcf) sales were up 2% over 2021.
- As a result of the revenue increases in 2021, the Department made an election to defer \$2.5M in 2021 electric operating revenues to the Department's rate stabilization reserve. The purpose of this stabilization reserve is to ensure that the Department's rates remain stable under various market conditions. This deferral offset the increases in 2021 operating revenue. In 2020, the Department utilized \$3.4M in reserve funds to offset higher power supply costs. In 2022 the Department did not make any adjustments to the rate stabilization reserve.

Fuel Cost

- Fuel costs increased by \$9,866,956 or 32% in 2022.
- Electric fuel expenses increased by \$4,297,286 or 21%. The increase was a result of higher purchased power costs as a result of higher loads at a higher average price and lower hydro generation in 2022. Hydro maintenance costs were also higher in 2022 as a result of \$1,500,000 in canal wall repairs during the year.
- Gas fuel expenses increased by \$5,569,671 or 56%. The increase is a result of higher pipeline fuel prices during 2022.

Non-Fuel Cost

- Non-fuel expenses increased by \$694,522 or 3%, in 2022. The non-fuel increase from 2021 was primarily due to a \$617,648 or 118% increase in electric tree clearing costs, as more tree trimming work was planned for 2022.
- Depreciation expense increased by \$180,088 or 2% in 2022 as a result of ongoing capital improvement and replacement projects undertaken by the Department.
- Amortization of a right to use asset decreased by \$8,247 or 4% in 2022. This was a new line item in 2022 as a result of Government Accounting Standards Board (GASB) statement 87, Leases, which went into effect during 2022.

Holyoke Gas & Electric

Management's Discussion and Analysis (Unaudited)
Years Ended December 31, 2022, and 2021

Other Revenue

- Other revenues decreased by \$14,049,298, or 510% in 2022 due to the performance of the Department's investment portfolios. Market performance in 2022 resulted in overall investment losses of \$9,439,716 compared with investment gains of \$5,943,487 in 2021.

Net Position

- The Departments' total net position decreased by \$14,281,890 in 2022 from the combined activities of HG&E, Holyoke Solar Cooperative, and the Massachusetts Clean Energy Cooperative. This decrease was primarily due to a reduction in the market value of investments experienced during the year. Overall, the Department continued to report strong operating results in 2022 in spite of challenges resulting from lower hydro generation, rising fuel costs and the impacts of inflation. Operating income decreased \$231,131 or 2% in 2022.

2021 MCECC Bond Issue

- In 2021 the Department issued \$69,040,000 in taxable revenue bonds through the Massachusetts Clean Energy Corporation (Clean Energy Coop), a component unit of the Department. \$57,970,000 of the bond proceeds were used to advance refund existing bonds at a lower interest rate and \$11,070,000 was issued to pay for rehabilitation of the Hadley Falls facility, Unit #2.

Overview of the Financial Statements/Using This Report

The HG&E Commission is a three member board comprised of three local citizens. Nominated by the mayor and approved by the city council, each member has a six year term when approved. One member comes up for re-appointment every two years on a rotating schedule. HG&E provides Electric, Gas and Telecommunications services to the City of Holyoke.

The gas division has a distribution system that covers the City and the eastern portion of Southamptton, Massachusetts. There are approximately 11,500 meters and 185 miles of main pipes. The division also operates a liquefied natural gas plant that is used to meet peak demand during the winter months. In addition to these services, gas and electric appliance repair is offered to customers.

The electric division operates and maintains five substations, 158+ miles of pole lines, 47+ miles of underground distribution, 9.25 miles of overhead transmission, 2,466 transformers and 4,225 streetlights. There are approximately 18,000 electric customers.

HG&E also owns and operates over 50 MW of hydro-electric generation capacity within the City of Holyoke. The Holyoke Gas & Electric hydroelectric system, including the Hadley Falls Dam and the Holyoke Canal hydro facilities, generated a total of 208,944 MWh of net generation which continued to help drive down the overall cost of power.

The Department is a member of the Massachusetts Municipal Wholesale Electric Company (MMWEC), a public corporation and a political subdivision of the Commonwealth of Massachusetts. Through MMWEC, HG&E has partial ownership (entitlements) to the following projects; Stony Brook Peaking Unit, Millstone Unit # 3 and Seabrook Nuclear Power Station.

In addition to offering some of the lowest electric rates in the Commonwealth, in 2022, 14.06% of HG&E's electricity sold at retail was renewable and 53.61% of HG&E's electricity sold at retail is considered carbon free.

Holyoke Gas & Electric

Management's Discussion and Analysis (Unaudited)
Years Ended December 31, 2022, and 2021

Other

Please refer to the table of contents for the various sections included in this report. The utility is a self-supporting entity and follows enterprise fund reporting; accordingly, the financial statements are presented using the economic resources measurement focus and the accrual basis of accounting. Enterprise fund statements offer short- and long-term financial information about the activities and operations of the utility.

- The Statement of Net Position includes all of the utility's assets, deferred outflows of resources, liabilities, and deferred inflows of resources and provides information about the nature and amount of investments in resources and the obligations to creditors. This statement provides the basis for evaluating the capital structure and assessing the liquidity and financial flexibility of the utility.
- The Statements of Revenues, Expenses, and Changes in Net Position provide an indication of the utility's financial health.
- The Statements of Cash Flows report the cash provided and used by operating activities, as well as other cash sources such as investment income and cash payments for repayment of bonds and capital additions.

Utility Financial Analysis

An analysis of the utility's financial position begins with a review of the Statements of Net Position, and the Statements of Revenues, Expenses and Changes in Net Position. These two statements report the utility's net position and changes therein. The utility's net position, the difference between assets, deferred outflows of resources, liabilities, and deferred inflows of resources, is key to measuring the financial health of the utility. Over time, increases or decreases in the net position value are an indicator of whether the financial position is improving or deteriorating. However, it should be noted that the financial position can also be affected by other non-financial factors, including economic conditions, customer growth, climate conditions and new regulations.

Holyoke Gas & Electric

Management's Discussion and Analysis (Unaudited)
Years Ended December 31, 2022, and 2021

A summary of the utility's Statements of Net Position is presented below in Table 1.

Table 1
Condensed Statements of Net Position

	<u>2022</u>	<u>Restated</u> <u>2021</u>	<u>2020</u>
Current and Other Assets	\$ 115,165,513	\$ 123,980,171	\$ 107,152,462
Capital Assets	<u>177,194,056</u>	<u>171,957,385</u>	<u>165,901,737</u>
TOTAL ASSETS	<u>292,359,569</u>	<u>295,937,556</u>	<u>273,054,199</u>
DEFERRED OUTFLOWS OF RESOURCES	<u>11,051,550</u>	<u>7,451,056</u>	<u>9,306,976</u>
Long-term Debt Outstanding	76,001,335	83,958,308	79,746,222
Other Liabilities	<u>41,613,460</u>	<u>42,356,373</u>	<u>48,683,635</u>
TOTAL LIABILITIES	<u>117,614,795</u>	<u>126,314,681</u>	<u>128,429,857</u>
DEFERRED INFLOWS OF RESOURCES	<u>67,888,419</u>	<u>57,619,682</u>	<u>47,212,617</u>
Net Investment in Capital Assets	108,170,525	98,917,924	93,140,978
Restricted for Debt Service	4,006,529	3,878,552	6,384,669
Restricted for OPEB		1,896,162	-
Unrestricted	5,730,851	14,761,611	7,193,054
TOTAL NET POSITION	<u>\$ 117,907,905</u>	<u>\$ 119,454,249</u>	<u>\$ 106,718,701</u>

Current and other assets decreased by \$8,814,658 or 7.1% in 2022 primarily due to a \$14,528,572 decrease in the Departments' rate stabilization and other investment accounts due to unfavorable market performance during the year. Offsetting that decrease was an increase in the Department's cash balance resulting from the proceeds of a new \$4.7M note that closed in 2022. The proceeds from that note will not be utilized until that project's completion in 2024. Additionally, there was an increase of \$2,192,545 in the MCECC 2021 bond redemption accounts. A smaller balance was required in the redemption accounts as of year end 2021 due to the bond closing in December of that year.

Net Capital assets increased by \$5,236,671 or 3% in 2022. The Department continued with its aggressive capital improvement and replacement plan during 2022, investing \$14,078,959 into capital. That increase, however, was offset by the recording of annual depreciation expense of \$8,216,115 and the retirement of \$309,150 in assets that were not yet fully depreciated as part of the Department's ongoing efforts to identify obsolete assets that are no longer in service.

Long-term debt outstanding decreased by \$7,956,973 or 9% in 2022 due to scheduled debt repayments made during the year. Additionally, during 2022, the Department paid off notes totaling \$6,298,284 and issued a new note totaling \$4,700,000 through Holyoke Solar Cooperative.

Other liabilities decreased by \$742,913 or 1.75% in 2022 primarily due to a combined \$5,549,469 or 24% decrease in the Department's actuarially determined net Pension and OPEB liabilities. Increases in the Department's accounts payable balance of \$4,552,568 or 76% from 2021 offset those decreases. The increase in accounts payable was due to the timing of the last warrant of 2022 combined with increases in December power supply bills that were not paid out until January.

Holyoke Gas & Electric

Management's Discussion and Analysis (Unaudited)
Years Ended December 31, 2022, and 2021

Table 2
Condensed Statement of Revenue, Expenses, and Changes in Net Position

	<u>2022</u>	<u>Restated 2021</u>	<u>2020</u>
OPERATING REVENUES	<u>\$ 84,941,702</u>	<u>\$ 74,439,506</u>	<u>\$ 73,775,704</u>
OPERATING EXPENSES	<u>73,997,561</u>	<u>63,264,234</u>	<u>66,184,213</u>
Operating Income	<u>10,944,141</u>	<u>11,175,272</u>	<u>7,591,491</u>
OTHER REVENUES (EXPENSES)	<u>(11,294,872)</u>	<u>2,754,426</u>	<u>3,668,228</u>
Change in Net Position before Transfers	<u>(350,731)</u>	<u>13,929,698</u>	<u>11,259,719</u>
TRANSFERS	<u>(1,195,613)</u>	<u>(1,194,152)</u>	<u>(1,250,966)</u>
Change in Net Position	<u>(1,546,344)</u>	<u>12,735,546</u>	<u>10,008,753</u>
NET POSITION - Beginning of Year	119,454,249	106,718,703	96,709,948
NET POSITION - End of Year	<u>\$ 117,907,905</u>	<u>\$ 119,454,249</u>	<u>\$ 106,718,701</u>

As previously noted, the Statement of Net Position shows the change in financial position. The specific nature or source of these changes then becomes more evident in the Statements of Revenues, Expenses and Changes in Net Position as shown above in Table 2.

During 2022, operating revenues increased \$10,502,196 or 14%. This increase in revenue was due to a combination of higher electric commercial sales, 2022 gas rate increases and a higher PGA as a result of rising gas prices during the year. Additionally, in 2021, the Department made an election to defer \$2.5M in electric revenue to the Department's rate stabilization reserve which resulted in lower overall revenue for 2021.

Operating expenses increased by \$10,733,327 or 17% overall. This was due to increases in gas and electric fuel costs during the year discussed in more detail in the financial highlights section.

The Departments' total net position decreased by \$14,281,890 in 2022 from the combined activities of HG&E, Holyoke Solar Cooperative, and the Massachusetts Clean Energy Cooperative discussed in more detail in the financial highlights section. The decrease in net position is mainly attributable to a reduction in the market value of the Department's investments experienced during the year.

Holyoke Gas & Electric

Management's Discussion and Analysis (Unaudited)
Years Ended December 31, 2022, and 2021

Table 3
Condensed Statements of Cash Flows

	<u>2022</u>	<u>Restated 2021</u>	<u>2020</u>
CASH FLOWS FROM OPERATING ACTIVITIES	\$ 16,584,253	\$ 18,338,124	\$ 11,763,524
CASH FLOWS FROM INVESTING ACTIVITIES	(3,432,934)	6,707,187	7,577,856
NET CASH USED IN NONCAPITAL FINANCING ACTIVITIES	(1,195,613)	(1,194,152)	(1,250,966)
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES	(20,459,694)	(8,459,752)	(15,478,727)
Increase in Cash and Cash Equivalents	(8,503,988)	15,391,407	2,611,687
CASH AND CASH EQUIVALENTS - Beginning of Year	92,618,368	77,226,961	74,615,274
CASH AND CASH EQUIVALENTS - END OF YEAR	\$ 84,114,380	\$ 92,618,368	\$ 77,226,961
NONCASH FINANCING ACTIVITY			
Bond proceeds used in refunding debt		\$ 53,660,000	\$ -
Loss on Retirement of Fixed Assets	\$ 317,806	\$ 876,750	\$ 220,461
Amortization of Premium on Bonds Payable	\$ 249,401	\$ 711,779	\$ 810,815

Cash flows from operating activities decreased by \$1,753,871, primarily because of an increase in cash received from customers, offset by an increase in cash paid to suppliers and employees. The increase in cash received from customers was a result of higher sales. Cash paid to suppliers increased as a result of overall higher operating expenses in 2022 as discussed in the financial highlights section. Additionally, cash paid to employees increased as a result of additional staffing needs that were filled in 2022 and additional overtime needed to complete planned capital work during the year.

Cash flows from investing activities decreased by \$10,140,12 due to investment losses resulting from unfavorable market performance during the year.

Cash flows from capital and related financing activities decreased by \$11,999,942 in 2022. Cash flow was higher in 2021 as a result of proceeds received from the MCECC 2021 bond issue related to the Hadley Falls Unit #2 rehabilitation.

Cash and cash equivalents decreased by \$8,503,988

Holyoke Gas & Electric

Management's Discussion and Analysis (Unaudited)
Years Ended December 31, 2022, and 2021

Table 4
Capital Assets – Electric

Electric			
	<u>2022</u>	<u>2021</u>	<u>2020</u>
Capital Assets			
Land	\$ 4,408,008	\$ 4,408,008	\$ 4,405,918
Plant, Property, and Equipment	<u>229,072,294</u>	<u>221,313,391</u>	<u>213,017,345</u>
TOTAL CAPITAL ASSETS	233,480,302	225,721,399	217,423,263
Construction Work in Progress	2,906,490	2,540,580	1,398,177
Less: Accumulated Depreciation	<u>(91,750,024)</u>	<u>(86,380,632)</u>	<u>(81,128,271)</u>
NET CAPITAL ASSETS - ELECTRIC	<u>\$ 144,636,768</u>	<u>\$ 141,881,347</u>	<u>\$ 137,693,169</u>

Electric plant, property and equipment increased by \$2,755,421 or 2% in 2022 as a result of ongoing replacements of the electric division's substation, transmission and distribution infrastructure as well as the ongoing Hadley Unit #2 rehabilitation project.

Table 5
Capital Assets – Gas

Gas			
	<u>2022</u>	<u>2021</u>	<u>2020</u>
Capital Assets			
Land	\$ 236,856	\$ 236,856	\$ 236,856
Plant, Property, and Equipment	<u>65,614,081</u>	<u>61,201,760</u>	<u>58,215,845</u>
TOTAL CAPITAL ASSETS	65,850,937	61,438,616	58,452,701
Construction Work in Progress	658,144	1,028,895	900,057
Less: Accumulated Depreciation	<u>(33,951,792)</u>	<u>(32,391,471)</u>	<u>(31,144,190)</u>
NET CAPITAL ASSETS - GAS	<u>\$ 32,557,289</u>	<u>\$ 30,076,040</u>	<u>\$ 28,208,568</u>

Gas plant, property and equipment increased by \$2,481,279 or 8% in 2022 due to ongoing replacements of bare steel and cast-iron services and mains.

Further details on capital assets are included in Note 3.

Holyoke Gas & Electric

Management's Discussion and Analysis (Unaudited)
Years Ended December 31, 2022, and 2021

Long-Term Debt

As of December 31, 2022, Holyoke Gas & Electric had \$63,530,000 in bonds payable as well as \$12,471,336 in notes payable. Bond and notes payable decreased by \$5,510,000 and \$2,446,972 respectively due to scheduled debt payments during the year. Additionally, during 2022, the Department paid off notes totaling \$6,298,284 and issued a new note totaling \$4,700,000 through Holyoke Solar Cooperative.

Details of the existing debt are included in Note 7.

Currently Known Facts/Economic Conditions

HG&E continues its aggressive maintenance and capital improvement program to upgrade its infrastructure in order to maintain system reliability performance objectives for all facets of the operation.

Contacting Utility's Financial Management

This financial report is designed to provide our customers, investors and creditors with a general overview of the Utility's finances. If you have questions about this report, or need additional financial information, contact Holyoke Gas & Electric Department at 99 Suffolk St, Holyoke Massachusetts 01040 or (413) 536 9300.

Holyoke Gas and Electric

Statements of Net Position

December 31, 2022 and 2021

	2022	2021 (Restated)
Assets and Deferred Outflows of Resources		
Current Assets		
Cash and investments	\$ 25,473,308	\$ 25,646,091
Restricted assets:		
Redemption account	3,787,167	1,594,622
Customer accounts receivable, net	8,615,448	7,984,632
Note receivable, current portion	330,848	539,639
Materials and supplies	5,306,054	3,705,386
Fuel for electric generation and gas in storage	1,140,846	767,682
Prepaid expense	3,272,365	3,029,326
Other receivables	2,043,835	1,921,617
Total current assets	49,969,871	45,188,995
Noncurrent Assets		
Restricted assets:		
Accounts required under bond indenture/note payable	14,484,411	19,173,749
Net OPEB asset	-	1,896,162
Customers' deposits	1,654,299	2,009,756
Note receivable, after one year	4,163,482	6,368,897
Customer Energy Conservation Assistance	1,216,976	1,217,536
Other assets:		
Purchased power accounts	387,898	383,374
Rate stabilization accounts	40,415,008	45,173,643
Regulatory asset, debt issuance cost	651,963	717,159
Costs recoverable in future, pollution	77,300	84,800
Other investments	188,390	188,390
Lease receivable	1,359,249	914,377
Intangible assets	596,666	663,333
Capital assets:		
Plant, property and equipment in service	294,920,993	282,749,768
Right of use asset	4,410,245	4,410,245
Construction in progress	3,564,634	3,569,475
Total capital assets	302,895,872	290,729,488
Less accumulated depreciation	(125,701,816)	(118,772,103)
Net capital assets	177,194,056	171,957,385
Total noncurrent assets	242,389,698	250,748,561
Total assets	292,359,569	295,937,556
Deferred Outflows of Resources		
OPEB related amounts	2,964,891	286,616
Pension related amounts	8,086,659	7,164,440
Total deferred outflows of resources	11,051,550	7,451,056

See notes to financial statements

Holyoke Gas and Electric

Statements of Net Position
December 31, 2022 and 2021

	<u>2022</u>	<u>2021</u> (Restated)
Liabilities, Deferred Inflows of Resources and Net Position		
Current Liabilities		
Accounts payable	\$ 10,535,310	\$ 5,982,742
Accrued liabilities	869,209	589,331
Current portion, accrued compensated absences	352,339	367,561
Accrued environmental costs	77,300	114,800
Current portion, leases	188,323	180,339
Current portion, notes payable	845,117	-
Liabilities payable from restricted assets:		
Current portion, bonds payable	5,145,000	6,494,892
Customers' deposits	1,686,891	1,618,089
Accrued interest	590,186	101,009
	<u>20,289,675</u>	<u>15,448,763</u>
Total current liabilities		
Long-Term Liabilities and Credits		
Bonds payable, long-term	58,385,000	63,530,000
Notes payable, long-term	11,626,218	13,933,416
Leases payable, long term	3,852,997	4,041,320
Accrued compensated absences	3,615,466	3,695,819
Net OPEB liability	443,781	-
Unearned revenue	2,545,262	2,671,343
Reserve fund for note receivable	-	144,374
Net pension liability	16,856,396	22,849,646
	<u>97,325,120</u>	<u>110,865,918</u>
Total long-term liabilities and credits		
Total liabilities	<u>117,614,795</u>	<u>126,314,681</u>
Deferred Inflows of Resources		
Regulatory deferral	10,689,939	4,231,257
Gain on refunding on debt	1,342,579	1,476,837
Lease related amounts	1,591,619	1,008,305
Pension related amounts	10,804,798	7,627,060
OPEB related amounts	3,044,475	2,861,214
Rate stabilization reserve	40,415,009	40,415,009
	<u>67,888,419</u>	<u>57,619,682</u>
Total deferred inflows of resources		
Net Position		
Net investment in capital assets	108,170,525	98,917,924
Restricted for debt service	4,006,529	3,878,552
Restricted for OPEB	-	1,896,162
Unrestricted	5,730,851	14,761,611
	<u>117,907,905</u>	<u>119,454,249</u>
Total net position		

See notes to financial statements

Holyoke Gas and Electric

Statements of Revenues, Expenses and Changes in Net Position
Years Ended December 31, 2022 and 2021

	<u>2022</u>	<u>2021</u> <u>(Restated)</u>
Operating Revenues		
Gas charges for service	\$ 29,041,905	\$ 22,709,742
Electric and telecommunications charges for service	55,899,797	54,229,764
Rate stabilization funds(deferred)/recognized in the current period	-	(2,500,000)
Total operating revenues	<u>84,941,702</u>	<u>74,439,506</u>
Operating Expenses		
Gas operation and maintenance	23,536,435	18,130,598
Depreciation, gas plant and equipment	<u>1,827,182</u>	<u>1,737,168</u>
Total gas operating expenses	<u>25,363,617</u>	<u>19,867,766</u>
Electric and telecommunications operation and maintenance	42,064,672	36,909,023
Amortization, right of use asset	180,339	188,586
Depreciation, electric and telecom plant and equipment	<u>6,388,933</u>	<u>6,298,859</u>
Total electric and telecommunications operating expenses	<u>48,633,944</u>	<u>43,396,468</u>
Total operating expenses	<u>73,997,561</u>	<u>63,264,234</u>
Operating Income		
Gas	3,678,288	2,841,976
Electric and telecommunications	<u>7,265,853</u>	<u>8,333,296</u>
Total operating income	<u>10,944,141</u>	<u>11,175,272</u>
Other Revenues (Expenses)		
Investment income, net of fees	3,590,958	3,550,777
Net gain (loss) on investments	(13,030,673)	2,392,710
Interest expense	(1,850,813)	(2,449,659)
Miscellaneous income (expense)	968,457	901,112
Amortization of intangible assets	(66,667)	(66,667)
Net gain (loss), plant retirements	(853,950)	(1,457,019)
Net gain (loss), merchandise jobbing	27,583	(25,888)
Taxes, other	<u>(79,767)</u>	<u>(90,940)</u>
Total other revenues (expenses)	<u>(11,294,872)</u>	<u>2,754,426</u>
Change in net position before transfers	(350,731)	13,929,698
Transfers		
Payment in lieu of taxes, City of Holyoke	<u>(1,195,613)</u>	<u>(1,194,152)</u>
Change in net position	(1,546,344)	12,735,546
Net Position, Beginning	<u>119,454,249</u>	<u>106,718,703</u>
Net Position, Ending	<u><u>\$ 117,907,905</u></u>	<u><u>\$ 119,454,249</u></u>

See notes to financial statements

Holyoke Gas and Electric

Statements of Cash Flows

Years Ended December 31, 2022 and 2021

	2022	2021 (Restated)
Cash Flows From Operating Activities		
Cash received from customers	\$ 86,498,477	\$ 79,898,943
Cash paid to suppliers	(51,774,499)	(44,933,828)
Cash paid to employees	(18,139,725)	(16,626,991)
Net cash flows from operating activities	16,584,253	18,338,124
Cash Flows From Investing Activities		
Proceeds from sale of investments	967,589	615,214
Purchase of investments	(8,017,785)	(138,691)
Investment income (loss), net of fees	(9,166,001)	5,718,567
Repayments on notes receivable	6,457,911	512,097
Net cash flows from investing activities	(9,758,286)	6,707,187
Cash Flows From Noncapital Financing Activities		
Payment in lieu of taxes and other property taxes	(1,195,613)	(1,194,152)
Net cash flows from noncapital financing activities	(1,195,613)	(1,194,152)
Cash Flows From Capital and Related Financing Activities		
Net investment in plant, property and equipment	(10,891,686)	(10,658,800)
Proceeds from debt issued	4,700,000	11,662,459
Debt issuance costs	-	(179,000)
Payments on bonds and notes payable	(12,656,972)	(5,925,507)
Interest paid on bonds, notes and leases payable	(1,611,036)	(3,358,904)
Net cash flows from capital and related financing activities	(20,459,694)	(8,459,752)
Increase in cash and cash equivalents	(14,829,340)	15,391,407
Cash and Cash Equivalents, Beginning	92,618,368	77,226,961
Cash and Cash Equivalents, Ending	\$ 77,789,028	\$ 92,618,368
Supplemental Noncash Financing Activity		
Bond proceeds used in refunding of debt	\$ -	\$ 53,660,000
Loss on retirement of fixed assets	\$ 317,806	\$ 876,750
Amortization	\$ 249,401	\$ 711,779
Lease receivable	\$ 759,695	\$ -

See notes to financial statements

Holyoke Gas and Electric

Statements of Cash Flows

Years Ended December 31, 2022 and 2021

	<u>2022</u>	<u>2021</u> (Restated)
Schedule of Reconciliation of Operating Income to		
Net Cash Provided by Operating Activities		
Operating income	\$ 10,944,141	\$ 11,175,273
Adjustments to reconcile operating income to net cash provided by operating activities:		
Depreciation	8,396,454	8,224,612
Amortization of regulatory deferral	128,029	101,739
Nonoperation Income	575,364	753,955
Changes in operating assets and liabilities:		
(Increase) decrease in:		
Accounts receivable	(630,812)	982,432
Materials and supplies	(1,600,668)	(686,274)
Fuel for electric generation and gas in storage	(373,164)	(175,875)
Prepaid expense	(243,047)	(118,166)
Other receivables	(453,069)	355,219
Energy Conservation Assistance and Constellation loan	451,185	371,425
Accounts payable	4,600,974	652,154
Customers' deposits	68,802	327,703
Accrued liabilities	153,797	(1,121,946)
Accrued compensated absences	(95,575)	206,806
Rate stabilization related deferrals	1,591,619	2,500,000
Pension and OPEB related deferrals and liabilities	(6,937,277)	(5,163,833)
Accrued environmental costs	7,500	(47,100)
	<u>5,640,112</u>	<u>7,162,851</u>
Total adjustments		
	<u>16,584,253</u>	<u>18,338,124</u>
Net cash provided by operating activities		
	<u>16,584,253</u>	<u>18,338,124</u>
Reconciliation of Cash and Cash Equivalents to the		
Statements of Net Position		
Cash and investments	25,473,308	25,646,091
Redemption account	3,787,167	1,594,622
Accounts required under bond indenture/note payable	14,484,411	19,173,749
Customer deposits	1,654,299	2,009,756
Purchased power accounts	387,898	383,374
Rate stabilization accounts	40,415,008	45,173,643
Other investments	188,390	188,390
	<u>86,390,481</u>	<u>94,169,625</u>
Total cash and investments		
	<u>86,390,481</u>	<u>94,169,625</u>
Less noncash equivalents	(8,601,453)	(1,551,257)
	<u>(8,601,453)</u>	<u>(1,551,257)</u>
Cash and cash equivalents	<u>\$ 77,789,028</u>	<u>\$ 92,618,368</u>

See notes to financial statements

Holyoke Gas and Electric OPEB Trust

Statements of Fiduciary Net Position - Fiduciary Fund
December 31, 2022 and 2021

	<u>2022</u>	<u>2021</u>
Assets		
Noncurrent Assets		
Investments	<u>\$ 18,950,522</u>	<u>\$ 22,303,231</u>
Total assets	<u><u>\$ 18,950,522</u></u>	<u><u>\$ 22,303,231</u></u>
Net Position		
Net Position Restricted for OPEB	<u><u>\$ 18,950,522</u></u>	<u><u>\$ 22,303,231</u></u>

Holyoke Gas and Electric OPEB Trust

Statements of Changes in Fiduciary Net Position - Fiduciary Fund
Years Ended December 31, 2022 and 2021

	<u>2022</u>	<u>2021</u>
Additions		
Employer contributions	\$ 82,547	\$ 2,820,251
Investment income (loss)	(3,365,236)	2,411,103
Employee contributions, direct payment of member benefits	402,958	403,490
Employer contributions, direct payment of member benefits	<u>574,368</u>	<u>575,849</u>
Total additions	<u>(2,305,363)</u>	<u>6,210,693</u>
Deductions		
Benefit payments, including refunds of member contributions	977,326	979,339
Advisory fees	<u>70,020</u>	<u>69,815</u>
Total deductions	1,047,346	1,049,154
Net increase in net position	<u>(3,352,709)</u>	<u>5,161,539</u>
Net Position, Beginning	<u>22,303,231</u>	<u>17,141,692</u>
Net Position, Ending	<u><u>\$ 18,950,522</u></u>	<u><u>\$ 22,303,231</u></u>

See notes to financial statements

Holyoke Gas and Electric

Notes to Financial Statements
December 31, 2022 and 2021

1. Summary of Significant Accounting Policies

The accounting policies of Holyoke Gas and Electric (Department) conform to accounting principles generally accepted in the United States of America as applicable to governmental units. The accepted standard-setting body for establishing governmental accounting and financial reporting principles is the Governmental Accounting Standards Board (GASB).

Reporting Entity

The financial statements present information on the activities of the Department, an enterprise fund of the City of Holyoke, Massachusetts (the City) and its component units, Holyoke Solar Cooperative and Massachusetts Clean Energy Cooperative Corporation.

The Department provides gas, electric, hydro and telecommunications services to its customers, substantially all of whom are local residents and commercial and industrial businesses. Approximately 66% and 73% of the Department's revenues were derived from its electric division in 2022 and 2021, respectively.

Blended Component Units

The Holyoke Solar Cooperative (Solar Coop) is a cooperative organized in Massachusetts, in December 2010 and is owned by the Department (its original Member). Solar Coop engages in transactions associated with the purchase, acquisition, distribution, sale, resale, supply and disposition of energy or energy-related services to wholesale or retail customers. The Solar Coop is included in the enterprise fund. The Solar Coop does not issue separate financial statements.

The Massachusetts Clean Energy Cooperative Corporation (Clean Energy Coop) was organized in Massachusetts, in March 2013. The initial members are the Department and the Massachusetts Municipal Wholesale Electric Company (MMWEC). The business of the Clean Energy Coop is managed by the board of directors, a majority of which consist of members of the Department's management or Commission. The Clean Energy Coop was formed to finance, purchase, own, lease or otherwise acquire, hold and use property; transact any business associated with the property; and the purchase, acquisition, generation, transformation, distribution, sale, resale, supply and provision of energy and telecommunications products and services, which will include, but is not limited to, the purchase and sale of the electrical capacity of the Hadley Falls Station hydroelectric generator unit #1 and #2 in Holyoke. The Clean Energy Coop is included in the enterprise fund. Separately issued financial statements of the Clean Energy Coop may be obtained from the Department's office.

The Cooperatives are organized under Chapters 157 and 164: Section 47C of the State of Massachusetts Statutes and are subject to the same federal and state laws and regulations applicable to municipal lighting plants or other public entities that provide those services.

All intercompany account balances and transactions have been eliminated in the basic financial statements.

Other Post-Employment Benefit (OPEB) Trust

The OPEB Trust fund is a fiduciary fund that is used to account for and report resources that are required to be held in trust for the members and beneficiaries of the OPEB plan. The OPEB Trust was established in October 2014.

Holyoke Gas and Electric

Notes to Financial Statements
December 31, 2022 and 2021

Rate Regulation

The rates of the Department are approved by the Department's Board of Commissioners. Rate schedules are filed with the Massachusetts Department of Public Utilities (DPU). While the DPU exercises general supervisory authority over the Department, the rates are not subject to DPU approval.

Measurement Focus, Basis of Accounting and Financial Statement Presentation

The Department is presented as an enterprise and fiduciary fund of the City. Enterprise and fiduciary funds are used to account for operations that are financed and operated in a manner similar to private business or when the governing body has decided that the determination of revenues earned, costs incurred and net income is necessary for management accountability. The OPEB trust fund is used to report resources that are held in trust by the Department for the members and beneficiaries of the defined benefit postemployment welfare plan. The financial statements have been presented using the economic resources measurement focus and the accrual basis of accounting. Under the accrual basis, revenues are recognized when earned and expenses are recorded when an obligation has been incurred.

In June 2017, the GASB issued Statement No. 87, Leases. This statement requires the recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. The standard establishes a single model for lease accounting based on the foundational principle that leases are financings of the right-to-use an underlying asset. Under the statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources, which enhances the relevance and consistency of information about the Department's leasing activities. The Department adopted this statement effective January 1, 2022. Accordingly, the accounting changes have been retroactively applied to prior periods presented.

Use of Estimates

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 consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Assets, Deferred Outflows of Resources, Liabilities, Deferred Inflows of Resources and Net Position

Deposits and Investments

Cash and Cash Equivalents

For purposes of the statement of cash flows, the Department, and OPEB trust, considers all highly liquid investments with an initial maturity of three months or less when acquired to be cash equivalents.

Investments

Investments totaling \$20,390 represent the cost of the Department's equity in New England HydroTransmission Corporation and New England Hydro-Transmission Electric Company. These investments represent 0.2653% of the issued common stock of these untraded companies. In addition, the Department has invested \$168,000 with the Public Utility Mutual

Holyoke Gas and Electric

Notes to Financial Statements
December 31, 2022 and 2021

Insurance Company (PUMIC). See Note 14 for additional information related to PUMIC. These investments are carried at original cost.

Investments in debt and equity securities are recorded at fair value (see Note 2).

Investments of the fiduciary fund are limited to investing in assets as a prudent investor would, by considering purposes, terms, distribution requirements and other circumstances of the trust.

Restricted Assets

Mandatory segregations of assets are presented as restricted assets. Such segregations are required by bond agreements and other external parties. Current liabilities payable from these restricted assets are so classified.

Designated Accounts

Purchased power funds are on deposit with Massachusetts Municipal Wholesale Electric Company (MMWEC) to pay for energy and related services as required under existing agreements.

The Department established a rate stabilization reserve which will be used for rate stabilization in the development of future rates and allow the Department to remain competitive under various market conditions by either purchasing replacement power or using reserves to mitigate the Department's exposure. Each year the Department determines the amount to be charged or credited to the reserve. The Department has set aside funds which will be used to offset these reserves. The reserve balances at December 31, 2022 and 2021 are \$40,415,008 and \$45,173,643, respectively, with corresponding amounts reported as deferred inflows of resources. In 2022 and 2021, the Department credited and charged a balance of \$0 and \$2,500,000, respectively.

Accounts Receivable

Accounts receivable are stated net of an allowance for uncollectible accounts of \$749,267 at December 31, 2022 and 2021. Management provides for probable uncollectible amounts through a charge to earnings and a credit to the valuation allowance based on its collection history and its assessment of the current status of individual accounts. Balances that are still outstanding after management has used reasonable collection efforts are written off through a charge to the valuation allowance and a credit to accounts receivable.

Customer Energy Conservation Advance

Customer energy conservation assistance are receivables from residential and commercial customers for assistance provided by the Department to make energy efficient improvements to their property, secured by municipal liens. Assistance amounts and terms vary based on the project type but are required to be repaid to the Department over a term generally between 3 to 5 years with 0% interest.

Holyoke Gas and Electric

Notes to Financial Statements
December 31, 2022 and 2021

Materials, Supplies and Fuel

Materials, supplies and fuel are valued at the lower of cost or market utilizing the average cost method. All materials are intended to be used in operations and are not intended for resale.

Prepaid Expense

Certain payments to vendors reflect costs applicable to future accounting periods and are recorded as prepaid items. This includes the purchase of prepaid power.

Plant, Property and Equipment

Capital assets (including right-to-use lease assets) are generally defined as assets with an initial individual cost of more than \$5,000 and an estimated useful life in excess of five years. Additions to and replacements of plant, property and equipment are recorded at cost or the estimated acquisition value at the time of contribution. The cost of plant, property and equipment retired, less accumulated depreciation and salvage, is charged against revenue in the year retired. The cost of repairs and minor renewals is charged to maintenance expense.

Leases

The Department is a lessor because it leases capital assets to other entities. As a lessor, the Department reports a lease receivable and corresponding deferred inflow of resources in the financial statements. The Department continues to report and depreciate the capital assets being leased as capital assets. The Department has a policy to recognize leases over \$100,000 as a lease receivable.

The Department is a lessee because it leases capital assets from other entities. As a lessee, the Department reports a lease payable and corresponding right of use asset in the financial statements. The Department has a policy to recognize leases over \$100,000 as a lease liability and right of use asset. Lease assets are typically amortized over the lease term.

Intangible Assets

Intangible assets are recorded at cost. Intangible assets subject to amortization include a franchise area fee to sell the electrical output associated with the December 2001 hydroelectric project purchase. Franchise fees are being amortized on a straight-line basis over the remaining lives of the respective licenses.

Line of Credit, Margin Credit Account

The Department is able to draw funds through the use of a margin account with their investment advisor. The investments held in the Department's investment account with their investment advisor are considered collateral for the borrowing. If the investments in the margin account decline in value, so does the value of the collateral supporting the borrowing and, as a result, the investment advisor may take action, such as issue a margin call or sell investments or other assets held in any of the Department's accounts held with the investment advisor. These funds received are recorded as a current liability and the subsequent investment as a restricted asset. No funds were outstanding on the margin account in 2022 and 2021. The margin line of credit is still open and available for the Department to use in the future.

Holyoke Gas and Electric

Notes to Financial Statements
December 31, 2022 and 2021

Environmental Matters

Expenditures that result from the remediation of an existing condition caused by past operations and that do not contribute to current or future revenues are expensed. Liabilities are recognized for remedial activities when the cleanup is probable and the cost can be reasonably estimated. A related asset for pollution costs recoverable in future has been recorded according to the General Standards of Accounting for the Effects of Regulation included in GASB Statement No. 62 *Codification of Accounting and Financial Reporting Guidance Contained in Pre- November 30, 1989 FASB and AICPA Pronouncements*.

Pensions

For purposes of measuring the net pension liability and deferred outflows and inflows of resources related to pensions and pension expense, information about the fiduciary net position of the City of Holyoke Retirement System (the Plan) and additions to/deductions from the Plan's fiduciary net position have been determined on the same basis as they are reported by the Plan. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms, investments are reported at fair value.

Net OPEB Liability (Asset)

For purposes of measuring the net OPEB liability (asset), deferred outflows and inflow of resources related to OPEB and OPEB expense, information about the fiduciary net position of the City of Holyoke's OPEB Plan (the Plan) administered to Department employees through the Department's Trust and additions to/deductions from the Plan's fiduciary net position have been determined on the same basis as they are reported by the Plan. For this purpose, the Plan recognizes benefit payments when due and payable in accordance with the benefit terms. Investments are reported at fair value.

Deferred Outflow of Resources

A deferred outflow of resources represents a consumption of net position that applies to a future period and will not be recognized as an outflow of resources (expense) until that future time.

Energy Tax

The Department is required to collect, on behalf of the State of Massachusetts, an energy tax based on 6.25% of gross sales to its commercial customers. The Department's policy is to exclude these energy taxes from revenue when collected and expenses when paid and instead, record the collection and payment of energy taxes through a liability account.

Compensated Absences

Substantially all employees receive compensation for vacations, holidays, illness and certain other qualifying absences. The number of days compensated in the various categories of absence is based generally on length of services. Compensated absences, which have been earned but not paid, have been accrued in the accompanying consolidated financial statements, based on current rates of pay.

Holyoke Gas and Electric

Notes to Financial Statements
December 31, 2022 and 2021

Long-Term Obligations

Long-term debt and other obligations are reported as liabilities. Bond premiums, issuance costs, and gains/losses on bond refunding are being amortized using the effective-interest method over the lives of the bonds. The balance at year-end for premiums is shown as an increase in the liability section of the statement of net position. The Department uses regulatory accounting to defer and amortize issuance costs in a manner similar to how they will be recovered in rates.

Unearned Revenues

In prior years, the Department collected charges from customers that will be used to pay for future pollution remediation costs. In the event that fees collected are in excess of actual pollution remediation costs, these charges may require refunds to customers and are therefore classified as a liability on the statement of net position. The Department stopped collecting charges from customers on January 1, 2019 as management believes the amounts collected to date are sufficient to cover future pollution remediation costs.

Regulatory Deferral

Regulatory deferral amounts represent reimbursements on infrastructure projects and customer/developer contributions that will be depreciated and recognized as revenue in matching amounts over future periods.

Deferred Inflows of Resources

A deferred inflow of resources represents an acquisition of net position that applies to a future period and, therefore, will not be recognized as an inflow of resources (revenue) until that future time. Rate stabilization reserves are reported as deferred inflows of resources for regulated business-type activities.

Net Position

The difference between assets, deferred outflows of resources, liabilities and deferred inflows of resources is net position. There are three components of net position: net investment in capital assets, restricted and unrestricted.

Net investment in capital assets consists of capital assets, less accumulated depreciation, reduced by the outstanding balances of any bonds, mortgages, notes or other borrowings that are attributable to the acquisition, construction or improvement of those assets.

Net position is restricted when constraints placed on its use are either: (1) externally imposed by creditors [such as through debt covenants], grantors, contributors or laws or regulations of other governments or (2) imposed by law through constitutional provisions or enabling legislation. The Department's restricted net position, as of December 31, 2022 and 2021, is related to the bond debt fund requirements, collateral required under note payable and funds reserved for payments on note receivable.

Unrestricted net position represents the net amount of assets and liabilities that are not invested in property, plant and equipment or restricted for debt service.

When both restricted and unrestricted resources are available for use, it is the Department's policy to use restricted resources first, then unrestricted resources as they are needed.

Holyoke Gas and Electric

Notes to Financial Statements
December 31, 2022 and 2021

Revenues and Expenses

Revenue Recognition

The Department distinguishes operating revenues and expenses from nonoperating items. Operating revenues and expenses generally result from providing services and producing and delivering goods in connection with the Department's principal ongoing operations. The principal operating revenues of the Department are charges to customers for sales and services. Operating expenses for an enterprise fund includes the cost of sales and services, administrative expenses and depreciation on capital assets. All revenues and expenses not making this definition are reported as nonoperating revenues and expenses.

Operating revenues are recognized on the basis of cycle billings rendered monthly, net of discounts. Revenues are not accrued for services delivered beyond such cycle billing dates.

Discounts reported for the year ended December 31, 2022 and 2021 that have directly reduced operating revenue in the statement of revenue, expenses and changes in net position are as follows:

	2022	2021
Gas	\$ 2,625,957	\$ 2,164,158
Electric	4,668,746	4,471,639
Total	<u>\$ 7,294,703</u>	<u>\$ 6,635,797</u>

Expense Allocation

Expenses associated with a particular division of the Department are charged to that division. For the years ended December 31, 2022 and 2021, shared expenses including administrative and supporting costs are allocated to each division as follows:

Gas	35.0 %
Electric and telecommunications	65.0 %

Depreciation

Depreciation is recorded on a straight-line basis using an annual rate of 3% of depreciable plant, property and equipment in service. The rate is in accordance with Massachusetts Department of Public Utilities regulations.

Effect of New Accounting Standards on Current Period Financial Statements

GASB has approved GASB Statement No. 94, *Public-Private and Public-Public Partnerships and Availability Payment Arrangements*, Statement No. 96, *Subscription-Based Information Technology Arrangements*, Statement No. 100, *Changes and Error Corrections - an Amendment of GASB Statement No. 62*, and Statement No. 101, *Compensated Absences*.

When they become effective, application of these standards may restate portions of these financial statements.

Comparative Data

Certain amounts presented in the prior year data may have been reclassified in order to be consistent with the current year's presentation.

Holyoke Gas and Electric

Notes to Financial Statements
December 31, 2022 and 2021

2. Deposits and Investments

The Department participates in a cash and investment pool maintained by the City. In addition, the Department holds certain cash separately from the pool.

Custody and use of restricted assets are subject to requirements and restrictions imposed under contractual agreements, bond indentures and the General Laws of the Commonwealth of Massachusetts and are not available for normal operating purposes. Postemployment benefit funds have been segregated by the Department to cover certain healthcare and life insurance benefits (see Note 10).

The Department invests various funds in debt and equity securities held by Flynn Financial Partners Ltd. and US Bank. All investments must be made in securities or deposits as authorized by Massachusetts General Laws, Chapter 44, Sections 54, 55 and 55B. Investments are stated at fair value.

The Department's deposits and investments as of December 31, 2022 were comprised of the following:

	Statement Balances	Carrying Value	Associated Risks
Demand deposits	\$ 14,616,728	\$ 13,232,883	Custodial credit risk
U.S. agencies, implicitly guaranteed	4,109,365	4,109,365	Credit risk, custodial credit risk, interest rate risk, concentration of credit risk
U.S. treasuries	1,627,365	1,627,365	Custodial credit risk, interest rate risk
Mutual funds, bond funds	10,408,772	10,408,772	Credit risk, interest rate risk
Mutual funds, other than bond funds	54,147,375	54,147,375	N/A
Certificates of deposit (CD), negotiable	1,858,752	1,858,752	Credit risk, custodial credit risk, interest rate risk
State and local bonds	1,005,971	1,005,971	Custodial credit risk, credit risk, interest rate risk, concentration of credit risk
Total, department	87,774,328	86,390,483	
OPEB Trust, demand deposits	657	657	Custodial credit risk
OPEB Trust, mutual funds, bond funds	1,647,627	1,647,627	Credit risk, Interest rate risk
OPEB Trust, mutual funds, other than bond funds	17,302,237	17,302,237	N/A
Total OPEB trust	18,950,521	18,950,521	
Grand total	\$ 106,724,849	\$ 105,341,004	
Reconciliation to statement of net position:			
Cash and investments		\$ 25,152,085	
Redemption account		3,787,167	
Accounts required under bond indenture/notes payable		14,484,411	
Customer deposits		1,654,299	
Purchased power accounts		387,898	
Rate stabilization accounts		40,736,232	
Other investments		188,390	
OPEB Trust, statement of fiduciary net position (separate financial statement)		18,950,522	
Total		\$ 105,341,004	

Holyoke Gas and Electric

Notes to Financial Statements
December 31, 2022 and 2021

The Department's deposits and investments at as of December 31, 2021 were comprised of the following:

	Statement Balances	Carrying Value	Associated Risks
Demand deposits	\$ 7,892,788	\$ 5,740,487	Custodial credit risk
U.S. agencies, implicitly guaranteed	1,188,543	1,188,543	Credit risk, custodial credit risk, interest rate risk, concentration of credit risk
Mutual funds, bond funds	21,351,959	21,351,959	Credit risk, interest rate risk
Mutual funds, other than bond funds	65,525,920	65,525,920	N/A
Certificates of deposit (CD), negotiable	224,024	224,024	Credit risk, custodial credit risk, interest rate risk
State and local bonds			Custodial credit risk, credit risk, interest rate risk, concentration of credit risk
	<u>138,691</u>	<u>138,691</u>	
Total, Department	<u>96,321,925</u>	<u>94,169,624</u>	
OPEB Trust, demand deposits	21,454	21,454	Custodial credit risk
OPEB Trust, mutual funds, bond funds	1,300,539	1,300,539	Credit risk, Interest rate risk
OPEB Trust, mutual funds, other than bond funds	20,981,238	20,981,239	N/A
Total OPEB Trust	<u>22,303,231</u>	<u>22,303,232</u>	
Grand total	<u>\$ 118,625,156</u>	<u>\$ 116,472,856</u>	
Reconciliation to statement of net position:			
Cash and investments		\$ 25,646,091	
Redemption account		1,594,622	
Accounts required under bond indenture/notes payable		19,173,749	
Customer deposits		2,009,756	
Purchased power accounts		383,374	
Rate stabilization accounts		45,173,643	
Other investments		188,390	
OPEB Trust, statement of fiduciary net position (separate financial statement)		<u>22,303,231</u>	
Total		<u>\$ 116,472,856</u>	

Deposits in each local and area bank are insured by the FDIC in the amount of \$250,000 for time and savings accounts (including NOW accounts) and \$250,000 for demand deposit accounts (interest-bearing and noninterest-bearing). In addition, if deposits are held in an institution outside of the state in which the government is located, insured amounts are further limited to a total of \$250,000 for the combined amount of all deposit accounts.

The Securities Investor Protection Corporation (SIPC), created by the Securities Investor Protection Act of 1970, is an independent government-sponsored corporation (not an agency of the U.S. government).

SIPC membership provides account protection up to a maximum of \$500,000 per customer, of which \$100,000 may be in cash. \$500,000 of the Department's investments and \$500,000 of the OPEB Trust investments are covered by SIPC. Additionally, through Lloyds of London, accounts have securities coverage subject to a \$600 million aggregate firm limit. Coverage limits per customer are not available. The value of investments subject to Lloyds of London coverage was \$9,888,366 in 2022 and \$1,147,713 in 2021 for the Department; \$0 in 2022 and 2021 for the OPEB trust.

Holyoke Gas and Electric

Notes to Financial Statements
December 31, 2022 and 2021

Fair Value

The Department categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs.

The valuation methods for recurring fair value measurements as of December 31, 2022 and 2021 are as follows:

- Institutional bond quotes for U.S. government agency securities and state and local bonds
- Quoted market prices for identical assets for mutual funds, bond funds and mutual funds, other than bond funds
- Quoted market prices for similar assets for certificates of deposits

The valuation levels for investments held as of December 31, 2022 and 2021 are as follows:

Investment Type	2022			
	Level 1	Level 2	Level 3	Total
U.S. agencies, implicitly guaranteed	\$ -	\$ 4,109,365	\$ -	\$ 4,109,365
U.S. treasuries	-	1,627,365	-	1,627,365
Mutual funds, bond funds	1,275,732	9,133,040	-	10,408,772
Mutual funds, other than bond funds	54,147,375	-	-	54,147,375
Certificate of deposit (CD), negotiable	-	1,858,752	-	1,858,752
State and local bonds	-	1,005,971	-	1,005,971
Total, Department	55,423,107	17,734,493	-	73,157,600
OPEB Trust, mutual funds, bond funds	1,647,627	-	-	1,647,627
OPEB Trust, mutual funds, other than bond funds	17,302,237	-	-	17,302,237
Total, OPEB Trust	18,949,865	-	-	18,949,865
Grand total	\$ 74,372,972	\$ 17,734,493	\$ -	\$ 92,107,465

Holyoke Gas and Electric

Notes to Financial Statements
December 31, 2022 and 2021

Investment Type	2021			
	Level 1	Level 2	Level 3	Total
U.S. agencies, implicitly guaranteed	\$ -	\$ 1,188,543	\$ -	\$ 1,188,543
Mutual funds, bond funds	21,351,959	-	-	21,351,959
Mutual funds, other than bond funds	65,525,920	-	-	65,525,920
Certificate of deposit	-	224,024	-	224,024
State and local bonds	-	138,691	-	138,691
Total, Department	86,877,879	1,551,258	-	88,429,137
OPEB Trust, mutual funds, bond funds	1,300,539	-	-	1,300,539
OPEB Trust, mutual funds, other than bond funds	20,981,238	-	-	20,981,238
Total, OPEB Trust	22,281,777	-	-	22,281,777
Grand total	\$ 109,159,656	\$ 1,551,258	\$ -	\$ 110,710,914

Custodial Credit Risk

Deposits

Custodial credit risk is the risk that the Department's deposits may not be returned to the Department. Uninsured, uncollateralized, deposits subject to custodial credit risk were \$11,533,080 in 2022 and \$6,420,564 in 2021.

Investments

For an investment, custodial credit risk is the risk that, in the event of the failure of the counterparty, the Department will not be able to recover the value of their investments or collateral securities that are in the possession of an outside party. The Department's investment policy addresses credit risk by defining allowable investments.

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. The Department does not have a formal investment policy that limits investment maturities.

Holyoke Gas and Electric

Notes to Financial Statements
December 31, 2022 and 2021

At December 31, 2022 and 2021, the Department's investments were as follows:

2022					
Fair Value	Maturity in Years				
	Less Than 1	1-4	5-10	Over 10	
U.S. agencies, implicitly guaranteed	\$ 4,109,365	\$ 2,853,021	\$ 236,017	\$ 140,721	\$ 879,606
U.S. treasuries	1,627,365	1,627,365	-	-	-
Mutual funds, bond funds	10,408,772	10,408,772	-	-	-
OPEB - Mutual funds, bond funds	1,647,627	1,647,627	-	-	-
CDs, negotiable	1,858,752	1,858,752	-	-	-
State and local bonds	1,005,971	233,334	-	370,000	402,637
Total	\$ 20,657,852	\$ 18,628,871	\$ 236,017	\$ 510,721	\$ 1,282,243
2021					
Fair Value	Maturity in Years				
	Less Than 1	1-4	5-10	Over 10	
U.S. agencies, implicitly guaranteed	\$ 1,188,543	\$ 671,210	\$ 517,333	\$ -	\$ -
Mutual funds, bond funds	21,351,959	21,351,959	-	-	-
OPEB - Mutual funds, bond funds	1,300,539	1,300,539	-	-	-
CDs, negotiable	224,024	224,024	-	-	-
State and local bonds	138,691	-	-	-	138,691
Total	\$ 24,203,756	\$ 23,547,732	\$ 517,333	\$ -	\$ 138,691

Holyoke Gas and Electric

Notes to Financial Statements
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Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The Department does not have a separate formal policy regarding credit risk.

As of December 31, 2022 and 2021, the Department's investments were rated as follows:

Investment Type	2022		
	Standard & Poor's	Moody's Investment Service	Composite
U.S. agencies, implicitly guaranteed	AA+	AAA	N/A
Mutual funds, bond funds	N/A	N/A	B to BBB
OPEB - Mutual funds, bond funds	N/A	N/A	B to BBB
CDs, negotiable	N/A	N/A	N/A

Investment Type	2021		
	Standard & Poor's	Moody's Investment Service	Composite
U.S. agencies, implicitly guaranteed	AA+	AAA	N/A
Mutual funds, bond funds	N/A	N/A	B to BBB
OPEB - Mutual funds, bond funds	N/A	N/A	B to BBB
CDs, negotiable	N/A	N/A	N/A

Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of the Department's investment in a single issuer. In 2022 and 2021, there were no investments in any one issuer that represented greater than 5% of total investments.

Holyoke Gas and Electric

Notes to Financial Statements
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3. Plant, Property and Equipment

Plant, property and equipment as of December 31, 2022 consist of the following:

	Balance January 1, 2022	Increase	Decrease	Balance December 31, 2022
Utility plant not being depreciated:				
Gas:				
Land	\$ 236,856	\$ -	\$ -	\$ 236,856
Construction in progress	1,028,895	4,472,451	4,843,202	658,144
	<u>1,265,751</u>	<u>4,472,451</u>	<u>4,843,202</u>	<u>895,000</u>
Electric/telecommunications:				
Land	4,408,008	-	-	4,408,008
Construction in progress	2,540,580	7,542,323	7,176,413	2,906,490
	<u>6,948,588</u>	<u>7,542,323</u>	<u>7,176,413</u>	<u>7,314,498</u>
Total utility plant not being depreciated	<u>8,214,339</u>	<u>12,014,774</u>	<u>12,019,615</u>	<u>8,209,498</u>
Utility plant being depreciated:				
Gas:				
Plant investment	57,460,273	4,664,673	374,597	61,750,349
Office furniture and equipment	1,543,533	89,946	3,177	1,630,302
Transportation and communication equipment	1,711,765	10,124	9,131	1,712,758
Other	486,189	34,483	-	520,672
	<u>61,201,760</u>	<u>4,799,226</u>	<u>386,905</u>	<u>65,614,081</u>
Electric/telecommunications:				
Plant investment	207,056,472	8,999,016	1,461,668	214,593,820
Office furniture and equipment	3,408,171	184,035	13,805	3,578,401
Transportation and communication equipment	5,687,371	81,863	29,313	5,739,921
Right of use asset	4,410,245	-	-	4,410,245
Other	751,132	19,658	20,883	749,907
	<u>221,313,391</u>	<u>9,284,572</u>	<u>1,525,669</u>	<u>229,072,294</u>
Total utility plant being depreciated	<u>\$ 282,515,151</u>	<u>\$ 14,083,798</u>	<u>\$ 1,912,574</u>	<u>\$ 294,686,375</u>

Note: Immaterial differences may exist due to rounding.

Holyoke Gas and Electric

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	Balance January 1, 2022	Increase	Decrease	Balance December 31, 2022
Less accumulated depreciation:				
Gas:				
Plant investment	\$ (29,679,139)	\$ (1,618,202)	\$ 270,396	\$ (31,026,945)
Office furniture and equipment	(975,869)	(155,598)	1,630	(1,129,837)
Transportation and communication equipment	(1,433,014)	(42,916)	9,131	(1,466,799)
Other	(303,449)	(24,762)	-	(328,211)
	<u>(32,391,471)</u>	<u>(1,841,478)</u>	<u>281,157</u>	<u>(33,951,792)</u>
Electric/telecommunications:				
Plant investment	(78,205,694)	(6,044,926)	1,259,894	(82,990,726)
Office furniture and equipment	(2,212,854)	(376,290)	6,681	(2,582,463)
Transportation and communication equipment	(5,224,087)	(40,964)	27,883	(5,237,168)
Right of use asset	(188,586)	(180,339)	-	(368,925)
Other	(549,411)	(49,139)	27,808	(570,742)
	<u>(86,380,632)</u>	<u>(6,691,658)</u>	<u>1,322,266</u>	<u>(91,750,024)</u>
Total accumulated depreciation	<u>(118,772,103)</u>	<u>(8,533,136)</u>	<u>1,603,423</u>	<u>(125,701,816)</u>
Total utility plant being depreciated, net:				
Gas	28,810,289	2,957,748	105,748	31,662,289
Electric	<u>134,932,759</u>	<u>2,592,914</u>	<u>203,403</u>	<u>137,322,270</u>
	<u>163,743,048</u>	<u>5,550,662</u>	<u>309,151</u>	<u>168,984,559</u>
Total utility plant, net:				
Gas	30,076,040	7,430,199	4,948,950	32,557,289
Electric	<u>141,881,347</u>	<u>10,135,237</u>	<u>7,379,816</u>	<u>144,636,768</u>
Net capital assets	<u>\$ 171,957,387</u>	<u>\$ 17,565,436</u>	<u>\$ 12,328,766</u>	<u>\$ 177,194,057</u>

Note: Immaterial differences may exist due to rounding.

Holyoke Gas and Electric

Notes to Financial Statements
December 31, 2022 and 2021

Plant, property and equipment as of December 31, 2021 consist of the following:

	Balance January 1, 2021	Increase	Decrease	Balance December 31, 2021
Utility plant not being depreciated:				
Gas:				
Land	\$ 236,856	\$ -	\$ -	\$ 236,856
Construction in progress	900,057	3,713,844	3,585,006	1,028,895
	<u>1,136,913</u>	<u>3,713,844</u>	<u>3,585,006</u>	<u>1,265,751</u>
Electric/telecommunications:				
Land	4,405,918	2,090	-	4,408,008
Construction in progress	1,398,177	5,683,321	4,540,918	2,540,580
	<u>5,804,095</u>	<u>5,685,411</u>	<u>4,540,918</u>	<u>6,948,588</u>
Total utility plant not being depreciated	<u>6,941,008</u>	<u>9,399,255</u>	<u>8,125,924</u>	<u>8,214,339</u>
Utility plant being depreciated:				
Gas:				
Plant investment	54,557,833	3,390,449	488,009	57,460,273
Office furniture and equipment	1,646,791	64,601	167,859	1,543,533
Transportation and communication equipment	1,606,927	112,425	7,587	1,711,765
Other	404,294	83,589	1,694	486,189
	<u>58,215,845</u>	<u>3,651,064</u>	<u>665,149</u>	<u>61,201,760</u>
Electric/telecommunications:				
Plant investment	203,238,073	5,657,404	1,839,005	207,056,472
Office furniture and equipment	3,393,279	206,791	191,899	3,408,171
Transportation and communication equipment	5,650,937	42,082	5,648	5,687,371
Right of use asset	4,410,245	-	-	4,410,245
Other	735,056	17,835	1,759	751,132
	<u>217,427,590</u>	<u>5,924,112</u>	<u>2,038,311</u>	<u>221,313,391</u>
Total utility plant being depreciated	<u>\$ 275,643,435</u>	<u>\$ 9,575,176</u>	<u>\$ 2,703,460</u>	<u>\$ 282,515,151</u>

Note: Immaterial differences may exist due to rounding.

Holyoke Gas and Electric

Notes to Financial Statements
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	Balance January 1, 2021	Increase	Decrease	Balance December 31, 2021
Less accumulated depreciation:				
Gas:				
Plant investment	\$ (28,450,166)	\$ (1,547,162)	\$ 318,189	\$ (29,679,139)
Office furniture and equipment	(1,078,176)	(61,316)	163,623	(975,869)
Transportation and communication equipment	(1,328,599)	(105,415)	1,000	(1,433,014)
Other	(287,249)	(17,894)	1,694	(303,449)
	<u>(31,144,190)</u>	<u>(1,731,787)</u>	<u>484,506</u>	<u>(32,391,471)</u>
Electric/telecommunications:				
Plant investment	(73,481,794)	(5,865,577)	1,141,677	(78,205,694)
Office furniture and equipment	(2,244,961)	(153,935)	186,042	(2,212,854)
Transportation and communication equipment	(4,886,802)	(348,750)	11,465	(5,224,087)
Right of use asset	-	(188,586)	-	(188,586)
Other	(514,714)	(36,256)	1,559	(549,411)
	<u>(81,128,271)</u>	<u>(6,593,104)</u>	<u>1,340,743</u>	<u>(86,380,632)</u>
Total accumulated depreciation	<u>(112,272,461)</u>	<u>(8,324,891)</u>	<u>1,825,249</u>	<u>(118,772,103)</u>
Total utility plant being depreciated, net:				
Gas	27,071,655	1,919,277	180,643	28,810,289
Electric	<u>136,299,319</u>	<u>(668,992)</u>	<u>697,568</u>	<u>134,932,759</u>
	<u>163,370,974</u>	<u>1,250,285</u>	<u>878,211</u>	<u>163,743,048</u>
Total utility plant, net:				
Gas	28,208,568	5,633,121	3,765,649	30,076,040
Electric	<u>142,103,414</u>	<u>5,016,419</u>	<u>5,238,486</u>	<u>141,881,347</u>
Net capital assets	<u>\$ 170,311,982</u>	<u>\$ 10,649,540</u>	<u>\$ 9,004,135</u>	<u>\$ 171,957,387</u>

Note: Immaterial differences may exist due to rounding.

Additional disclosures of the lease asset are included in the Lease Disclosure note (See Note 4).

Holyoke Gas and Electric

Notes to Financial Statements
December 31, 2022 and 2021

4. Lease Disclosures

Lessee - Lease Liabilities

Electric and Telecommunications

Lease Liabilities Description	Date of Issue	Final Maturity	Interest Rates	Original Indebtedness	Balance 12/31/22
Solar power sales and energy storage services agreement	5/31/2018	5/31/2038	4.34%	\$ 4,410,245	\$ 4,041,320
Total lease liabilities					\$ 4,041,320

Debt service requirements to maturity are as follows:

	Principal	Interest	Total
Years ending December 31:			
2023	\$ 188,323	\$ 171,677	\$ 360,000
2024	196,661	163,339	360,000
2025	205,368	154,632	360,000
2026	214,461	145,539	360,000
2027	223,956	136,044	360,000
2028-2032	1,277,585	522,415	1,800,000
2033-2037	1,586,579	213,421	1,800,000
2038	148,387	-	148,387
Total	\$ 4,041,320	\$ 1,507,067	\$ 5,548,387

Lessor - Lease Receivables

Electric and Telecommunications

Lease Receivables Description	Date of Inception	Final Maturity	Interest Rates	Receivable Balance 12/31/22	Receivable Balance 12/31/21
Lease of land for PODS	9/1/2012	8/31/2032	4.34%	\$ 709,525	\$ 757,453
Pole attachments	1/1/2017	12/31/2026	4.34%	204,851	250,852
Lease of dark fiber	5/1/2022	12/31/2027	4.34%	677,242	-
Total electric utility activities				\$ 1,591,618	\$ 1,008,305

The Department recognized \$178,902 and \$86,222 of lease revenue as of December 31, 2022 and 2021, respectively.

The Department recognized \$61,119 and \$30,665 of interest revenue as of December 31, 2022 and 2021, respectively.

Holyoke Gas and Electric

Notes to Financial Statements
December 31, 2022 and 2021

5. Note Receivable

	<u>2022</u>	<u>2021</u>
Note receivable from Holyoke Solar, LLC (separate nonrelated entity) due to the Solar Coop in monthly installments of \$74,191 including interest at 5.25%, secured by the Solar Installation Property, matures December 2031.	\$ -	\$ 6,908,536
Note receivable from Massachusetts Institute of Technology due to Holyoke Gas and Electric in monthly installments of \$57,937 including interest at 4.4%, matures April 2032.	4,494,330	-
Less amount due within one year	<u>(330,848)</u>	<u>(539,639)</u>
Note receivable, due after one year	<u>\$ 4,163,482</u>	<u>\$ 6,368,897</u>

The remaining interest due on the Holyoke Solar, LLC loan is \$0 as it was paid off in 2022. The Holyoke Solar, LLC note and security agreement also requires the borrower to establish a Reserve Account to be held in an interest-bearing savings account equal to no less than 6 months of principal and interest debt service payments. The Solar Coop shall use the Reserve Account to cure any failure of the borrower to pay when due any principal or interest payment. If the Reserve Account is not used by the Solar Coop during the first 6 years, the Reserve Account shall be decreased to no less than 2 months of principal and interest debt service payments. The Reserve Account was established with a required balance of \$444,737. The account balances at December 31, 2022 and 2021 were \$0 and \$148,271, respectively.

6. Other Receivables

Other receivables, all due within one year, consist of the following as of December 31, 2022 and 2021:

	<u>2022</u>	<u>2021</u>
Springfield Water and Sewer	\$ 251,991	\$ 64,999
Massachusetts Department of Transportation	992,775	889,259
Accrued interest receivable	13,709	10,226
Current portion of lease receivable	232,370	93,928
Miscellaneous other receivables	<u>552,990</u>	<u>863,205</u>
Total	<u>\$ 2,043,835</u>	<u>\$ 1,921,617</u>

7. Intangible Assets

		<u>2022</u>	
	<u>Life in Years</u>	<u>Gross Carrying Amount</u>	<u>Accumulated Amortization</u>
2001 franchise fees	30	\$ 2,000,000	\$ 1,403,334
		<u>2021</u>	
	<u>Life in Years</u>	<u>Gross Carrying Amount</u>	<u>Accumulated Amortization</u>
2001 franchise fees	30	\$ 2,000,000	\$ 1,336,667

Holyoke Gas and Electric

Notes to Financial Statements
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Aggregate amortization expense was \$66,667 for the years ended December 31, 2022 and 2021.
Estimated annual aggregate amortization expense is \$66,667 for the nine years subsequent to 2022.

8. Long-Term Obligations

Revenue bonds, issued through Massachusetts Clean Energy

Original issue amount is \$69,040,000 and date of issue is
December 2021. Bonds mature annually 2021-2038.

Interest rates range from .567% to 2.985%. \$ 63,530,000

Less amount due within one year (5,145,000)

Bonds payable, due after one year \$ 58,385,000

Principal maturing and interest payments are anticipated to be as follows:

	Principal	Interest	Total
Years ending December 31:			
2023	\$ 5,145,000	\$ 1,180,372	\$ 6,325,372
2024	5,820,000	1,147,135	6,967,135
2025	5,885,000	1,086,607	6,971,607
2026	5,960,000	1,006,100	6,966,100
2027	6,060,000	912,648	6,972,648
2028-2032	29,765,000	2,673,063	32,438,063
2033-2037	4,020,000	490,199	4,510,199
2038	875,000	26,119	901,119
Total	\$ 63,530,000	\$ 8,522,242	\$ 72,052,242

The outstanding revenue bonds contain:

1. a provision that in the event of default not remedied, the Trustee may declare the principal of all the Bonds then Outstanding and interest accrued thereon to be immediately due and payable; and
2. a provision that in the event of default not remedied, upon demand of the Trustee, all monies, securities and funds held by the Cooperative and pledged under the Bond Resolution and after receipt thereof, all revenues from the net capability of the Hadley Falls facility.

Revenue Bonds are payable solely from and secured solely by the Revenues of MCEC derived from the sale of the Net Capability of the Hadley Falls Facility.

Holyoke Gas and Electric

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The Department is required to satisfy certain bond covenant requirements in connection with the bonds payable. In addition, the notes payable from direct placement detailed on the following page also have funding requirements. The following funds are required as part of the bond and note agreements:

	<u>2022</u>	<u>2021</u>
Revenue bonds:		
Debt service reserve fund	\$ 5,954,549	\$ 5,899,696
Redemption account:		
Reserve and contingency fund	608,675	706,470
Principal account	2,585,915	787,143
Bond interest fund	592,577	101,009
Hadley Falls construction account	<u>8,529,862</u>	<u>10,159,429</u>
Subtotal related to bonds	<u>18,271,578</u>	<u>17,653,747</u>
Notes payable:		
Collateral account	-	2,966,279
Reserve fund	<u>-</u>	<u>148,345</u>
Subtotal related to notes	<u>-</u>	<u>3,114,624</u>
Total funds required under bond indenture/ note payable	<u>\$ 18,271,578</u>	<u>\$ 20,768,371</u>
Note payable to bank, secured by revenues of the Department with a lien on all business assets on Holyoke Solar Cooperative and a pledge of the service contract between the Department and Holyoke Solar Cooperative, monthly payments of \$54,667 including interest at 3.30%, matures in April 2038.	\$ 7,858,878	
Note payable to bank, secured by all assets of Holyoke Solar Cooperative, monthly payments of \$4,707 including interest at 3.250%, matures January 2026.	165,393	
Note payable to bank, secured by all assets of Holyoke Solar Cooperative, monthly payments of \$48,493 including interest at 4.34%, matures April 2032	4,447,065	
Less amount due within one year	<u>(845,117)</u>	
Notes payable, due after one year	<u>\$ 11,626,219</u>	

Holyoke Gas and Electric

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Principal maturing and interest payments are anticipated to be as follows:

	Principal	Interest	Total
Years ending December 31:			
2023	\$ 845,117	\$ 449,301	\$ 1,294,418
2024	876,908	417,510	1,294,418
2025	912,369	382,048	1,294,417
2026	895,542	347,096	1,242,638
2027	926,027	311,903	1,237,930
2028-2032	4,815,202	986,501	5,801,703
2033-2037	2,983,019	297,005	3,280,024
2038	217,152	1,516	218,668
Total	<u>\$ 12,471,336</u>	<u>\$ 3,192,880</u>	<u>\$ 15,664,216</u>

The outstanding notes from direct placements contain:

1. a provision that in an event of default, outstanding amounts become immediately due and payable; and/or
2. a provision that in an event of default, the borrower shall reimburse the bank for any reasonable cost incurred by the Bank in connection to the collection and enforcement of the provisions of the loan agreement; and/or
3. a provision that in the event of default, all deposits, securities and other property in the possession of the bank belonging to the borrower shall be treated as collateral to secure payment of the notes; and
4. a provision that in the event of default, the entire outstanding principal balance of the notes shall bear interest, from the date of default at the default rate of 5%.

Changes in Long-Term Liabilities

Long-term liability activities for the years ended December 31, 2022 are as follows:

	Balance January 1, 2022	Additions	Reductions	Balance December 31, 2022	Current Portion
Long-term bonds and loans:					
Bonds payable	\$ 69,040,000	\$ -	\$ 5,510,000	\$ 63,530,000	\$ 5,145,000
Notes payable	14,918,308	4,700,000	7,147,026	12,471,282	845,117
Total long-term bonds and loans	83,958,308	4,700,000	12,657,026	76,001,282	5,990,117
Other long-term liabilities:					
Net pension liability	22,849,646	-	5,993,250	16,856,396	-
Compensated absences	4,063,380	-	95,575	3,967,805	352,339
Unearned revenue	2,671,343	-	126,080	2,545,262	-
Lease liability	4,221,659	-	180,339	4,041,320	188,323
Net OPEB liability (asset)	(1,896,162)	2,339,943	-	443,781	-
Reserve fund for note receivable	144,374	-	144,374	-	-
Total long-term liabilities	<u>\$ 116,012,548</u>	<u>\$ 7,039,943</u>	<u>\$ 19,196,644</u>	<u>\$ 103,855,847</u>	<u>\$ 6,530,779</u>

Holyoke Gas and Electric

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Long-term liability activities for the years ended December 31, 2021 are as follows:

	Restated Balance January 1, 2021	Additions	Reductions	Restated Balance December 31, 2021	Current Portion
Long-term bonds and loans:					
Bonds payable	\$ 58,640,000	\$ 69,040,000	\$ 58,640,000	\$ 69,040,000	\$ 5,510,000
Premium on bonds	5,502,488	-	5,502,488	-	-
Notes payable	15,603,734	260,081	945,507	14,918,308	984,892
Total long-term bonds and loans	79,746,222	69,300,081	65,087,995	83,958,308	6,494,892
Other long-term liabilities:					
Net pension liability	29,829,651	-	6,980,005	22,849,646	-
Compensated absences	3,856,574	206,806	-	4,063,380	367,561
Unearned revenue	2,782,163	-	110,820	2,671,343	-
Lease liability	4,410,245	-	188,586	4,221,659	180,339
Net OPEB liability (asset)	2,700,503	-	4,596,665	(1,896,162)	-
Reserve fund for note receivable	148,291	-	3,917	144,374	-
Total long-term liabilities	\$ 123,473,649	\$ 69,506,887	\$ 76,967,988	\$ 116,012,548	\$ 7,042,792

Revenue Debt

The Department has pledged future revenues, net of certain operating expenses to repay revenue bonds. Proceeds from the bonds provided financing for improvements to the Hadley Falls generating station. The bonds are payable solely from revenues generated by the power purchase agreement with MMWEC through 2032. Annual principal and interest payments on the bonds are expected to require 100% of the Clean Energy Coop future gross revenues from MMWEC. The principal and interest remaining to be paid on the bonds is \$72,052,241. Principal and interest paid in 2022 and 2021 were \$6,217,064 and \$6,109,605, respectively. Total customer net revenues in 2022 and 2021 were \$8,491,278 and \$4,841,131, respectively. Customer revenues began in 2015 to coincide with the first bond principal payment due.

Advance Refunding

On November 29, 2021, Massachusetts Clean Energy Cooperative Revenue Bonds, Series 2021 were issued in the amount of \$69,040,000 with average interest rate ranges of 0.576% – 2.985% to refund \$53,660,000 of outstanding bonds with an average interest rate of 4.0%. The net proceeds were used to purchase U.S government securities. Those securities were deposited in an irrevocable trust with an escrow agent to provide future debt service payments on the old bonds. As a result, the old bonds are considered defeased and the liability for the old bonds has been removed from the statement of net position. The amount defeased as of December 31, 2022 and 2021 was \$33,309,000 and 52,190,000, respectively.

The cash flow requirements on the old bonds prior to the advance refunding was \$71,434,125 from 2022 through 2032. The cash flow requirements on the new bonds are \$64,316,583 from 2022 through 2032. The advance refunding resulted in an economic gain of \$4,900,938.

Holyoke Gas and Electric

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9. Blended Component Units

The following schedules provide details of the blended component units' balances, activities and eliminations.

Combining Schedule of Net Position December 31, 2022

	HGE	Holyoke Solar	Mass Clean Energy	Eliminations	Total
Assets					
Current assets:					
Cash and investments	\$ 10,287,513	\$ 15,164,274	\$ 21,521	\$ -	\$ 25,473,308
Restricted assets:					
Redemption account	-	-	3,787,167	-	3,787,167
Customer accounts receivable, net	8,603,373	12,075	-	-	8,615,448
Note receivable, current portion	330,848	-	-	-	330,848
Materials and supplies	5,306,054	-	-	-	5,306,054
Fuel for electric generation and gas in storage	1,140,846	-	-	-	1,140,846
Prepaid expense	3,272,353	-	48,948,493	(48,948,481)	3,272,365
Other receivables	2,040,741	3,094	-	-	2,043,835
Total current assets	30,981,728	15,179,443	52,757,181	(48,948,481)	49,969,871
Noncurrent assets:					
Restricted assets:					
Accounts required under bond indenture/note payable	-	-	14,484,411	-	14,484,411
Customers' deposits	1,654,299	-	-	-	1,654,299
Other receivables, after one year	4,163,482	-	-	-	4,163,482
Customer energy conservation assistance	1,216,976	-	-	-	1,216,976
Advances to other funds	431,000	8,639,495	-	(9,070,495)	-
Other assets:					
Purchased power accounts	387,898	-	-	-	387,898
Rate stabilization accounts	40,415,008	-	-	-	40,415,008
Regulatory asset debt issuance cost	-	-	651,963	-	651,963
Costs recoverable in future, pollution	77,300	-	-	-	77,300
Other investments	188,390	-	-	-	188,390
Lease receivable	1,359,249	-	-	-	1,359,249
Intangible assets	596,666	-	-	-	596,666
Capital assets:					
Plant, property and equipment in service	294,920,993	-	-	-	294,920,993
Right of use asset	4,410,245	-	-	-	4,410,245
Construction in progress	3,564,634	-	-	-	3,564,634
Total capital assets	302,895,872	-	-	-	302,895,872
Less accumulated depreciation	(125,701,816)	-	-	-	(125,701,816)
Net capital assets	177,194,056	-	-	-	177,194,056
Total noncurrent assets	227,684,324	8,639,495	15,136,374	(9,070,495)	242,389,698
Total assets	258,666,052	23,818,938	67,893,555	(58,018,976)	292,359,569
Deferred Outflows of Resources					
OPEB related amounts	2,964,891	-	-	-	2,964,891
Pension related amounts	8,086,659	-	-	-	8,086,659
Total deferred outflows	11,051,550	-	-	-	11,051,550

Holyoke Gas and Electric

Notes to Financial Statements
December 31, 2022 and 2021

Combining Schedule of Net Position December 31, 2022

	HGE	Holyoke Solar	Mass Clean Energy	Eliminations	Total
Liabilities					
Current liabilities:					
Accounts payable	\$ 10,522,664	\$ 12,646	\$ -	\$ -	\$ 10,535,310
Accrued liabilities	869,209	-	-	-	869,209
Current portion, accrued compensated absences	352,339	-	-	-	352,339
Current portion, accrued environmental costs	77,300	-	-	-	77,300
Current portion, leases	188,323	-	-	-	188,323
Current portion, notes payable	-	845,117	-	-	845,117
Liabilities payable from restricted assets:					
Current portion, bonds and notes payable	-	-	5,145,000	-	5,145,000
Customers' deposits	1,686,891	-	-	-	1,686,891
Accrued interest	-	-	590,186	-	590,186
Total current liabilities	13,969,726	857,763	5,735,186	-	20,289,675
Long-term liabilities:					
Bonds payable, long term	-	-	58,385,000	-	58,385,000
Notes payable, long-term	-	11,626,218	-	-	11,626,218
Leases payable, long-term	3,852,997	-	-	-	3,852,997
Accrued compensated absences	3,615,466	-	-	-	3,615,466
Net OPEB liability	443,781	-	-	-	443,781
Unearned revenue	51,493,743	-	-	(48,948,481)	2,545,262
Advances from other funds	8,639,495	-	431,000	(9,070,495)	-
Net pension liability	16,856,396	-	-	-	16,856,396
Total long-term liabilities	84,901,878	11,626,218	58,816,000	(58,018,976)	97,325,120
Total liabilities	98,598,604	12,483,981	64,551,186	(58,018,976)	117,614,795
Deferred Inflows of Resources					
Regulatory deferral	10,689,939	-	-	-	10,689,939
Pension related amounts	10,804,798	-	-	-	10,804,798
Lease related amounts	1,591,619	-	-	-	1,591,619
OPEB related amounts	3,044,475	-	-	-	3,044,475
Rate stabilization reserve	40,415,009	-	-	-	40,415,009
Gain on refunding	-	-	1,342,579	-	1,342,579
Total deferred inflows of resources	66,545,840	-	1,342,579	-	67,888,419
Net Position					
Net investment in plant, property and equipment	177,194,056	-	-	(69,023,531)	108,170,525
Restricted for debt service	-	-	4,006,529	-	4,006,529
Restricted OPEB	-	-	-	-	-
Restricted for purchase of future power capacity	-	-	8,529,863	(8,529,863)	-
Unrestricted (deficit)	(72,620,898)	11,334,957	(10,536,602)	77,553,394	5,730,851
Total net position (deficit)	\$ 104,573,158	\$ 11,334,957	\$ 1,999,790	\$ -	\$ 117,907,905

Holyoke Gas and Electric

Notes to Financial Statements
December 31, 2022 and 2021

Combining Schedule of Revenues, Expenses and Changes in Net Position Year Ended December 31, 2022

	HGE	Holyoke Solar	Mass Clean Energy	Eliminations	Consolidated Total
Operating Revenues	\$ 84,941,702	\$ 567,228	\$ 8,491,278	\$ (9,058,506)	\$ 84,941,702
Operating Expenses					
Operation and maintenance	69,461,553	189,517	5,008,543	(9,058,506)	65,601,107
Amortization – right of use asset	180,339	-	-	-	180,339
Depreciation, plant and equipment	8,216,115	-	-	-	8,216,115
Total operating expenses	77,858,007	189,517	5,008,543	(9,058,506)	73,997,561
Operating income	7,083,695	377,711	3,482,735	-	10,944,141
Nonoperating Other Revenues (Expenses)					
Investment income, net of fees	3,008,044	832,803	161,439	(411,328)	3,590,958
Net gain (loss) on investments	(11,089,775)	(1,745,005)	(195,893)	-	(13,030,673)
Interest expense	(618,832)	(516,129)	(1,127,180)	411,328	(1,850,813)
Miscellaneous income (expense)	1,187,011	1,535	-	(220,089)	968,457
Amortization of intangible assets	(66,667)	-	-	-	(66,667)
Net gain (loss), disposal of assets	(853,950)	-	-	-	(853,950)
Net gain (loss), merchandise jobbing	27,583	-	-	-	27,583
Taxes, other	(299,856)	-	-	220,089	(79,767)
Total other revenues (expenses)	(8,706,442)	(1,426,796)	(1,161,634)	-	(11,294,872)
Change in net position before transfers	(1,622,747)	(1,049,085)	2,321,101	-	(350,731)
Transfers					
Payments in lieu of taxes, City of Holyoke	(1,195,613)	-	-	-	(1,195,613)
Change in net position	(2,818,360)	(1,049,085)	2,321,101	-	(1,546,344)
Net Position (Deficit), Beginning	107,391,518	12,384,042	(321,311)	-	119,454,249
Net Position (Deficit), Ending	\$ 104,573,158	\$ 11,334,957	\$ 1,999,790	\$ -	\$ 117,907,905

Holyoke Gas and Electric

Notes to Financial Statements
December 31, 2022 and 2021

Condensed Combining Schedule of Cash Flows Year Ended December 31, 2022

	HGE	Holyoke Solar	Mass Clean Energy	Eliminations	Total
Net Cash Flows From (Used in)					
Operating activities	\$ 8,043,540	\$ 106,812	\$ 8,433,901	\$ -	\$ 16,584,253
Investing activities	(3,450,876)	6,377,749	(6,359,807)	-	(3,432,934)
Noncapital financing activities	(1,195,613)	-	-	-	(1,195,613)
Capital and related financing activities	(9,364,002)	(3,290,565)	(7,805,127)	-	(20,459,694)
Net increase (decrease) in cash and cash equivalents	(5,966,951)	3,193,996	(5,731,033)	-	(8,503,988)
Cash and Cash Equivalents, Beginning	63,994,392	10,925,196	17,698,780	-	92,618,368
Cash and Cash Equivalents, Ending	<u>\$ 58,027,441</u>	<u>\$ 14,119,192</u>	<u>\$ 11,967,747</u>	<u>\$ -</u>	<u>\$ 84,114,380</u>

Holyoke Gas and Electric

Notes to Financial Statements
December 31, 2022 and 2021

The following schedules provide details of the blended component units' balances, activities and eliminations.

Combining Schedule of Net Position December 31, 2021 (Restated)

	HGE	Holyoke Solar	Mass Clean Energy	Eliminations	Total
Assets					
Current assets:					
Cash and investments	\$ 16,637,705	\$ 8,963,353	\$ 45,033	\$ -	\$ 25,646,091
Restricted assets:					
Redemption account	-	-	1,594,622	-	1,594,622
Customer accounts receivable, net	7,961,808	22,824	-	-	7,984,632
Note receivable, current portion	-	539,639	-	-	539,639
Materials and supplies	3,705,386	-	-	-	3,705,386
Fuel for electric generation and gas in storage	767,682	-	-	-	767,682
Prepaid expense	3,029,318	-	52,446,085	(52,446,077)	3,029,326
Other receivables	1,916,991	4,626	-	-	1,921,617
Total current assets	34,018,890	9,530,442	54,085,740	(52,446,077)	45,188,995
Noncurrent assets:					
Restricted assets:					
Accounts required under bond indenture/note payable	-	3,114,624	16,059,125	-	19,173,749
Customers' deposits	2,009,756	-	-	-	2,009,756
Net OPEB asset	1,896,162	-	-	-	1,896,162
Other receivables, after one year	-	6,368,897	-	-	6,368,897
Customer energy conservation assistance	1,217,536	-	-	-	1,217,536
Advances to other funds	431,000	8,460,396	-	(8,891,396)	-
Other assets:					
Purchased power accounts	383,374	-	-	-	383,374
Rate stabilization accounts	45,173,643	-	-	-	45,173,643
Regulatory asset debt issuance cost	-	-	717,159	-	717,159
Costs recoverable in future, pollution	84,800	-	-	-	84,800
Other investments	188,390	-	-	-	188,390
Lease receivable	914,377	-	-	-	914,377
Intangible assets	663,333	-	-	-	663,333
Capital assets:					
Plant, property and equipment in service	282,749,768	-	-	-	282,749,768
Right of use asset	4,410,245	-	-	-	4,410,245
Construction in progress	3,569,475	-	-	-	3,569,475
Total capital assets	290,729,488	-	-	-	290,729,488
Less accumulated depreciation	(118,772,103)	-	-	-	(118,772,103)
Net capital assets	171,957,385	-	-	-	171,957,385
Total noncurrent assets	224,919,756	17,943,917	16,776,284	(8,891,396)	250,748,561
Total assets	258,938,646	27,474,359	70,862,024	(61,337,473)	295,937,556
Deferred Outflows of Resources					
OPEB related amounts	286,616	-	-	-	286,616
Pension related amounts	7,164,440	-	-	-	7,164,440
Total deferred outflows	7,451,056	-	-	-	7,451,056

Holyoke Gas and Electric

Notes to Financial Statements
December 31, 2022 and 2021

Combining Schedule of Net Position December 31, 2021 (Restated)

	HGE	Holyoke Solar	Mass Clean Energy	Eliminations	Total
Liabilities					
Current liabilities:					
Accounts payable	\$ 5,824,609	\$ 23,644	\$ 134,489	\$ -	\$ 5,982,742
Accrued liabilities	589,331	-	-	-	589,331
Current portion, accrued compensated absences	367,561	-	-	-	367,561
Current portion, accrued environmental costs	114,800	-	-	-	114,800
Current portion, leases	180,339	-	-	-	180,339
Liabilities payable from restricted assets:					
Current portion, bonds and notes payable	-	984,892	5,510,000	-	6,494,892
Customers' deposits	1,618,089	-	-	-	1,618,089
Accrued interest	-	-	101,009	-	101,009
Total current liabilities	8,694,729	1,008,536	5,745,498	-	15,448,763
Long-term liabilities:					
Bonds payable, long term	-	-	63,530,000	-	63,530,000
Notes payable, long-term	-	13,933,416	-	-	13,933,416
Leases payable, long-term	4,041,320	-	-	-	4,041,320
Accrued compensated absences	3,695,819	-	-	-	3,695,819
Unearned revenue	55,117,420	-	-	(52,446,077)	2,671,343
Advances from other funds	8,456,405	148,365	431,000	(8,891,396)	144,374
Net pension liability	22,849,646	-	-	-	22,849,646
Total long-term liabilities	94,160,610	14,081,781	63,961,000	(61,337,473)	110,865,918
Total liabilities	102,855,339	15,090,317	69,706,498	(61,337,473)	126,314,681
Deferred Inflows of Resources					
Regulatory deferral	4,231,257	-	-	-	4,231,257
Pension related amounts	7,627,060	-	-	-	7,627,060
OPEB related amounts	2,861,214	-	-	-	2,861,214
Rate stabilization reserve	40,415,009	-	-	-	40,415,009
Lease related amounts	1,008,305	-	-	-	1,008,305
Gain on refunding	-	-	1,476,837	-	1,476,837
Total deferred inflows of resources	56,142,845	-	1,476,837	-	57,619,682
Net Position					
Net investment in plant, property and equipment	171,957,385	-	-	(73,039,461)	98,917,924
Restricted for debt service	-	2,129,732	1,748,820	-	3,878,552
Restricted OPEB	1,896,162	-	-	-	1,896,162
Restricted for purchase of future power capacity	-	-	10,159,429	(10,159,429)	-
Unrestricted (deficit)	(66,462,029)	10,254,310	(12,229,560)	83,198,890	14,761,611
Total net position (deficit)	\$ 107,391,518	\$ 12,384,042	\$ (321,311)	\$ -	\$ 119,454,249

Holyoke Gas and Electric

Notes to Financial Statements
December 31, 2022 and 2021

Combining Schedule of Revenues, Expenses and Changes in Net Position Year Ended December 31, 2021 (Restated)

	HGE	Holyoke Solar	Mass Clean Energy	Eliminations	Consolidated Total
Operating Revenues	\$ 74,439,506	\$ 313,205	\$ 4,841,131	\$ (5,154,336)	\$ 74,439,506
Operating Expenses					
Operation and maintenance	57,069,769	169,078	2,955,110	(5,154,336)	55,039,621
Amortization, right of use asset	188,586	-	-	-	188,586
Depreciation, plant and equipment	8,036,027	-	-	-	8,036,027
Total operating expenses	65,294,382	169,078	2,955,110	(5,154,336)	63,264,234
Operating income	9,145,124	144,127	1,886,021	-	11,175,272
Nonoperating Other Revenues (Expenses):					
Investment income, net of fees	2,955,513	864,088	13,825	(282,649)	3,550,777
Net gain (loss) on investments	1,628,830	492,679	46,281	-	2,167,790
Interest expense	(929,862)	(555,618)	(1,246,828)	282,649	(2,449,659)
Miscellaneous income (expense)	888,280	368,953	-	(131,201)	1,126,032
Amortization of intangible assets	(66,667)	-	-	-	(66,667)
Net gain (loss), disposal of assets	(1,457,019)	-	-	-	(1,457,019)
Net gain (loss), merchandise jobbing	(25,888)	-	-	-	(25,888)
Taxes, other	(222,141)	-	-	131,201	(90,940)
Total other revenues (expenses)	2,771,046	1,170,102	(1,186,722)	-	2,754,426
Change in net position before transfers	11,916,170	1,314,229	699,299	-	13,929,698
Transfers					
Payments in lieu of taxes, City of Holyoke	(1,194,152)	-	-	-	(1,194,152)
Change in net position	10,722,018	1,314,229	699,299	-	12,735,546
Net Position (Deficit), Beginning	96,669,500	11,069,813	(1,020,610)	-	106,718,703
Net Position (Deficit), Ending	<u>\$ 107,391,518</u>	<u>\$ 12,384,042</u>	<u>\$ (321,311)</u>	<u>\$ -</u>	<u>\$ 119,454,249</u>

Holyoke Gas and Electric

Notes to Financial Statements
December 31, 2022 and 2021

Condensed Combining Schedule of Cash Flows Year Ended December 31, 2021 (Restated)

	HGE	Holyoke Solar	Mass Clean Energy	Eliminations	Total
Net Cash Flows From (Used in)					
Operating activities	\$ 13,013,109	\$ 504,586	\$ 4,820,429	\$ -	\$ 18,338,124
Investing activities	4,508,984	2,138,097	60,106	-	6,707,187
Noncapital financing activities	(1,194,152)	-	-	-	(1,194,152)
Capital and related financing activities	(12,750,512)	(1,083,093)	5,373,853	-	(8,459,752)
Net increase (decrease) in cash and cash equivalents	3,577,429	1,559,590	10,254,388	-	15,391,407
Cash and Cash Equivalents, Beginning	60,416,963	9,365,606	7,444,392	-	77,226,961
Cash and Cash Equivalents, Ending	<u>\$ 63,994,392</u>	<u>\$ 10,925,196</u>	<u>\$ 17,698,780</u>	<u>\$ -</u>	<u>\$ 92,618,368</u>

10. Retirement Plans

General Information About the Pension Plan

Substantially all full-time employees participate in the Holyoke Contributory Retirement System, a cost sharing multiple employer defined benefit public employee retirement system. The system is partially funded by employee contributions. The Plan provides pension benefits, deferred allowances and death and disability benefits. Retirement allowance is based on the following factors: age, length of creditable service, level of salary and group classification. Age at retirement and group classification determine a benefit rate. Percentages are specified in Chapter 32 of the Massachusetts General Laws. Participants may elect to receive their retirement in one of three optional forms of payment.

Member employers are required by state statutes to make contributions to the Plan. Contributions are determined by the Commonwealth of Massachusetts Division of Public Employee Retirement Administrative Commission (PERAC).

Covered employees are required by state statute to contribute a fixed percentage of their earnings into the Plan. The percentage varies from 5 to 9% depending upon date of hire. All employees hired after January 1, 1979 contribute an additional 2% on all gross regular earnings over \$30,000 per year.

Members hired on or after April 2, 2012 are covered by the provisions of Chapter 32 as amended by Chapter 176 of the Acts of 2011 and Chapter 139 of the Acts of 2012.

The Plan issues a publicly available financial report that includes financial statements and required supplementary information. This report may be obtained by writing or calling the Plan as follows:
Attn: Anthony Dulude, Executive Director, Holyoke Retirement Board, City Hall Annex - Room 207, Holyoke, Massachusetts 01040, 413 534 2179.

Holyoke Gas and Electric

Notes to Financial Statements
December 31, 2022 and 2021

Pension Liabilities, Pension Expense and Deferred Outflows of Resources Related to Pensions

At December 31, 2022, the Department reported a liability of \$16,856,396, for its proportionate share of the net pension liability. The net pension liability was measured as of December 31, 2021 and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of January 1, 2022. No material changes in the assumptions or benefit terms occurred between the actual valuation date and the measurement date. The Department's proportion of the net pension liability was based on the Department's share of appropriations of the pension plan relative to the appropriations of all participating employers. At December 31, 2021 the Department's proportion was 22.980771 which was an increase of 0.379986 from its proportion measured as of January 1, 2021.

At December 31, 2021, the Department reported a liability of \$22,849,646, for its proportionate share of the net pension liability. The net pension liability was measured as of December 31, 2020 and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of January 1, 2020. No material changes in the assumptions or benefit terms occurred between the actual valuation date and the measurement date. The Department's proportion of the net pension liability was based on the Department's share of appropriations of the pension plan relative to the appropriations of all participating employers. At December 31, 2020 the Department's proportion was 22.600785% which was a decrease of 0.440609% from its proportion measured as of January 1, 2020.

For the year ended December 31, 2022 and 2021, the Department recognized pension expense of \$418,584 and \$2,044,176, respectively.

At December 31, 2022, the Department reported deferred outflows and deferred inflows of resources from the following sources:

	2022	
	Deferred Outflows of Resources	Deferred Inflows of Resources
Net differences between projected and actual earnings on pension plan	\$ -	\$ 9,638,484
Differences between projected and actual experiences	-	806,695
Changes of actuarial assumptions	2,848,670	-
Changes in proportion and differences between employer contributions and proportionate share of contributions	1,083,674	359,619
Employer contributions subsequent to the measurement date	4,154,315	-
Total	\$ 8,086,659	\$ 10,804,798

Holyoke Gas and Electric

Notes to Financial Statements
December 31, 2022 and 2021

At December 31, 2021, the Department reported deferred outflows and deferred inflows of resources from the following sources:

	2021	
	Deferred Outflows of Resources	Deferred Inflows of Resources
Net differences between projected and actual earnings on pension plan	\$ -	\$ 6,568,594
Differences between projected and actual experiences	-	578,974
Changes of actuarial assumptions	1,946,438	-
Changes in proportion and differences between employer contributions and proportionate share of contributions	1,218,942	479,492
Employer contributions subsequent to the measurement date	3,999,060	-
Total	\$ 7,164,440	\$ 7,627,060

Deferred outflows related to pension resulting from the Department's employer contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability in the year ended December 31, 2022. \$4,156,315 is reported for the Department. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pension will be recognized in pension expense as follows:

Years ending December 31:	
2023	\$ (1,051,804)
2024	(2,888,688)
2025	(2,068,762)
2026	(865,200)
Thereafter	-
Total	\$ (6,874,454)

Actuarial Assumptions

The total pension liability was determined by an actuarial valuation as of January 1, 2022 and 2020, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	3.25%
Salary increases	4:00 - 4.50%
Investment rate of return	7.00% (2022), 7.25% (2021)
Cost of living adjustments	3% of first \$14,000
Pre-retirement	RP-2014 Blue Collar Employee Mortality Table set forward one year for females projected generationally using Scale MP-2021 (2022) and Scale MP-2017 (2021)
Healthy retiree	RP-2014 Blue Collar Healthy Annuitant Mortality Table set forward one year for females projected generationally using Scale MP-2021 (2022) and Scale MP-2017 (2021)
Disabled retiree	RP-2014 Blue Collar Healthy Annuitant Mortality Table set forward one year projected generationally using Scale MP-2021 (2022) and Scale MP-2017 (2021)

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The long term expected rate of return on pension plan investments was determined using a building-block method in which best estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation as of December 31, 2022 and 2021 are summarized in the following table:

Asset Class	2022	2021
	Long-Term Expected Real Rate of Return	Long-Term Expected Real Rate of Return
Domestic equity	6.11 %	6.28 %
International developed markets equity	6.49	7.00
International emerging markets equity	8.12	8.82
Core fixed income	0.38	0.38
High yield fixed income	2.48	-
Real estate	3.72	3.50
Hedge fund, GTAA, risk parity	2.63	2.35
Private equity	9.93	10.11

Discount Rate

The discount rate used to measure the total pension liability was 7.00% for December 31, 2022 and 7.25% for December 31, 2021. The projection of cash flows used to determine the discount rate assumed Plan member contributions will be made at the current contribution rate and the City of Holyoke Retirement system contributions will be made at rates equal to the actuarially determined contribution rates. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current Plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of the Net Pension Liability to Changes in the Discount Rate

The following presents the net pension liability of the Department, calculated using the discount rate of 7.00% for 2022 and 7.25% for 2021, as well as what the Department's net pension liability would be if it were calculated using a discount rate that is 1-percentage point lower or 1-percentage point higher than the current rate.

The sensitivity analysis as of December 31, 2022 follows:

	1% Decrease to Discount Rate (6.00%)	Current Discount Rate (7.00%)	1% Increase to Discount Rate (8.00%)
The Department's proportionate share of the net position liability	\$ 29,526,693	\$ 16,856,396	\$ 6,181,188

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The sensitivity analysis as of December 31, 2021 follows:

	1% Decrease to Discount Rate (6.25%)	Current Discount Rate (7.25%)	1% Increase to Discount Rate (8.25%)
The Department's proportionate share of the net position liability	\$ 34,842,851	\$ 22,849,646	\$ 12,756,699

11. Other Postemployment Benefits, Holyoke Gas and Electric

General Information About the OPEB Plan

Plan Description

As part of the Department's Fiduciary Funds, the Department's policy is to provide certain healthcare and life insurance benefits to eligible retirees, their dependents or their survivors through the City of Holyoke's single employer postemployment welfare benefit plan.

The Department created a trust in 2014 to administer these benefits. The trust accounts for the portions of the active members retirees' premiums paid by the Department for health insurance, dental coverage and life insurance. Since the Department has established a separate trust to segregate assets to fund their portion of the City of Holyoke's single employer plan, the disclosures that follow, are consistent with an agent multiemployer plan.

Benefits Provided

Medical and prescription drug benefits are provided to all eligible retirees through a variety of Plans offered by Blue Cross Blue Shield of Massachusetts and Health New England. The Holyoke Gas and Electric Department also pays 50% of the retiree life insurance premium and 50% of the dental premium (non-Medicare retirees only).

Employees covered by benefit terms at December 31, 2022 and 2021, the following employees were covered by the benefit terms:

	2022	2021
Inactive plan members or beneficiaries currently receiving benefit payments	191	191
Active plan members	155	148
Total members	346	339

Contributions

For the year ended December 31, 2022 and 2021, the Department's average contribution rate was 4.32 and 23.41% of covered-employee payroll. Plan members are not required to contribute to the Plan, other than paying their portion of the health, dental, and life insurance premiums.

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Investments

Investment Policy

It is the policy of the Department to pursue an investment strategy that reduces risk through the prudent diversification of the portfolio across a broad selection of distinct asset classes. Investments are limited to investing in assets as a prudent investor would, by considering purposes, terms, distribution requirements and other circumstances of the trust. The following were the Department's investment allocations as of December 31, 2022 and 2021:

Asset Class	2022 Allocation	2021 Allocation
Mutual funds, ETFs and closed-end funds	99.90 %	99.90 %
Cash and cash equivalents	0.10	0.10
Total	100.00 %	100.00 %

Net OPEB Liability (Asset)

The Department's net OPEB liability (asset) was measured as of December 31, 2022 and 2021 and the total OPEB liability used to calculate the net OPEB liability (asset) was determined by an actuarial valuation as of December 31, 2021 and December 31, 2020, respectively.

The components of the net OPEB liability (asset) of the Department at December 31, 2022 and 2021, were as follows:

	2022	2021
Total OPEB liability	\$ 19,394,302	\$ 20,407,069
Plan fiduciary net position	(18,950,521)	22,303,231
Department's net OPEB liability (asset)	\$ 443,781	\$ (1,896,162)
Plan fiduciary net position as a percentage of the total OPEB liability (asset)	97.71%	109.29 %

Actuarial Assumptions

The total OPEB liability (asset) was determined by an actuarial valuation as of December 31, 2022, using the following actuarial assumptions, applied to all periods included in the measurement:

Discount rate	6.25%
Salary increases	Service-related increases for Group 1: 6.0% per year decreasing over 9 years to 4.25% per year Service-related increases for Group 4: 7.0% per year decreasing over 6 years to 4.75% per year
Investment rate of return	6.25%
Non-Medicare medical/prescription drug cost	6.50% per year graded down by the Getzen model to an ultimate rate of 4.14% per year
Healthcare cost trend rates	
Medicare medical/prescription drug cost	6.50% per year graded down by the Getzen model to an ultimate rate of 4.14% per year
Healthcare cost trend rates	
Dental/administrative	6.50% per year graded down by the Getzen model to an ultimate rate of 4.14% per year
Healthcare cost trend rates	
Mortality rates	PubG.H-2010 Mortality Table with MP-2021 Projection Scale

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Below are the actuarial assumptions from the December 31, 2020 actuarial valuation.

Discount rate	6.25%
Salary increases	Service-related increases for Group 1: 6.0% per year decreasing over 9 years to 4.25% per year Service-related increases for Group 4: 7.0% per year decreasing over 6 years to 4.75% per year
Investment rate of return	6.25%
Non-Medicare medical/prescription drug cost	6.00% per year graded down by the 2021 Getzen model to an ultimate rate of 3.98% per year
Healthcare cost trend rates	
Medicare medical/prescription drug cost	6.00% per year graded down by the 2021 Getzen model to an ultimate rate of 3.98% per year
Healthcare cost trend rates	
Dental/administrative	6.00% per year graded down by the 2021 Getzen model to an ultimate rate of 3.98% per year
Healthcare cost trend rates	
Mortality rates	PubG.H-2010 Mortality Table with MP-2021 Projection Scale

The long term expected rate of return on pension plan investments was determined using a building-block method in which best estimate ranges of expected future real rates of return (expected returns, net of plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation as of December 31, 2022 and 2021 are summarized in the following table:

Asset Class	2022	2021
	Long-Term Expected Real Rate of Return	Long-Term Expected Real Rate of Return
Closed-end funds	6.25 %	6.25 %

Discount Rate

The discount rate is a blend of the long-term expected rate of return on OPEB Trust assets and a yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rate of AA/Aa or higher as shown in the S&P Municipal Bond 20-Year High Grade Obligation Index 4.31 and 2.06% as of December 31, 2022 and 2021, respectively. The blending is based on the sufficiency of projected assets to make projected benefit payments.

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Changes in Net OPEB Liability (Asset)

	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (Asset) (a) - (b)
Balance at December 31, 2021	<u>\$ 20,407,069</u>	<u>\$ 22,303,231</u>	<u>\$ (1,896,162)</u>
Changes for the year:			
Service cost	580,935	-	580,935
Interest	1,247,108	-	1,247,108
Differences between expected and actual experience	(2,789,519)	-	(2,789,519)
Changes in assumptions	523,075	-	523,075
Contributions, employer	-	656,914	(656,914)
Contributions, employee	402,958	402,958	-
Net investment income	-	(3,365,236)	3,365,237
Benefit payments	(977,325)	(977,325)	-
Administrative expense	-	(70,020)	70,021
Net changes	<u>(1,012,768)</u>	<u>(3,352,709)</u>	<u>2,339,943</u>
Balance at December 31, 2022	<u>\$ 19,394,301</u>	<u>\$ 18,950,522</u>	<u>\$ 443,781</u>
	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (Asset) (a) - (b)
Balance at December 31, 2020	<u>\$ 19,842,195</u>	<u>\$ 17,141,692</u>	<u>\$ 2,700,503</u>
Changes for the year:			
Service cost	570,325	-	570,325
Interest	1,211,804	-	1,211,804
Differences between expected and actual experience	(285,049)	-	(285,049)
Changes in assumptions	(356,356)	-	(356,356)
Contributions, employer	-	3,396,100	(3,396,100)
Contributions, employee	403,490	403,490	-
Net investment income	-	2,411,103	(2,411,103)
Benefit payments	(979,339)	(979,339)	-
Administrative expense	-	(69,815)	69,815
Net changes	<u>564,874</u>	<u>5,161,539</u>	<u>(4,596,665)</u>
Balance at December 31, 2021	<u>\$ 20,407,069</u>	<u>\$ 22,303,231</u>	<u>\$ (1,896,162)</u>

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Sensitivity of the Net OPEB Liability (Asset) to Changes in the Discount Rate

The following presents the net OPEB liability (asset) of the Department, as well as what the Department's net OPEB liability (asset) would be if it were calculated using a discount rate that is 1-percentage point lower (5.25%) or 1-percentage-point higher (7.25%) than the current discount rate:

The sensitivity analysis as of December 31, 2022 follows:

	<u>1% Decrease</u> <u>(5.25%)</u>	<u>Discount Rate</u> <u>(6.25%)</u>	<u>1% Increase</u> <u>(7.25%)</u>
Net OPEB liability (asset)	\$ 2,874,286	\$ 443,781	\$ (1,569,150)

The sensitivity analysis as of December 31, 2021 follows:

	<u>1% Decrease</u> <u>(5.25%)</u>	<u>Discount Rate</u> <u>(6.25%)</u>	<u>1% Increase</u> <u>(7.25%)</u>
Net OPEB liability	\$ 995,966	\$ (1,896,162)	\$ (4,242,732)

Sensitivity of the Net OPEB Liability (Asset) to Changes in the Healthcare Cost Trend Rates

The following presents the net OPEB liability (asset) of the Department, as well as what the Department's net OPEB liability (asset) would be if it were calculated using healthcare cost trend rates that are 1-percentage-point lower or 1-percentage-point higher than the current healthcare cost trend rates:

The sensitivity analysis as of December 31, 2022 follows:

	<u>1% Decrease</u> <u>(5.50%)</u>	<u>Healthcare</u> <u>Cost Trend</u> <u>Rates</u> <u>(6.50%)</u>	<u>1% Increase</u> <u>(7.50%)</u>
Net OPEB liability (asset)	\$ (1,833,299)	\$ 443,781	\$ 3,262,926

The sensitivity analysis as of December 31, 2021 follows:

	<u>1% Decrease</u> <u>(5.0%)</u>	<u>Healthcare</u> <u>Cost Trend</u> <u>Rates</u> <u>(6.0%)</u>	<u>1% Increase</u> <u>(7.0%)</u>
Net OPEB liability	\$ (4,515,963)	\$ (1,896,162)	\$ 1,379,697

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OPEB Expense and Deferred Outflows of Resources Related to OPEB

For the year ended December 31, 2022 and 2021, the Department recognized OPEB expense of \$501,842 and \$189,169. At December 31, 2022 and 2021, the Department reported deferred outflows of resources related to OPEB from the following sources.

	2022	
	Deferred Outflows of Resources	Deferred Inflows of Resources
Net differences between projected and actual earnings on pension plan	\$ 65,365	\$ 2,752,050
Changes of actuarial assumptions	544,158	292,425
Net differences between projected and actual investment earnings on pension plan investment	2,355,368	-
Total	<u>\$ 2,964,891</u>	<u>\$ 3,044,475</u>
	2021	
	Deferred Outflows of Resources	Deferred Inflows of Resources
Net differences between projected and actual earnings on pension plan	\$ 110,106	\$ 534,920
Changes of actuarial assumptions	176,510	373,390
Net differences between projected and actual investment earnings on pension plan investment	-	1,952,904
Total	<u>\$ 286,616</u>	<u>\$ 2,861,214</u>

Deferred outflows of resources related to OPEB will be recognized in OPEB expense as follows:

Years ending December 31:	
2023	\$ (225,038)
2024	(21,577)
2025	165,761
2026	456,082
2027	(364,500)
Thereafter	<u>(90,312)</u>
Total	<u>\$ (79,584)</u>

Funding Policy

The Department is not required to provide funding for OPEB, other than the pay-as-you go amount necessary to provide current benefits to retirees and eligible beneficiaries/dependents. The cost of providing these benefits, paid by the Department and the retirees, was \$979,339 for 191 retirees in 2021 and \$977,325 in 2022 for 191 retirees. In 2021 and 2022, the Department contributed assets into a separate legal trust, Holyoke Gas and Electric OPEB Trust, for the payment of future OPEB obligations. Contributions were \$82,547 in 2022 and \$2,820,251 in 2021.

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12. Related-Party Transactions

The Massachusetts Clean Energy Cooperative (Clean Energy Coop) signed a power sales contract in April 2013 with its member Massachusetts Wholesale Electric Company (MMWEC). Through this contract, MMWEC will purchase the net electrical capacity of the Hadley Falls Facility from the Clean Energy Coop at a monthly charge as defined in the contract. There were no sales to MMWEC during 2022 and 2021.

There is also an agency contract between the Clean Energy Coop and MMWEC, whereby MMWEC will act as agent for the Clean Energy Coop in the performance of its administrative obligations.

The Department transacted business with Tighe & Bond for engineering services in the amount of \$0 in 2022 and \$8,333 in 2021. One of the Department's commissioners has a financial interest in this company, requiring disclosure.

13. Commitments and Contingences

Purchased Power Contracts

Short-Term Power

On a continuing basis, the Department enters into several short-term power supply contracts for either the purchase or sale of capacity, energy, renewable certificates, or ancillary services with various suppliers. This includes bilateral purchases to meet Department's shortfall position during the summer months of 2023 through 2026, where commitments were made by the end of 2022 in the amount of \$88,131 for 2023 and \$244,335 for the period from 2024-2026.

Massachusetts Renewable Energy Certificates (RECs)

On a continuing basis, the Department enters into REC contracts for the sale of Massachusetts Class I, Massachusetts Class II and Maine Existing RECs from its hydro units. These commitments were made by the end of 2022. The summary of the resulting revenues to the Department by year and based on the total certificates sold is shown in the table below:

Contract Date	2022		2023		2024	
	Revenues	Total Certificates	Revenues	Total Certificates	Revenues	Total Certificates
2021	\$ 389,344	12,750	\$ 964,938	33,500	\$ 1,039,063	34,550

Canal Hydro Power

In November 2013, the Department entered into an agreement to provide electricity to the Open Square facility and purchase any excess electricity from the operation of the Open Square D and G wheels at a monthly charge as defined in the agreement. The Department does not have any liability associated with these energy purchases as any excess energy beyond contract water rights is at Department discretion under terms with the customer. The customer sold his property in December 2022 and assigned the contract to Open Square Reality LLC. The terms of this contract expire in December 2023.

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Solar Power

In December 2010, the Department, through its subsidiary Holyoke Solar Cooperative, signed a 20-year solar Power Purchase Agreement (PPA) with Holyoke Solar, LLC. The Department has agreed to purchase the electricity produced by two grid-connected solar power facilities and for the remaining years to the contract, the total future commitment is \$3,276,522. After the initial term, this agreement can be renewed for two consecutive five-year terms. In conjunction with this PPA, the Department is leasing, to Holyoke Solar, LLC, the property on which the solar power facility is located at \$100 per usable acre per year for the first 20 years. After the initial term under the PPA, the rate shall be \$3,000 per usable acre per year subject to a 2.5% annual escalation.

In June 2011, the Department signed a 20-year solar Power Sales Agreement with Rivermoor Citizens Holyoke, LLC beginning in February 2013. The Department agreed to purchase the electricity produced by the photovoltaic solar electric generation system and for the remaining years to the contract, the total future commitment is \$647,432. After the initial term, this agreement shall automatically renew for successive one-year terms, up to a maximum of 10 such renewal terms, unless terminated by either party.

In December 2014, the Department signed a 25-year solar Power Sales Agreement with Healthy Planet Partners, LLC. beginning October 2015. For the remaining years to the contract, the total future commitment is \$1,173,173.

The Department contracted for several 20-year solar PPA's during 2015 and 2016 with various solar developers and executed interconnection only agreements with a few others. Two C2 Special Solutions Group solar projects had COD of December 2016 under 20-year PPA's signed in October 2015. For the remaining years to the contract, the total future commitment is \$1,303,974. The Department contracted for several 20-year solar PPA's with various solar developers. Below is a summary for each solar project, which became commercial in 2017 or 2018.

Date of PPA	System Name	Annual Energy Payment	Commercial Operation Date
July 2016	Mt. Tom Solar	\$ 4,699,329	02/03/17
October 2016	AEGIS	734,583	01/04/17
October 2016	Gary Rome	562,431	01/06/17
December 2016	Conklin	709,616	02/24/17
January 2017	Riverside Roof	148,758	05/08/17
June 2017	Walnut Roof	116,842	11/22/17
June 2017	Hadley Mills	369,184	12/29/17
September 2017	Jackson Street	131,620	03/15/18
November 2017	Boys & Girls Club	173,292	04/20/18
October 2015 and reassigned December 2017	Kelly Way 2	537,011	06/04/18
March 2018	YMCA	176,030	12/21/18

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Long-Term Power Transactions

In August 2018, the Department signed an eight-year contract through December 2029 with NextEra Energy Power Marketing to purchase on-peak physical energy and clean nuclear tags each year at a remaining future commitment cost of \$14,187,350. In November 2020, the Department extended this contract for another six years from January 2030 through December 2035 at an estimated cost of \$11,846,265.

In November 2020, the Department executed a four-year contract starting November 1, 2022 and ending October 31, 2026 with NextEra Energy Power Marketing for around-the-clock energy. The total future commitment is \$5,461,853. At the same time, the Department executed a 4-year Second Amendment to the above contract with the Massachusetts Green High Performance Computing Center, Inc. locking in the Energy Only piece of the rate and extending the term to cover this transaction.

In October 2020, the Department executed a five-year around-the-clock physical power and Hydro Quebec System Mix clean energy Tags contract starting November 2020 and ending October 2025 with Hydro Quebec through MMWEC. The annual energy payment will be around \$911,101 and for the 34 months remaining to the contract, the total future commitment is \$2,582,014.

In December 2013, the Department signed a 25-year PPA for energy and capacity out of the Hancock Wind Project, located in Hancock County, Maine. The annual energy payment will be about \$813,200 for this project that had an estimated commercial operation date of December 2016.

In October 2015, the Department contracted with MMWEC to participate in a new MMWEC owned simple cycle 55 MW peaking unit located in Peabody, MA through the Predevelopment phase. All requirements have been completed in order to participate in the ISO-NE 2021/22 Forward Capacity Auction (FCA) which was held on February 5, 2018. The Department contracted with MMWEC in 2017 prior to the FCA to participate in this project for up to the life of unit with expected COD beginning June 2023. HG&E's estimated portion of construction costs is approximately \$3,300,000. As the project is MMWEC owned, the Department will not carry project debt on its books. The annual total costs will vary between \$290,832 and \$322,269 over the estimated 30-year life of unit.

In December 2015, the Department contracted with Scuderi Clean Energy, LLC under a 20-year PPA for output from a natural gas generating facility. Expected Commercial Operation is unknown at this time. The Department mitigated market and development risk by ensuring interconnection costs are born by other party and that rates under PPA are discounted to full wholesale energy and resulting load reduction cost savings (where and if applicable).

In September 2017, the Department contracted with Mt. Tom Solar, LLC under a 20-year PPA for a lithium-ion battery-based energy storage system (ESS) located at the Mt Tom Solar facility. Testing and limited operation was completed in 2018 with fixed capacity payments beginning in June 2018. The Commercial Operation date was achieved in March 2019 after all City permitting. The annual fixed capacity payment will be \$360,000 and for the 15 years and 5 months remaining to the contract, the total future commitment is \$5,550,000. See note 4 for more information.

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In February 2020, HG&E contracted with Holyoke BESS, LLC under a 15-year PPA. This is our second utility-scale energy storage project totaling 4.99 MW/12 MWh with a commercial operation date in August 2021. This will be located across from our North Canal Substation. This will act as a load reducer to lower capacity and transmission costs. The annual capacity and transmission savings will be split between parties. The annual Department Payment will be around \$630,841 and the total future commitment will be around \$9,187,333.

In June 2021, HG&E contracted with Holyoke Energy Storage 1, LLC under a 15-year PPA. This will be our third utility scale energy storage project totaling 4.80 MW/14.40 MWh with an expected commercial operation date in June of 2024. This will be located on Cabot Street and will act as a load reducer to lower capacity and transmission costs. The annual capacity and transmission savings will be split between parties. The annual Department Payment will be around \$714,438 and the total future commitment will be around \$14,288,759.

In October 2021, HG&E contracted with Holyoke Energy Storage 2, LLC under a 20-year PPA. This will be our fourth utility scale energy storage project totaling 4.80 MW/14.40 MWh with an expected commercial operation date in June of 2025. This will be located on Lower Westfield Rd and will act as a load reducer to lower capacity and transmission costs. The annual capacity and transmission savings will be split between parties. The annual Department Payment will be around \$728,660 and the total future commitment will be around \$14,573,207.

Long-Term Capacity Transaction

In January 2016, the Department contracted with PSEG through MMWEC under a five-year Capacity Load Obligation Transfer contract. This capacity hedge began June 1, 2019, ends May 31, 2024 and protects against rising capacity costs in ISO-NE's Rest of System capacity zone in which the Department is located. The annual capacity payment will be \$1,395,000 per year and for the one year and five months remaining to the contract, the total future commitment is \$1,976,250.

Massachusetts Municipal Wholesale Electric Company

The Department is a Participant in certain Projects of the Massachusetts Municipal Wholesale Electric Company (MMWEC), a public corporation and a political subdivision of the Commonwealth of Massachusetts, created as a means to develop a bulk power supply for its Members and other utilities. MMWEC is authorized to construct, own or purchase ownership interests in, and to issue revenue bonds to finance, electric facilities (Projects). MMWEC has acquired ownership interests in electric facilities operated by other entities and also owns and operates its own electric facilities. MMWEC operates the Stony Brook Intermediate Project and the Stony Brook Peaking Project, both fossil-fueled power plants.

MMWEC has the Nuclear Mix No 1 Project, Nuclear Project Three, Nuclear Project Four, Nuclear Project Five and Project Six, which comprise an 11.6% ownership interest in the Seabrook Station nuclear generating unit operated by NextEra Energy Seabrook, LLC and a 4.8% ownership interest in the Millstone Unit 3 nuclear unit, operated by Dominion Nuclear Connecticut, Inc. The operating license for Seabrook Station extends to March 15, 2050. The operating license for the Millstone Unit 3 nuclear unit extends to November 25, 2045.

The Department is also a Participant in MMWEC Project 2015A, a capacity reliability resource in Peabody, Massachusetts. Project 2015A is under construction as of December 31, 2022. As of December 31, 2022, the Light Department has contributed \$471,186 for design and construction costs for Project 2015A.

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MMWEC sells all of the capability (Project Capability) of each of its Projects to its Members and other utilities (Project Participants) under Power Sales Agreements (PSAs). The Department has entered into PSAs with MMWEC. Under the PSAs the Department is required to make certain payments to MMWEC payable solely from Municipal Light Department revenues. Among other things, the PSAs require each Project Participant to pay its pro rata share of MMWEC's costs related to the Project, which costs include debt service on the revenue bonds issued by MMWEC to finance the Project. In addition, should a Project Participant fail to make any payment when due, other Project Participants of that Project may be required to increase (step-up) their payments and correspondingly their Participant's share of that Project's Project Capability. Project Participants have covenanted to fix, revise and collect rates at least sufficient to meet their obligations under the PSAs. Each Participant is unconditionally obligated to make payments due to MMWEC whether or not the Project(s) is completed or operating and notwithstanding the suspension or interruption of the output of the Project(s).

Pursuant to the PSAs, the MMWEC Project Participants are liable for their proportionate share of the costs associated with decommissioning the plants, which are funded through monthly Project billings, as needed. Also, the Millstone and Seabrook Project Participants are liable for their proportionate share of the uninsured costs of a nuclear incident that might be imposed under the Price-Anderson Act (Act). Originally enacted in 1957, the Act has been renewed several times. In July 2005, as part of the Energy Policy Act of 2005, Congress extended the Act until the end of 2025.

MMWEC is involved in various legal actions. In the opinion of management, the outcome of such litigation or claims will not have a material adverse effect on the financial position of the company.

The total capital expenditures and annual capacity, fuel and transmission costs (which include debt service and decommissioning expenses as discussed above), and amount of required debt service payments (if applicable) under the PSAs associated with the Department's Project Capability of the Projects in which it participates for the years ended December 31, 2022 and 2021, respectively, are listed in the table(s) below:

Projects	Percentage Share	Total Capital Expenditures 2022	Capacity, Fuel and Transmission Billed 2022	Capacity, Fuel and Transmission Billed 2021
Stony Brook Peaking Project	2.8342 %	\$ 1,755,939	\$ 151,888	\$ 113,110
Nuclear Mix No. 1, Seabrook	7.2615	752,764	34,820	31,142
Nuclear Mix No. 1, Millstone	7.2615	4,639,643	431,421	482,544
Nuclear Project No. 3, Millstone	6.3500	9,824,956	749,720	840,735
Nuclear Project No. 4, Seabrook	6.1180	18,735,848	772,065	700,934
Nuclear Project No. 5, Seabrook	2.9821	2,470,257	97,582	87,908
Project 2015A-Capacity Resources	3.8790	2,513,994	-	-
		<u>\$ 40,693,401</u>	<u>\$ 2,237,496</u>	<u>\$ 2,256,373</u>

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Years Ended	Total Project 2015A Debt Service 4.5200%	Total Project Debt Service
2023	\$ 114,451	\$ 114,451
2024	166,319	166,319
2025	166,026	166,026
2026	165,850	165,850
2027	165,814	165,814
2028-2032	826,832	826,832
2033-2037	826,155	826,155
2038-2042	824,810	824,810
2043-2047	822,590	822,590
2048-2051	656,055	656,055
Total	<u>\$ 4,734,902</u>	<u>\$ 4,734,902</u>

Long-Term Power Transactions – In March 2023, the Department contracted with MMWEC to participate in a long-Term Power contract beginning in January 2036 and ending December 2049 with NextEra Energy Power Marketing providing the power and clean nuclear tags. The Department will purchase up to 10 MW of around-the-clock physical energy and associated clean nuclear tags each year. The annual energy payment will start at \$6,783,004 in 2036 and grow two (2) percent per year to \$8,594,436 in 2049. The total future commitment is \$104,537,049.

Telecommunications Contracts

The Department has entered into long-term contracts for dedicated point-to-point data lines and Internet Access services from several companies. These contracts have three-year terms.

In 2022, The Department entered into a new five-year contract with Crown Castle, Chicopee Electric Light, and Westfield Gas and Electric to provide dark fiber services.

In 2022, The Department co-terminated an existing three-year contract with Lumen to increase Internet speeds from 20Gig to 30Gig.

In 2021, The Department entered into a three-year contract with Lumen to provide 20Gig of Internet Services. The Department also entered into a five-year contract with WG&E to provide point-to-point services to Westfield Bank. The Department entered into a three-year contract with Fiber Sonic to provide point-to-point services to multiple locations.

In 2020, The Department entered into a five-year contract with Cooley Dickinson Hospital to provide Colocation Services. The Department also entered into a five-year contract renewal with PeoplesBank to increase their Internet from 100M to 200M.

In 2019, The Department entered into a five-year contract renewal with Cross Roads a division of Chicopee Electric Light to increase wholesale internet from 2 gigs to 3 gigs. The Department also entered into a five-year contract renewal with PeoplesBank to provide router management.

In 2018, the Department entered into a five-year contract with Cross Roads a division of Chicopee Electric Light and a one-year contract with Fiber Sonic a division of South Hadley Electric Light.

In 2017, the Department entered into a five-year contract with Fiber Connect, LLC to provide network operator services.

Holyoke Gas and Electric

Notes to Financial Statements
December 31, 2022 and 2021

In 2002, the Department entered into a lease with Fiber Technologies Networks, LLC (Fibertech) for use of the Department's fiber optic lines. The lease provides for an annual payment per route mile for 20 years with an option to renew for an additional five years.

The Department has long-term contracts which range from one to five years with customers for telecommunications services.

Environmental Protection and Other Issues

In 1990, the Massachusetts Department of Environmental Protection (MDEP) sent a notice of responsibility to the Department and other parties regarding the presence of coal tar on property known as the gas works, adjacent to the Connecticut River. An investigation of the site has revealed concentrations of contaminants on the site and MDEP classified the area as a priority site. A second notice of responsibility was issued in September 1993 for gas tar deposits in the Connecticut River, effectively separating the gas works into a land site and a river site.

The current estimate for the remaining clean-up of only the land site is approximately \$77,000. No estimate is currently available for the river site. However, the cost of clean-up may be significant and material to the financial statements. The measurement of the accrual for remediation costs is subject to uncertainty, including the evolving nature of environmental regulations and the difficulty in estimating the extent and type of remediation activity that will be utilized. The utility is also in negotiations with another counterparty under a similar order to fund part of the clean-up efforts. A final agreement as to the cost-sharing methodology between the parties has not been reached. The impact of these negotiations may be material to the financial statements but cannot be estimated.

Sources of Labor Supply

Fifty-eight percent of the Department's labor force is covered under a collective bargaining agreement between the City of Holyoke Gas and Electric Department and the Holyoke Municipal Gas, Light & Power Guild, Inc. The agreement expires March 31, 2023.

Line of Credit, Margin Account

As of December 31, 2022 and 2021, the Department had funds of \$0.00 on an open line of credit facility (securitized by portfolio assets on deposit) from our investment adviser, LPL Financial. While currently at \$0, the Department does, from time to time, access this line if and where beneficial. The current interest rate on the line of credit is 4.50%, which is a negotiated .75% discount off of LPL's base lending rate. The base interest rate may be subject to change at any time and is based upon commercially recognized interest rates, industry conditions relating to extension of credit and general market conditions.

14. Risk Management

Claims and Judgments

The Department is exposed to various risks of loss related to torts; theft of, damage to or destruction of assets; errors and omissions; workers compensations; and health care of its employees. The Department participates in a public entry risk pool called the PUMIC to provide coverage for the above-mentioned risks except for workers compensation. The following details the coverage through the PUMIC. Settled claims have not exceeded the risk pool coverage in any of the past three years. There were no significant reductions in coverage compared to the prior year.

Holyoke Gas and Electric

Notes to Financial Statements
December 31, 2022 and 2021

Public Entity Risk Pool

Public Utility Mutual Insurance Company (PUMIC)

The PUMIC is a liability insurance company, which is owned by its members. The PUMIC was formed in 1997 to provide general insurance to members of the Public Utility Risk Management Association (PURMA). PURMA is a 501(c)(6) not-for-profit association whose members include municipal utilities and rural cooperatives.

The PUMIC is self-insured up to a maximum of \$1,000,000 of each insurance risk. Losses paid by the PUMIC plus administrative expenses will be recovered through premiums to the participating pool of municipal utilities and rural cooperatives.

Management of each organization consists of a board of directors comprised of representatives elected by the participants. The Department has an employee participating as a board member in each of the organizations.

Financial statements of PUMIC and PURMA can be obtained directly from PUMIC's offices.

The initial investment in PUMIC is refundable upon withdrawal from the organization and has been reported at the original amount of \$168,000.

For general liability purposes, the Department is self-insured up to \$50,000, has self-insurance trust coverage in the amount of \$500,000 and general liability insurance through the risk pool for \$500,000 to \$25,000,000 per occurrence. The Department was also self-insured for workers compensation up to \$250,000 per occurrence through December 31, 2014. The Department has since moved to commercial insurance for workers compensation.

Holyoke Gas and Electric

Notes to Financial Statements

December 31, 2022 and 2021

15. Restatement of Net Position

The Department adopted GASB Statement No. 87 effective January 1, 2022. The impact of the implementation did not affect net position. However, prior year balances were restated for the new standard. The following balances were restated at January 1, 2021:

	As Originally Report (12/31/21)	Adjustment for GASB No. 87	As Restated (12/31/21)
<u>Statement of Net Position</u>			
Other receivables (current asset)	\$ 1,827,150	\$ 94,467	\$ 1,921,617
Lease receivable	-	914,377	914,377
Right of use asset	-	4,410,243	4,410,243
Accumulated depreciation	(118,583,517)	(188,586)	(118,772,103)
Current portion leases	-	180,339	180,339
Lease payable, long-term	-	4,041,320	4,041,320
Deferred inflows of resources, leases related amount	-	1,008,305	1,008,305
<u>Statement of Revenues, Expenses and Changes in Net Position</u>			
Electric and telecommunications operation and maintenance	37,269,023	(360,000)	36,909,023
Amortization, right of use asset	-	188,585	188,585
Investment income, net of fees	3,520,112	30,665	3,550,777
Interest expense	(2,278,245)	(171,414)	(2,449,659)
Miscellaneous income (expense)	1,156,699	(30,658)	1,126,031
<u>Statement of Cash Flows</u>			
Received from customers	80,024,073	(125,130)	79,898,943
Paid to suppliers	(45,105,779)	171,951	(44,933,828)
Investment income (loss) net of fees	5,687,902	30,665	5,718,567
Net investment in plant, property and equipment	(10,752,728)	93,928	(10,658,800)
Interest paid on bond notes, and leases payable	(3,187,490)	(171,414)	(3,358,904)

16. Subsequent Events

The Department evaluated subsequent events through April 27, 2023, the date that the financial statements were available to be issued, for events requiring recording or disclosure in the financial statements.

New electric rates were approved to be effective January 1, 2023, representing an increase of approximately 10% for residential, commercial, and small industrial users.

REQUIRED SUPPLEMENTARY INFORMATION

Holyoke Gas and Electric

Schedule of Proportionate Share of the Net Pension Liability (Unaudited)

City of Holyoke Retirement System

Last 10 Fiscal Years*

The required supplementary information presented below represents the proportionate information for the enterprise funds included in this report.

	2022	2021	2020	2019	2018	2017	2016	2015
Holyoke Gas and Electric's proportion of the net pension liability	22.9807710%	22.6007850%	23.0413940%	22.7516170%	21.8667720%	21.0663720%	20.7392330%	20.4671670%
Holyoke Gas and Electric's proportionate share of the net pension liability	\$ 16,856,396	\$ 22,849,646	\$ 57,619,682	\$ 34,387,346	\$ 25,930,197	\$ 30,715,656	\$ 30,700,334	\$ 27,426,467
Holyoke Gas and Electric's covered employee payroll	13,370,925	12,794,112	12,976,188	12,629,315	11,779,347	11,381,012	10,862,753	10,776,026
Plan fiduciary net position as a percentage of the total pension liability	85.04%	78.57%	71.79%	64.90%	71.67%	64.26%	62.55%	64.47%

* The amounts presented for each fiscal year were determined as of the calendar year-end that occurred within the fiscal year.

Schedule of Contributions - Pension

City of Holyoke Retirement System

Last 10 Fiscal Years *

The required supplementary information presented below represents the proportionate information for the enterprise funds included in this report.

	2022	2021	2020	2019	2018	2017	2016	2015
Contractually required contributions	\$ 4,094,911	\$ 3,907,249	\$ 3,983,422	\$ 3,958,373	\$ 3,856,839	\$ 3,711,165	\$ 3,596,091	\$ 3,526,919
Contributions in relation to the contractually required contributions	(4,094,911)	(3,907,249)	(3,983,422)	(3,958,373)	(3,856,839)	(3,711,165)	(3,596,091)	(3,526,919)
Contributions deficiency (excess)		-	-	-	-	-	-	-
Holyoke Gas and Electric's covered-employee payroll	14,003,339	13,370,925	12,794,112	12,976,188	12,629,315	11,779,347	11,381,012	10,862,753
Contributions as a percentage of covered-employee payroll	29.24%	29.22%	31.13%	30.50%	30.54%	31.51%	31.60%	32.47%

* The amounts presented for each fiscal year were determined as of the calendar year-end that occurred within the fiscal year.

Holyoke Gas and Electric

Schedule of Changes of the Net OPEB Liability (Asset) (Unaudited)
City of Holyoke Retirement System
Last 10 Fiscal Years *

	2022	2021	2020	2019	2018	2017
Total OPEB Liability (Asset)						
Service cost	\$ 580,935	\$ 570,325	\$ 500,313	\$ 518,484	\$ 594,872	\$ 526,946
Interest cost	1,247,108	1,211,804	1,162,953	1,119,602	1,008,278	998,426
Differences between expected and actual experience	(2,789,519)	(285,049)	(269,324)	(222,610)	289,069	-
Changes of assumptions	523,075	(356,356)	(50,171)	(83,641)	463,399	-
Benefit payments, including refunds of member contributions	(574,367)	(575,849)	(589,998)	(579,319)	(574,584)	(824,241)
Net change in total OPEB liability	(1,012,768)	564,875	753,773	752,516	1,781,034	701,131
Total OPEB Liability, Beginning	<u>20,407,070</u>	<u>19,842,195</u>	<u>19,088,422</u>	<u>18,335,906</u>	<u>16,554,872</u>	<u>15,853,741</u>
Total OPEB Liability, Ending	<u>\$ 19,394,302</u>	<u>\$ 20,407,070</u>	<u>\$ 19,842,195</u>	<u>\$ 19,088,422</u>	<u>\$ 18,335,906</u>	<u>\$ 16,554,872</u>
Plan Fiduciary Net Position						
Contribution, employer	\$ 656,915	\$ 3,396,100	\$ 2,708,768	\$ 2,559,063	\$ 1,774,584	\$ 2,024,241
Net investment income (loss)	(3,435,257)	2,341,288	1,742,116	1,866,028	(593,694)	840,362
Benefit payments, including refunds of member contributions	(574,367)	(575,849)	(589,998)	(579,319)	(574,584)	(824,241)
Net change in fiduciary net position	(3,352,709)	5,161,539	3,860,886	3,845,772	606,306	2,040,362
Plan Fiduciary Net Position, Beginning	<u>22,303,231</u>	<u>17,141,692</u>	<u>13,280,806</u>	<u>9,435,034</u>	<u>8,828,728</u>	<u>6,788,366</u>
Plan Fiduciary Net Position, Ending	<u>\$ 18,950,522</u>	<u>\$ 22,303,231</u>	<u>\$ 17,141,692</u>	<u>\$ 13,280,806</u>	<u>\$ 9,435,034</u>	<u>\$ 8,828,728</u>
Net OPEB Liability (Asset)						
Net OPEB liability (asset)	\$ 443,780	\$ (1,896,161)	\$ 2,700,503	\$ 5,807,616	\$ 8,900,872	\$ 7,726,144
Plan's fiduciary net position as a percentage of the total OPEB liability	97.71%	109.29%	86.39%	69.58%	51.46%	53.33%
Covered-employee payroll	15,213,927	14,508,827	13,698,697	13,115,000	12,520,427	12,187,515
Net OPEB liability (asset) as a percentage of covered-employee payroll	2.92%	-13.07%	19.71%	44.28%	71.09%	63.39%

* The amounts presented for each fiscal year were determined as of the calendar year-end that occurred within the fiscal year.
GASB Statement No. 74 was implemented effective January 1, 2017, and therefore only four years are available for disclosure.

Holyoke Gas and Electric

Schedule of Contributions - Other Post-Employment Benefits (Unaudited)

City of Holyoke Retirement System

Last 10 Fiscal Years *

	2022	2021	2020	2019	2018	2017
Actuarially determined contribution	\$ 919,281	\$ 580,935	\$ 1,279,538	\$ 1,732,455	\$ 1,974,179	\$ 1,978,662
Contributions in relation to the actuarially determined contribution	656,914	3,396,100	2,708,768	2,559,063	1,774,584	2,024,241
Contribution deficiency (excess)	<u>\$ 262,367</u>	<u>\$ (2,815,165)</u>	<u>\$ (1,429,230)</u>	<u>\$ (826,608)</u>	<u>\$ 199,595</u>	<u>\$ (45,579)</u>
Covered-employee payroll	15,213,927	14,508,827	13,698,697	13,115,000	12,520,427	12,187,515
Contributions as a percentage of covered-employee payroll	4.32%	23.41%	19.77%	19.51%	14.17%	16.61%
Annual Weighted Rate of Return on OPEB plan investments	-15.08%	13.02%	12.52%	18.32%	-5.97%	11.37%

* The amounts presented for each fiscal year were determined as of the calendar year-end that occurred within the fiscal year.
 GASB Statement No. 74 was implemented effective January 1, 2017, and therefore only four years are available for disclosure.

Holyoke Gas and Electric

Notes to Required Supplementary Information – Pensions (Unaudited)
Year Ended December 31, 2022

Changes of benefit terms: Effective January 1, 2020 the Cost of Living Adjustment (COLA) base was increased from \$12,000 to \$14,000. There were no changes of benefit terms for any participating employer in the City of Holyoke Retirement System for the years 2015 – 2019.

Changes of assumptions:

The following changes were effective January 1, 2022:

- The investment return assumption was lowered from 7.25% to 7.00
- The mortality improvement scale was updated from MP-2017 to MP2021

The following changes were effective January 1, 2021:

- None

The following changes were effective January 1, 2020:

- The investment return assumption was lowered from 7.50% to 7.25

The following changes were effective January 1, 2018:

- Salary increases was lowered from 4.25% - 4.75% to 4.00% - 4.50%
- The inflation assumption was lowered from 3.50% - 3.25%
- The investment return assumption was lowered from 7.625% to 7.50%
- The mortality assumption for healthy retirees changed from RP-2000 Healthy Annuitant Mortality Table projected using Scale BB2D from 2009, to RP-2014 Blue Collar Healthy Annuitant Mortality Table set forward one year for females projected generationally using Scale MP-2017
- The mortality assumption for disabled retirees changed from the RP-2000 Healthy Annuitant Mortality Table projected generationally using Scale BB2D from 2015, to RP-2014 Blue Collar Healthy Annuitant Mortality Table set forward one year projected generationally using Scale MP- 2017

The following changes were effective January 1, 2016:

- The investment return assumption was lowered from 7.75% to 7.625%
- The mortality assumption for non-disabled participants was changed from the RP-2000 Employee and Healthy Annuitant Mortality Tables projected generationally using Scale AA from 2010 to the RP-2000 Employee and Healthy Annuitant Mortality Tables projected generationally using Scale BB2D from 2009
- The mortality assumption for disabled participants was changed from the RP-2000 Healthy Annuitant Mortality Table set forward three years for males only projected generationally using Scale AA from 2010 to the RP-2000 Healthy Annuitant Mortality Table projected generationally using Scale BB2D from 2015.

Holyoke Gas and Electric

Notes to Required Supplementary Information – Other Post-Employment Benefits (Unaudited)
Year Ended December 31, 2022

Factors significantly affecting trends in the amounts reported:

Inflation	3.50% for FY2022 - FY2017
Salary increases	Service-related increases for Group 1: 6.0% per year decreasing over 9 years to 4.25% per year for FY2022 - FY2017 Service-related increases for Group 4: 7.0% per year decreasing over 6 years to 4.75% per year for FY2022 – FY2017
Investment rate of return	6.25% for FY2022 – FY2017
Healthy Mortality Rates	PubG.H-2010 Mortality Table with MP-2021 Mortality Scale for FY2022 and FY2021. PubG.H-2010 Mortality Table with MP-2020 Projection Scale for FY2020. PubG.H-2010 Mortality Table with MP-2018 Mortality Scale for FY2019 and FY2018. RP-2000 Healthy Annuitant Mortality Table projected generationally with Scale BB2D from 2009 for FY2017.

Significant Methods and assumptions used in calculating actuarially determined contributions:

Valuation Date	Actuarially determined contribution for the fiscal year ending December 31, 2022 was determined with the December 31, 2022 actuarial valuation. The fiscal years ending December 31, 2021 and 2020 were both determined with the December 31, 2020 actuarial valuation. The fiscal year ending December 31, 2019 and 2018 were both determined with the December 31, 2018 actuarial valuation. The fiscal year ending December 31, 2017 was determined with the June 30, 2015 actuarial valuation.
Actuarial cost method	Entry Age Actuarial Cost Method for FY2022 – FY2018. Projected Unit Credit Method for FY2017.
Amortization method	Level percent of payroll for FY2022 – FY2017
Remaining amortization period	6 years from December 31, 2022 for FY2022. 6 years from December 31, 2020 for FY2021 and FY2020. 6 years from December 31, 2018 for FY2019 and FY2018. 7 years from December 31, 2015 for FY2017.
Asset valuation method	Market value for FY2022 – FY2017
Discount rate	6.25% for FY2022 – FY2017
Inflation	3.50% for FY2022 - FY2017
Health care trend rates*	6.5% per year graded down by the Getzen model to an ultimate rate of 4.14% per year for FY2022. 6.00% per year graded down by the Getzen model to an ultimate rate of 3.94% per year for FY2021. 5.5% per year graded down by the Getzen model to an ultimate rate of 4.04% per year for FY2020. 6.00% per year graded down by the Getzen model to an ultimate rate of 3.84% per year for FY2019. 6.50% per year graded down by the Getzen model to an ultimate rate of 3.84% per year for FY2018. 10.0%, then 7.5% decreasing by 0.5% for 5 years to an ultimate level of 5.0% per year for FY2017.
<i>Non-Medicare medical/prescription drug</i>	
<i>Medicare medical/prescription drug</i>	6.5% per year graded down by the Getzen model to an ultimate rate of 4.14% per year for FY2022. 6.00% per year graded down by the Getzen model to an ultimate rate of 3.94% per year for FY2021. 5.5% per year graded down by the Getzen model to an ultimate rate of 4.04% per year for FY2020. 6.00% per year graded down by the Getzen model to an ultimate rate of 3.84% per year for FY2019. 5.5%, then 7.5% decreasing by 0.5% for 5 years to an ultimate level of 5.0% per year for FY2018. 10.0%, then 7.5% decreasing by 0.5% for 5 years to an ultimate level of 5.0% per year for FY2017.

Holyoke Gas and Electric

Notes to Required Supplementary Information – Other Post-Employment Benefits (Unaudited)
Year Ended December 31, 2022

Dental/Administrative

6.5% per year graded down by the Getzen model to an ultimate rate of 4.14% per year for FY2022. 6.00% per year graded down by the Getzen model to an ultimate rate of 3.94% per year for FY2021. 5.5% per year graded down by the Getzen model to an ultimate rate of 4.04% per year for FY2020. 6.00% per year graded down by the Getzen model to an ultimate rate of 3.84% per year for FY2019. 5.0% for FY2018 and FY2017.

Contributions

Retiree contributions for medical and prescription drug coverage are expected to increase with medical trend for FY2022 – FY2017.

**Trends reflect known increases for the first year*

S U P P L E M E N T A R Y I N F O R M A T I O N

Holyoke Gas and Electric

Schedules of Operating Revenues and Expenses - Gas Division
Years Ended December 31, 2022 and 2021

	2022	2021
Operating Revenues		
Residential	\$ 12,238,475	\$ 10,060,774
Commercial	12,090,722	9,159,467
Industrial	3,127,328	2,334,624
Municipal	935,535	706,886
Departmental sales	87,246	56,603
Sales for resale	652,211	511,907
Uncollectible accounts	(89,612)	(120,519)
Total operating revenues	<u>\$ 29,041,905</u>	<u>\$ 22,709,742</u>
Cost of Gas Sold		
Purchases, natural gas	\$ 14,394,235	\$ 9,227,452
Liquid natural gas processed	809,164	446,863
Environmental response	126,084	110,820
Supplies and expenses	206,594	181,271
Total cost of gas sold	<u>\$ 15,536,077</u>	<u>\$ 9,966,406</u>
Distribution		
Salaries and wages:		
System control and load dispatch	\$ 402,955	\$ 387,379
Supervision and engineering	470,480	429,736
Customer installation	644,139	608,494
Operation	690,718	656,624
Maintenance	1,260,160	1,233,783
Supplies and expenses	1,258,674	1,382,289
Total distribution	<u>\$ 4,727,126</u>	<u>\$ 4,698,305</u>
Customer Accounts		
Salaries and wages:		
Meter reading	\$ 39,643	\$ 45,783
Accounting and collection	163,418	139,723
Supplies and expenses	107,652	109,017
Total customer accounts	<u>\$ 310,713</u>	<u>\$ 294,523</u>
General and Administrative		
Salaries	\$ 1,062,196	\$ 1,000,280
Pensions and benefits	892,621	1,265,410
Insurance	141,300	134,714
General supplies and expenses	866,402	770,960
Total general and administrative	<u>\$ 2,962,519</u>	<u>\$ 3,171,364</u>

Holyoke Gas and Electric

Schedules of Operating Revenues and Expenses - Electric and Telecommunications Divisions

Years Ended December 31, 2022 and 2021

	2022	2021 (Restated)
Operating Revenues		
Electric sales:		
Residential	\$ 15,359,645	\$ 15,306,842
Commercial	26,814,760	25,965,347
Industrial	4,946,765	5,106,473
Municipal	2,880,053	2,829,986
Interdepartmental	307,660	267,786
Water	6,300	6,300
Renewable energy revenue	2,236,608	1,591,551
Cobble Mountain operation, net	564,361	647,709
Telecommunication sales	2,967,441	2,780,993
Uncollectible accounts, electric/hydro	(182,937)	(270,399)
Uncollectible accounts, telecommunications	(859)	(2,824)
Rate stabilization funds(deferred)/utilized in the current period	-	(2,500,000)
Total operating revenues	\$ 55,899,797	\$ 51,729,764
Cost of Electricity/Steam/Water Sold		
Purchases, electricity	\$ 15,836,388	\$ 12,280,601
Salaries and wages:		
Production	1,363,268	1,362,905
Maintenance	1,704,999	1,815,035
Supplies and expenses	4,610,411	2,793,900
Cost of water sold	440,851	395,133
Total cost of electricity/steam/water sold	\$ 23,955,917	\$ 18,647,574
Electric Transmission		
Salaries and wages	\$ 961,014	\$ 987,475
Supplies and expenses	451,227	320,722
Transmission by others	3,347,005	2,812,736
Total electric transmission	\$ 4,759,246	\$ 4,120,933
Distribution		
Electric:		
Salaries and wages:		
Lines, equipment and street lights	\$ 3,472,325	\$ 3,062,334
Customer installations	255,810	267,190
Supplies and expenses	4,203,803	3,189,986
Telecommunications distribution	1,824,080	1,785,306
Total distribution	\$ 9,756,018	\$ 8,304,816
Customer Accounts		
Salaries and wages:		
Meter reading	\$ 77,513	\$ 85,265
Accounting and collection	330,786	259,484
Supplies and expenses	194,343	197,234
Total customer accounts	\$ 602,642	\$ 541,983
General and Administrative		
Electric:		
Salaries	\$ 1,883,664	\$ 1,820,409
Pensions and benefits	1,748,859	2,490,704
Insurance	650,557	563,489
General supplies and expenses	2,056,454	1,846,130
Telecommunications general and administrative	511,761	603,133
Total general and administrative	\$ 6,851,295	\$ 7,323,865

