



2017

ANNUAL REPORT



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

Submitted herewith is the 115 Annual Report of the City of Holyoke Gas & Electric Department (HG&E), for the year ending December 31, 2017.

HG&E had a very busy and productive 2017. Despite significant increases in capacity and transmission costs, the Department finished the year with strong financial performance while continuing to offer some of the most competitive rates in the region.

The Electric Division worked hard to insulate ratepayers from the full brunt of increasing costs through various load management activities. These activities included ensuring that available hydro and solar generators were operating during peak periods, as well as operating other assets to reduce the Department's peak load. These measures helped to save \$1.56 million during the course of the year. The Division also negotiated an agreement with ENGIE, N.A. to deploy the largest battery storage facility in Massachusetts at ENGIE's Mt. Tom Solar Facility site. This project will further benefit ratepayers when it is commissioned in 2018.

The Gas Division negotiated an agreement with Columbia Gas of Massachusetts (CMA) to add additional gas supply. Through this agreement, HG&E will interconnect with the CMA distribution system to provide additional, and much-needed, capacity as well as path diversity benefits for the HG&E ratepayers.

The Hydro Division continued efforts to update the fleet of hydro generators and associated facilities. New intake racks were added at the Riverside #4 and #5 units during the year. A new head gate hoist was added at the Hadley Falls Station. Additionally, a new Visitor Center was constructed and commissioned at the Robert E. Barrett Fishway, open to the public in May for the annual spring migration.

The Telecom Division continued to provide high-quality, fiber optic services throughout the Pioneer Valley and launched an expansion of wholesale ISP services to OTT Communications and FiberConnect, LLC. Staff also made efforts to increase network security and improve cybersecurity systems.

HG&E also continued to do its part in protecting the environment and supporting community. In 2017, 66.87% of the Department's generation was from renewable resources (hydro, solar, and wind) and 90.11% of its generation was carbon-free (renewable and nuclear). Employees also contributed \$27,000 to the United Way and donated approximately 5,000 hours to various nonprofit and community organizations throughout the year.

We thank city officials and HG&E employees for their continued faithful service to HG&E, and 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

Robert H. Griffin, Commission Treasurer

James A. Sutter, Commission Secretary

James M. Lavelle, Manager

GAS DIVISION



IN ALL, THE DEPARTMENT INSTALLED OVER 12,114 FEET OF NEW MAINS AND 354 NEW AND REPLACEMENT SERVICES. HG&E'S NATURAL GAS DISTRIBUTION SYSTEM NOW CONSISTS OF OVER 185 MILES OF MAINS AND 7,948 SERVICE LINES.

NEW SERVICES

In 2017, the Department installed 50 service lines to new customers. The Department also replaced or retired 304 existing older services in Holyoke by installing new plastic pipe.

Per HG&E's Distribution Integrity Management Plan (DIMP), which was implemented in August 2011, the Department embarked on a 10-year bare steel service replacement program. There are currently 1,229 bare steel gas services remaining in Holyoke, down from approximately 3,200 at the beginning of the program. At the conclusion of this replacement program, all gas services will be constructed of either polyethylene plastic or coated steel. Bare steel services were installed from the early 1900s through the late 1960s.

NEW AND REPLACEMENT MAINS

The Department continued its cast iron main replacement efforts and replaced just under one and a half miles (7,379 feet) of small-diameter, wrought iron, and cast iron pipes with new plastic pipes on Calumet Road, Francis Avenue, West Franklin Street, Lawler Street, South Street, Argyle Street, Myrtle Avenue, Montgomery Avenue, and Bullard Avenue. An additional 1,570 feet of pipe was abandoned, the majority of it on Anniversary Road and Clemente Street. The new plastic mains are generally four inches or six inches in diameter, with eight inches being used along West Franklin Street and South Street.

On Lower Westfield Road, the Department replaced 545 feet of steel main with new four-inch plastic mains and also upgraded three residential gas services in the area. In Southampton, 935 feet of eight-inch steel main was replaced on College Highway with eight-inch plastic main as part of a state-funded improvement project. Also, mains were extended on Cook Road, Miller Avenue, and Moosebrook Road. Approximately, 2,630 feet of two-inch plastic pipe was installed to serve these new streets.

In all, the Department installed over 12,114 feet of new mains and 354 new or replacement services. HG&E's natural gas distribution system now consists of over 185 miles of mains and 7,948 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 more than 4,000 lines in 2017, or about one-half of the service pipes in the system. The combined surveys accounted for the detection of 102 leaks, mostly minor. All leaks were investigated and prioritized. A total of 216 leaks were repaired and/or eliminated in 2017, and the remainder were monitored throughout the year or scheduled for repair, consistent with the applicable safety regulations.



Daniel Falcetti and Brendan Flynn surveying a gas line

GAS SUPPLY AND FLOW CONTROL

The Department delivered 2,216,535 dekatherms (DTH) of gas in 2017, with a peak daily send-out of 18,731 DTH on December 31. Of that, 12,479 DTH was delivered over the pipeline and 6,252 DTH was supplemented by liquefied natural gas (LNG). HG&E continues to operate its LNG storage and vaporizing system, providing the extra gas needed during the coldest winter days and as an emergency supply for the entire city.

In 2017, the Apremont and Dupuis regulator station was rebuilt; new regulators and safety devices were installed. This station feeds West Holyoke and Southampton on the intermediate pressure system. In addition to increased reliability, the rebuild allows for station isolation without customer interruption.

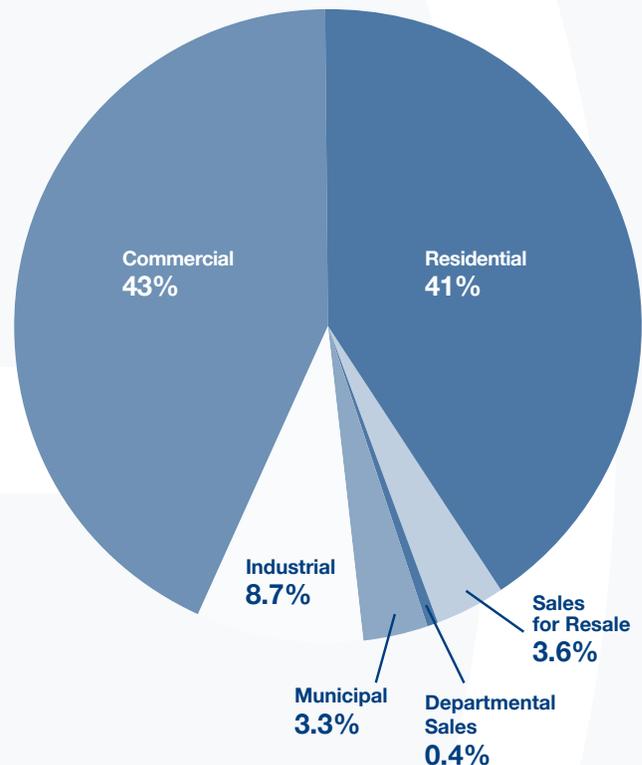
SERVICE

The Department completed 2,440 appliance repair service calls for customers in Holyoke and Southampton during the year. These calls include boiler/furnace, water heater, and dryer repairs and thermostat installations. In addition 1,382 gas meters were changed to comply with the state-mandated seven-year meter exchange requirement.

The Service Department completed a total of 3,762 corrosion inspections as service orders for gas and electric meter turn-ons and turnoffs continued to decrease. In lieu of sending an employee to each site for ons and offs, the Department was able to utilize its fixed-meter network to remotely read meters that were being transferred between customers.

**SERVICE DEPARTMENT
EMPLOYEES ATTENDED
OVER 1,200 HOURS
OF TRAINING IN 2017,
INCLUDING ON NEW
TECHNOLOGY, GAS
PROCEDURES (OQ),
AND SAFETY.**

2017 GAS REVENUES





HG&E Customer Service Representative Emily Ortiz-Santos

ELECTRIC PRODUCTION

HYDROELECTRIC FACILITIES

In 2017, a number of projects were completed that improved or will contribute to future generation capacity and reliability of the Department's hydroelectric facilities.

THESE PROJECTS INCLUDED:

Hadley Falls Station: During the summer of 2017, the following maintenance projects were completed at Hadley Falls Station;

- Hadley Falls Unit 1 - draft tube inspection and repair of an oil leak on the Kaplan Oil Head assembly.
- Hadley Falls Unit 2 - replaced the wicket gate packing and replaced the RTDs on the generator guide bearing.
- Dive inspection of the dam apron toe and gatehouse structure.

City #2 Rehabilitation: The outage on City #2 began on June 19 and will continue into the second quarter of 2018. To date, the work has consisted of the complete disassembly of all nonembedded components of the machine. New wicket gates are being fabricated, and the generator stator, rotor, and exciter rehabilitation has been completed. Miscellaneous parts have begun to arrive, and reassembly will begin in early 2018.

Hadley Falls Station New Head Gate Hoist: The original head gate hoist and gantry crane installed in 1951 was replaced. A new 50-ton crane was fabricated, installed, and successfully commissioned by early May 2017.

Emergency Generator: A new emergency generator was installed at Boatlock Station. Work included replacement of generator, transfer switches, and tie-in to electrical control system.

Hadley Station City Water Line Replacement: The Department completed phase two of the Hadley Station city water line replacement project. The water line was replaced from the Hadley Station entrance gate to the 12-inch city water line adjacent to Conklin Furniture. The new eight-inch pipe replaced the existing six-inch pipe, which was installed in approximately 1900.

Hadley Station Downstream Fish Passage Project: The Department completed the installation of the new downstream fish passage facility in December 2015. In 2017, testing effectiveness of the new facility continued with a multiyear radio tagging study of shortnose sturgeon. Results of the testing are expected to be available in the first quarter of 2018.

Visitor Training Center Opened at Hadley Station: In September 2016, a contract was awarded for the fabrication and installation of a new modular building (48'x26'). By the end of the 2016, concrete foundations and floor slabs were placed and utilities were extended to the new foundations. The new building was completed in March 2017 and opened to the public in May 2017 for the spring public viewing season.

Riverside #4 and #5 Intake Rack Replacement: A new nonmetallic intake rack was installed in September 2017.

Riverside Station: Pointed and cleaned bricks on the downstream face of the building at Riverside Units 4-7.

OTHER PROJECTS

Annual Spring and Fall Canal Inspections: Assessment of canals and canal walls, including overflows, intakes, penstocks, powerhouses, and tailraces.

MAJOR COMPLIANCE ISSUES ADDRESSED INCLUDE:

Part 12 D Inspection: The five-year Part 12D Safety Inspection of the Project was completed between September 12 and 14, 2017. Based on the inspection, it was found that the project is suitable for continued safe and reliable operation.

Relicensing of city Units 1, 2 and 3: The Federal Energy Regulatory Commission (FERC) issued a letter confirming that second scoping documents would not be necessary for the City 1, 2 or 3 units. Additionally, the units would not be ready for environmental analysis until after the results of the 2017 eel study are completed. This document is expected to be filed with FERC in the first quarter of 2018.

Applications for Surrender: Final surrender applications for the Albion A, Albion D, and Nonotuck units were filed with the FERC. The Massachusetts Historic Commission sent confirmation to the FERC that there were no adverse impacts to historic properties anticipated. Final approval from the FERC is expected in the first quarter of 2018.

ENVIRONMENTAL PROJECTS INCLUDED:

- Monitoring of invasive plant species along the impoundment and ongoing efforts to control water chestnut in Log Pond Cove.
- Annual water quality monitoring of project operations.
- All 2017 wetlands monitoring and reporting requirements were completed. No monitoring will be required for 2018. Additional invasives monitoring will be completed in 2019 and 2021.

Robert E. Barrett Fishway Operations: In 2017, 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. Activities included biological sampling, trapping and loading of shad, trapping of shortnose sturgeon and Atlantic salmon, and observations of lift operations and eel passage.

HYDRO



HG&E's Hadley Station



Evening view of the Holyoke Dam at Hadley Station

2017 FISH PASSAGE

The fish lift at the Robert E. Barrett Fishway assists migrating fish on their journey to reach spawning areas above the Holyoke Dam. HG&E's fish passage facility was the first and most successful fish lift on the Atlantic coast. It is composed of two fish elevators that carry migrating fish up and beyond the dam.

The passage of anadromous and resident fish species that were observed and monitored in the lift system in 2017 included:

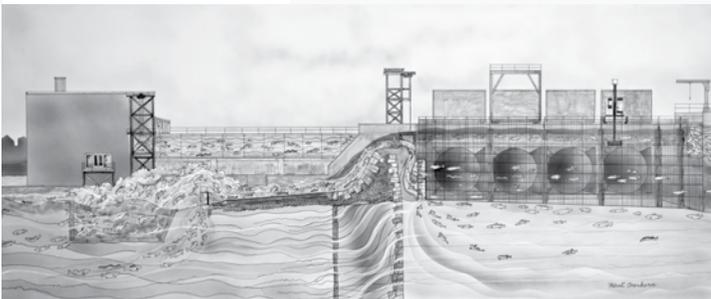
AMERICAN SHAD	536,670
ATLANTIC SALMON	10
BLUEBACK HERRING	875
GIZZARD SHAD	738
SEA LAMPREY	21,526
SHORTNOSE STURGEON	85
STRIPED BASS	338

In addition to the fishlift, there are two eel ramp passage facilities on both the Holyoke and South Hadley shores below the dam. The number of American eels counted at the eel ramps in 2017 was 17,037.

In 2017, the public viewing facility at the Barrett Fishway was open from May 3 through June 11 and attracted 8,685 visitors. The opportunity to view fish on their annual spring spawning run is a rare opportunity and demonstrates HG&E's commitment to Connecticut River stewardship and educational programs.

2017 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 2017 Shad Derby was held on the weekends of May 13-14 and 20-21. The event attracted 128 registrants in the Senior Division and 34 registrants in the Junior Division. Kathy Welch of Chicopee got the first-place award in the 2017 Senior Division with a 5 lb., 5 oz shad. Andrew Pieczarka of Chicopee led the Junior Division with a 5 lb., 2.25 oz. shad. The John A. DiNapoli Award for the first shad caught by a youth went to Justin Rivera of Chicopee.



ELECTRIC DIVISION



ELECTRIC OPERATIONS

In 2017, a number of projects were completed that will increase the reliability of the Department's electric substation and transmission infrastructure.

THESE PROJECTS INCLUDED:

Holyoke Substation Replacement – Phase II: This project entails replacing the existing 115/13.8 kV dual transformer substation, which is currently near the end of its life and over firm capacity. In 2017, we obtained all regulatory approvals and awarded bids for major equipment, including power transformers, 115 kV packaged substation equipment, 15 kV switchgear, and 115 kV relay and control panels. Preliminary demolition and construction activities necessary to make room for the new substation and 15 kV switchgear commenced, including (1) retirement of five power transformers, (2) resupplying the 15 kV indoor switchgear with cable ties, (3) resupplying the 4.8 kV F Bus to serve No. 1 Hydro, and (4) abatement and demolition of the travelling screen and all impeding utilities in the old boiler room. Construction on the new station is planned to start in spring 2018, with half of the station slated for energization by year end. The second half of construction and final commissioning and acceptance will occur in late 2019.

Electric Station Load Center #2 Replacement: This project entailed replacing the 1940s-vintage 480 V load center which formerly supplied

boiler auxiliary equipment in the Electric Station. The new switchgear was reconfigured to feed the plant load and interconnect the Electric Station emergency and peak shaving natural gas generators. Steps were also taken to accommodate future panelboards and transformers associated with building renovations planned in the turbine room.

Protective Relay Replacements – Phase I: This project involves replacing electromechanical relays with microprocessor-based relays at the Holyoke 17L indoor switchgear and various transmission-level relays at Ingleside 52W. In 2017, the designs for both locations were completed, and construction drawings were issued. All materials for the project were also procured. Installation and commissioning of the new relays will occur in 2018.

Safety Improvements: Two major safety improvements were completed in 2017, including (1) installation of battery room hydrogen sensors at all substation battery rooms and (2) retrofitting remote circuit breaker racking devices at Highland and Walnut substations. The hydrogen sensors control ventilation fans and also alert employees to hazardous levels of hydrogen. The racking devices permit remote removal/insertion of high-voltage circuit breakers, which reduces arc flash hazards to employees during maintenance operations.

As part of the Department's preventative maintenance (PM) plan, major maintenance and testing was performed on various substation and plant equipment throughout the year. In summary, 308 maintenance orders were completed, including major maintenance and/or testing on:

- Four power transformers and LTCs at North Canal Substation
- Fourteen 15 kV and 10 35 kV vacuum circuit breakers at North Canal Substation
- Three 115 kV SF6 circuit breakers at North Canal Substation
- Two 125 Vdc station battery system at North Canal Substation
- Twenty-eight NERC mandated transmission level protective relays at Holyoke Substation

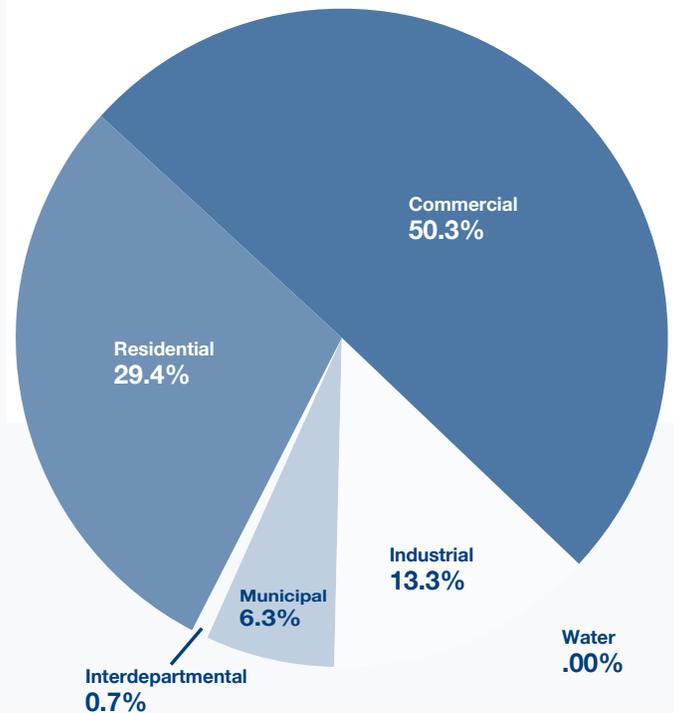
Support for electric distribution and hydro during the year included the preparation of 138 switching orders with clearances issued for planned and emergency high-voltage work, assistance with the replacement of four transmission poles, assistance with the corrosive sulfur mitigation on three power transformers, and assistance with the interconnection processes for various solar and energy storage projects. Maintenance/repair operations were also performed as required on distribution and hydro equipment, including monthly 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 2017, HG&E continued to make important investments in the electric distribution system. Some of the major investments included the replacement of a 300-foot section of underground primary cable on Bemis Road under the I-91 overpass and a 1960 vintage ground-mounted, oil-filled station type transformer with pole-mounted transformers at US Tsubaki on Main Street. An 800-foot line extension was installed at Mengel-DaFonte Auto Body and nearby customers to increase service voltage and improve reliability in the surrounding area.

The Department continued its work that began in 2016 involving the removal or replacement of existing vacuum switches in manholes. The project will involve eventually 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. Eight more vacuum switches were removed or replaced with air break switches throughout the year, bringing the total to 19 since 2016. The Department also issued a bid for new automated padmount or vault-mounted, oil-filled switches that will eventually replace any remaining vacuum switches in the field. These new switches will also provide automation to isolate faulted sections of circuit more quickly and provide control of these devices from remote locations.

2017 ELECTRIC DIVISION REVENUES



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 liability to the overall system. Based on reliability data, tree trimming expenses, and known hazard areas, locations with backyard facilities were reviewed in 2017. The Department determined whether new facilities are to be installed underground or overhead based on the type of distribution existing nearby. There were 23 services, 17 single family and six multifamily, that were relocated from the backyard to the street in locations, including Brown Avenue, Beacon Avenue, Hampden Street, Wolcott Street, Glen Street, and View Street.

As a result of increased reliability and load shifting, a new loop was completed around the entire Kmart Plaza area on Northampton Street, inclusive of all businesses within the plaza as well as McDonald's, Holyoke Charter School, and Gillette Equipment. This change will allow crews to isolate the line or equipment while minimizing any potential outages for other customers. Customer load was also transferred to the 52W11 circuit located on Whiting Farms Road, in order to reduce the amount of customer load on the 52W1 circuit feeding Holyoke Substation. The backup capabilities of Holyoke Substation include both West Holyoke and Oakdale switching stations.



HG&E's Electric Division Storekeeper Abigail Alers

Approximately 1,200 feet of new cable was installed for the 44P8 circuit along Main Street which allowed for the elimination of a 300-foot overhead crossing, which was mounted on steel towers over Main Street between South Canal Street and South Water Street. In addition, a 150-foot overhead crossing was eliminated on South Street over the Pioneer Valley-owned railroad tracks that connected South Water Street with Berkshire Street. As a result, customer load and generation was transferred from the 44P8 to the 44P1 circuit, which is served from Jackson Street along South Water Street. Additionally, customer load was transferred from the 17L2 circuit to the 17L6 circuit on Main Street, in order to eliminate any customers on the 17L2 circuit that previously had not been protected from the downstream recloser.

In 2013, all primary cable was replaced and new conduit installed in the Lindor Heights area. In 2017, any remaining secondary mains and services were replaced and conduit was installed to complete the removal of all direct buried infrastructure in this neighborhood. In all, eight services and approximately 200 feet of secondary main were replaced within new conduit. This also included the removal of five backyard poles, seven backyard overhead services, and three sections of backyard overhead secondary main from service. The entire neighborhood was converted underground as of 2017.

Two customers whose 1960s-vintage transformers were either vault mounted or submersible had their transformers replaced. The pole-top transformers located inside a vault at the Motel 6 on Northampton Street were replaced with a new pole-mounted, three-phase, overhead bank. The submersible transformer located on the premises of Pulaski Heights on Maple Street was replaced with a new padmount transformer, which provides added protection from an upstream fuse, isolating the customer in case of an electrical problem or maintenance issue.

There were six new solar projects requiring new electrical feeds with upgraded metering resulting in an additional 1.55 MW-dc of solar output load. Four of these were commercial projects located at Conklin Office Furniture on Appleton Street, the former sand shed site on Hadley Mills Road, and two Department-owned buildings at 30 Water Street and 91 Walnut Street. The other two solar projects were for residential customers on Amherst Street and Prew Avenue.

Five services on Hitchcock Street, Cleveland Street, Allyn Street, Sycamore Street, and Taylor Street were relocated from heavily overgrown areas with difficult accessibility to the street. This will provide customers with a more reliable electric service, as well as protection from potential safety hazards and safety code violations. Additionally, these measures will reduce some of the tree trimming and outage costs for the Department.

A number of preventative maintenance activities continued throughout the year. Testing was performed on 95 new and used transformers, 91 pole-top units, and four padmount units. 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 also completed in the West Holyoke and Blueberry Hill areas.

There were 170 padmount transformers on various circuits inspected by the Department line crew. Annual visual inspections on all three transmission lines were also performed by in-house staff to ensure reliable operation of the transmission system. Infrared inspections were performed on all distribution circuits throughout the city, while an extensive radio frequency (RF) analysis on the distribution system was completed. There were 23 transformers upgraded or replaced due to overload conditions, leaking, and/or poor condition. Enhanced wildlife protections were installed on various pieces of equipment throughout the city which continued to reduce outage time in 2017.

A new electric service for the Daniel O'Connell's Sons office building on Kelly Way was completed, resulting in a net additional connected load of 150 kVA. Service upgrades were performed at the Holyoke Mall to accommodate the new Sumo Japanese Steakhouse and at the former Autron building on Appleton Street to accommodate Positronic Farms, resulting in an additional connected load of 775 kVA. There was also one new home constructed on an available lot that required a new electric service, resulting in a connected load of 10 kVA.

In summary, for 2017, HG&E set 127 poles and removed 237. A net 1,452 kVA connected load was added to the distribution system. Some 17,639 circuit feet of underground cable was installed, while 14,460 was removed. Similarly, 35,836 circuit feet of overhead wire was installed, while 40,226 was removed. Approximately 3.09 miles of PVC conduit was installed. There was a net increase of 30 contract lights and a net increase of one streetlight.

RELIABILITY

Reliability statistics allow the Department to track its service reliability and compare them 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).

ELECTRIC DISTRIBUTION SYSTEM RELIABILITY STATISTICS		
STATISTIC	2017	2016
ASAI	99.9960%	99.9988%
CAIDI	56.072 min	37.372 min
SAIDI	21.673 min	6.228 min
SAIFI	0.387 outages	0.167 outages

Average System Availability Index (ASAI)—represents how much of the time a customer actually has service available to them.

Customer Average Interruption Duration Index (CAIDI)—represents the average time expected to take 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.

METERING

The Department operated its fixed network automated meter reading (AMR) system for its fourth year since installation and final acceptance in late 2013. Beyond performing meter reading tasks on a monthly basis, the system provides outage notification from electric meters, tampering diagnostics for electric and gas meters, interval meter data, and instantaneous meter reads. This technology allows the Department to perform certain tasks remotely, such as successions when opening or closing an account. The metering group has utilized custom reports to track down inactive meters showing consumption, validate meter removals, and detect malfunctioning meters to reduce lost revenue and maintain system accuracy. AMR had an average daily read rate of 99.61% for 2017, with an initial design of 99%. The overall remote read rate for the Department was 97.48%, which includes all meters without RF capability.

The Department solicited bids and awarded a contract to implement an advanced metering infrastructure (AMI) system to support commercial and industrial billing and future distribution automation. By the end of 2017, the Department finalized the overall design, implemented the cloud interface software, and performed meter acceptance testing, in preparation for the AMI system 2018 rollout.

The Department was required by ISO-NE to implement a remote intelligent gateway (RIG), which sends electronic dispatch instructions to HG&E and sends reliability data back to ISO-NE's control room for Hadley Falls and Cobble Mountain stations. Utilizing the Department's high-end revenue meters and RIG, the completed solution is the interface between the Department's hydro control system and ISO-NE. This was accomplished by replacing all four revenue meters at the station in order to successfully create a connection with Cobble Mountain and the RIG.

As part of the electrical configuration changes at Boatlock and City Hydro 1 and 2, new metering designs were developed and three revenue meters were installed. The Department installed four revenue meters for Conklin (2), Walnut Street Gas Division facility, and Hadley Mills solar sites. A total of four transformer and station service meters were tested at Hadley Falls substation, as well as Chemical and Valley Hydro stations. These meters are tested by the Meter Department on a biannual basis through the use of the Department's own portable test unit.

Testing of current transformers (CT) continued at various customer locations. There were 100 CT rated customer locations tested by in-house meter personnel. This testing ensures that customer metering remains accurate and any issues found are addressed in a timely fashion.

Throughout the year, the metering group continued to support the Credit Department, performing delinquent customer ons and offs, tagging notifications, meter reads, and collections. In total, 4,599 credit-related duties were performed in 2017.

In summary, there were a net total of 141 electric meters installed, 94 electric meters replaced, and 70 electric meters retired, having an average

age of 11.56 years. A total of 237 electric meters were tested and calibrated; 20 power quality checks, 482 turn-ons and 365 turnoffs, and 10 electric successions performed; and 57 vacant consumption reports investigated for metering problems and/or theft of service. There were 50 current transformers installs and 12 removals. There were also eight potential transformers installed. In addition, 29 surge protectors were replaced due to warranty expiration. On the gas side, 1,425 meters were removed and tested, 1,495 meters were installed, another 1,521 meters were sealed, and 464 meters were retired.

WHOLESALE POWER

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, ensuring stable rates for all customers.

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 realized over \$100,000 in savings from these replacements in 2017.

During 2017, the Department proactively pursued low-cost carbon-free projects to secure and further enhance its clean energy portfolio. Seven utility-scale and two residential new solar projects totaling 9.03 MW-dc began commercial operation at various times throughout 2017. HG&E's County Road ground-mounted solar project produced 970 MWh, the Mueller Road and Meadow Street projects produced 4,938 MWh, and RICAR rooftop solar projects produced 1,057 MWh of carbon-free power for the Department in 2017, while the new systems produced 4,604MWh. These projects bring the total number of solar fields in service to 19 (13 utility-scale, four residential, two commercial), with a corresponding output load of 16.7 MW-dc, allowing the Department to purchase power at a lower cost.

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. This program allows residential customers to receive the benefits of solar without the expense of installing a system at their location. The newly operational Mt. Tom Solar project totaling 4.500 MW-ac was designated as a Community Solar project and produced 5,866 MWh of carbon-free power for the Department. The community shared solar reduction generated total savings of \$87,724 to those participating in the program. Additionally in 2017, a total of \$16,242 was provided to the Holyoke Housing Authority from two solar system (Aegis and Gary Rome) that were set up under the Low or Moderate Income (LMI) Solar Program.

POWER SUPPLY

2017 POWER SUPPLY RESOURCES

PROJECT NAME	FUEL TYPE	PROJECT START DATE	CONTRACT CAPACITY (kW-AC)		CONTRACT END DATE
			WINTER	SUMMER	
BASE UNITS					
NYPA FIRM	HYDRO	1985	1,787	1,787	9/1/25
MILLSTONE 3 - MIX 1	NUCLEAR	1986	1,334	1,334	11/25/45 *
MILLSTONE 3 - MIX 1	NUCLEAR	1986	2,325	2,325	11/25/45 *
SEABROOK - MIX 1	NUCLEAR	1990	147	147	3/15/30 *
SEABROOK - PROJ 4	NUCLEAR	1990	3,306	3,306	3/15/30 *
SEABROOK - PROJ 5	NUCLEAR	1990	408	408	3/15/30 *
INTERMEDIATE UNITS					
HYDRO QUEBEC 1	N/A	1986	1,189	1,189	LOU **
HYDRO QUEBEC 2	N/A	1989	1,938	1,938	LOU **
W.F. WYMAN 4	#6 OIL	1978	4,199	4,152	LOU *
PEAKING UNITS					
NYPA PEAK	HYDRO	1985	383	383	9/1/25
STONYBROOK GT 2A	#2 OIL	1982	2,476	1,910	LOU *
STONYBROOK GT 2B	#2 OIL	1982	2,413	1,850	LOU *
RENEWABLE					
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 *
BEEBE HOLBROOK	HYDRO	1948	205	205	OWNED *
SKINNER	HYDRO	1924	300	300	OWNED *
VALLEY HYDRO	HYDRO	2004	790	790	OWNED *
ALBION A	HYDRO	2004	281	281	OWNED * ***
ALBION D	HYDRO	2004	395	395	OWNED * ***
NONOTUCK	HYDRO	2004	472	472	OWNED * ***
OPEN SQUARE	HYDRO	2004	525	525	2/29/16 ****
HANCOCK WIND	WIND	2016	6,032	6,032	12/14/41
CONSTELLATION - MUELLER RD	SOLAR	2012	2,693	2,693	12/20/31 ****
CONSTELLATION - MEADOW ST	SOLAR	2012	793	793	12/20/31 ****
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	SOLAR	2017	4,500	4,500	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 ****

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, entitlement, which continues for the life of the unit

*** Analysis and Relicensing

**** Load Reducer



HG&E Lineman Angel Maldonado Jr.

Residential and commercial customers continue to invest in renewable solar technologies, resulting in 37,610 kWh of load reduction on the system in 2017. The harnessing of solar energy from these projects within Holyoke is offsetting the Department's demand and reducing future costs for all customers.

HG&E contracted with MMWEC in December 2013 under a 25-year PPA for 6.032 MW of energy and capacity out of the Hancock Wind Project, located in Hancock County, Maine. This project came on line in December 2016 and produced 16,315 MWh of carbon-free power for the Department in 2017.

In 2011, HG&E executed a 10-year Power Transaction, which included nuclear certificates, with Nextera Energy Power Marketing, LLC. Year five of this transaction produced 40,640 MWh of carbon- and emission-free power for the Department in 2017 and helped to stabilize rates for all customers.

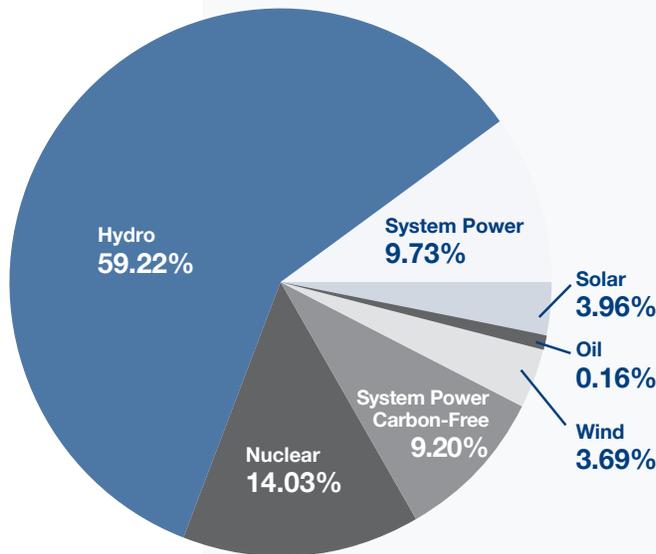
A total of 243,308 MWh of net generation was produced from the Department-owned hydro resources, which continued to help drive down the overall cost of power. During 2017, the hydro preference power credit to residential customers generated total savings of \$1,057,460 (\$754,382 from Department-owned hydro and \$303,078 from NYPA entitlements).

The hydroelectric system, including the Hadley Falls Dam and the Holyoke Canal hydro facilities, was recertified by the Low Impact Hydropower Institute (LIHI) with an effective date through December 31, 2024, allowing the Department to register for Massachusetts Class I and II status. 10.91% of Hadley Falls 1 and 2 is MA Class I Certified. All of the canal units with the exception of Harris and City 4J are MA Class II certified, and six canal units are certified with small percentages as MA Class I. Sale of these certificates resulted in \$804,714 of revenue to the Department in 2017.

In 2017, 66.87% of the Department's generation was from renewable resources (hydro, solar, and wind), and 90.11% of its generation was carbon-free (renewable and nuclear). The graph at left summarizes the Department's resource mix by energy type. Note that System Power represents short-term bilateral contracts representative of system mix within ISO-NE that were procured during the summer time frame, and System Power Carbon-Free represents a long-term on-peak bilateral contract with nuclear certificates attached.

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 reduces transmission costs. Transmission Regional Network Service (RNS) rates increased 7.55% from \$104.10/kW-year to \$111.96/kW-year in June 2017. The Department's RNS annual charge of \$6,553,418 was offset by 9.25 circuit miles, with three transmission substations, of PTF revenues of \$3,297,190 and peak shaving solar and hydro offsets of \$359,840, reducing the Department's annual RNS charge to \$2,896,388.

HOLYOKE GAS & ELECTRIC DEPARTMENT 2017 TOTAL ENTITLEMENTS



The Department's average annual carbon dioxide emissions per MWh for 2017 is 62.94 pounds, compared to an average of 615 pounds for New England. The above chart is a summary of the Department's carbon footprint.

TELECOMMUNICATIONS



HG&E's commercial network, now in its 19th year of operation, provides high-speed network connectivity via fiberoptic lines to business-class customers located in Holyoke, Chicopee, downtown Springfield, and throughout the Pioneer Valley. Both the Department itself and the city receive services from the network. The service platforms are industry standard Carrier Ethernet and IP (Internet Protocol), supporting speeds up to 10 Gbps (gigabits per second).

COMMERCIAL NETWORK UPGRADES

As customer needs grow and application requirements evolve, HG&E's network investments continue. In 2017, HG&E completed a major improvement for the Holyoke Public Schools, upgrading all locations from 1 Gbps of fiber to 10 Gbps. In addition, HG&E implemented the Holyoke Public Schools hub overhaul and completed the migration of fiber and equipment for Dean Technical High School.

COMMERCIAL NETWORK EXPANSION

In 2017, the Department continued to expand fiber optic wide area networking (WAN) services to the Pioneer Valley. Within the expanded service territory, HG&E is focused on providing fiberoptic WAN services for large institutions. For example, HG&E provides support for a large regional institution with six locations, offering 10 Gbps of bandwidth and carrier Ethernet over fiber. Since implementing commercial managed router services in 2013, the Department manages large fiberoptic WAN services on behalf of clients.

CARRIER INTERCONNECTION

HG&E developed interconnect relationships with other fiber Ethernet carriers to service core customers with locations outside of the existing footprint. The Department has leveraged these high-speed interconnections to extend its network throughout the Pioneer Valley. The Telecom Division implemented a dual-redundant host environment for carrier network management operations and upgraded Comcast and Level3 Internet feeds from 1Gx1G to 2Gx10G. HG&E is a next-generation provider, having designed, engineered, and implemented full IPv6 Internet routing and peering with both carriers.

UTILITY OPERATIONS NETWORK UPGRADES

In addition to provisioning and maintaining retail commercial network customers, the Department continued its support for the design, operation, and maintenance of its internal operations network and information intelligence needs. In 2017, the Department added IT staffing to manage growing demands in both operational and technical areas.

CITY OF HOLYOKE NETWORK CONSULTING

HG&E is responsible for ongoing maintenance, installation, and operation of the city of Holyoke's network, which includes providing PC support, hardware replacement, and security improvements. In addition to maintaining the city's servers, the Department assisted with the implementation of the city's new IP phone system. In 2017, HG&E completed several projects for the city, including server migration to a complete VM environment, firewall and Wi-Fi access points to a new Internet cybersecurity platform, and upgrading the Police Department's camera system.

TELECOMMUNICATIONS HELP DESK

HG&E administers a centralized help desk, accepting support calls from customers, city of Holyoke employees, and the HG&E department staff. In 2017, a new helpdesk application was installed and implemented. The help desk received 2,265 tickets and closed 2,254 tickets, solving 924 issues for HG&E department employees, 814 for the city of Holyoke, and 516 for commercial customers.

CYBERSECURITY

As external and internal cyberthreats continue to evolve, HG&E remains committed to continually improving its cybersecurity posture. Pursuant to these goals, HG&E implemented an umbrella cyberthreat detection and mitigation system at its Internet gateways in 2017. This system provides blanket attack protection to all HG&E Internet subscribers and users. HG&E also practices constant user awareness training and regular vulnerability testing to ensure compliance and responsiveness for cybersecurity policies and technology practices.

WHOLESALE BROADBAND SERVICES

HG&E has been developing a last-mile strategy, and has designed, engineered, and implemented a wholesale broadband residential ISP IP aggregation and networking platform. This includes a new IP aggregation router. The Department continues to work with and expand two wholesale customers that are building or have built residential fiberoptic broadband networks in rural communities throughout Western Massachusetts. Leveraging its current network and ISP infrastructure, HG&E is scaling support for communities that build their own networks but need an experienced operator and ISP to run it. HG&E is in a unique position to help these communities, as well as many others, to achieve their broadband goals.

GOODWILL



MacKenzie Stadium,
home of the Valley Blue Sox

Big V Where People

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.

In 2017, HG&E offered support to several major community events, including the Hispanic Family Festival, the St. Patrick's Day Parade, and the Holyoke Fireworks, which are underwritten by the Department.

In total, \$169,193 in sponsorships and \$16,029 in labor was provided for nonprofit causes.

NEIL J. MORIARTY JR. SCHOLARSHIP FOR CADET ENGINEERS

The Cadet Engineer program is dedicated to the memory of our late commission chairperson, Neil 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 made each year.

The program offers aid to Holyoke students who are pursuing Bachelor of Science degrees in engineering. Rebecca Shannon was admitted as the candidate for 2017.

ECONOMIC DEVELOPMENT

In 2017, the Department provided \$221,585 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 2017, \$86,859 was provided under this program.

CONTRIBUTION	AMOUNT
Nonprofit Sponsorships	\$169,193
Nonprofit Labor	\$16,029
Cadet Engineer Scholarship	\$48,750
Payment in Lieu of Taxes	\$1,080,940
Municipal Payment Discounts	\$316,813
Discounted Street Lighting	\$413,220
Economic Development Discount	\$221,585
New Homeowner Discount	\$86,859
Energy Conservation Assistance	\$814,242
TOTAL COMMUNITY SUPPORT	\$2,791,163



HG&E Safety Program at Lawrence School



HG&E Safety Program at Blessed Sacrament School

HOLYOKE GAS AND ELECTRIC

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

FINANCIAL STATEMENTS

Including Independent Auditors' Report

As of and for the Years Ended December 31, 2017 and 2016

HOLYOKE GAS AND ELECTRIC

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

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INDEPENDENT AUDITORS' REPORT

To the Utility Commission
Holyoke Gas and Electric
Holyoke, Massachusetts

Report on the Financial Statements

We have audited the accompanying financial statements of Holyoke Gas and Electric and Holyoke Gas and Electric OPEB Trust, enterprise and fiduciary funds, respectively, of the City of Holyoke, Massachusetts, as of and for the years ended December 31, 2017 and 2016, and the related notes to the financial statements, as listed in the table of contents. Hereafter the funds will collectively be referred to as "Holyoke Gas and Electric."

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes 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' Responsibility

Our responsibility is to express opinions on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Holyoke Gas and Electric's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Holyoke Gas and Electric's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Holyoke Gas and Electric as of December 31, 2017 and 2016, and the respective changes in financial position and cash flows, where applicable, for the years then ended in accordance with accounting principles generally accepted in the United States of America.

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, 2017 and 2016 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 has adopted the provisions of GASB Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*, effective January 1, 2017. Our opinions are not modified with respect to this matter.

Other Matters

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, 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 audits were conducted for the purpose of forming opinions on the financial statements as a whole. The supplemental 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 supplemental information is fairly stated in all material respects in relation to the financial statements as a whole.

Baker Tilly Virchow Krause, LLP

Madison, Wisconsin
May 14, 2018

**MANAGEMENT'S DISCUSSION
AND ANALYSIS**

HOLYOKE GAS & ELECTRIC

MANAGEMENT'S DISCUSSION AND ANALYSIS

As of and for the years ended December 31, 2017, 2016, and 2015
UNAUDITED

The management of Holyoke Gas & Electric (HG&E) 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, 2017, 2016, and 2015. You are invited to read this narrative in conjunction with the utility's financial statements.

FINANCIAL HIGHLIGHTS

- > Operating revenues for the utility decreased by \$569,712, or .85%, in 2017. Electric operating revenues decreased by \$2,124,600, or 4.43%, which was primarily due to a decrease in renewable energy certificate (REC) sales in 2017. This decrease was offset by an increase in natural gas operating revenue of \$1,554,888, or 8.05%. The increase in natural gas revenue was due to higher wholesale natural gas costs in 2017, which resulted in an increase in the corresponding Purchased Gas Adjustment (PGA) component of the gas rates. Natural gas unit sales also increased 3.4% from 2016 further increasing revenues.
- > Fuel expenses increased by \$469,216, or 1.81% in 2017. Electric fuel expenses decreased \$659,531, or 3.79% which was primarily due to higher generation from the Departments' hydro facilities and other entitlements. Increased generation resulted in less overall wholesale power purchases for the year. This decrease was offset by an increase in gas fuel expenses of \$1,128,747 or 13.11% in 2017 due to higher wholesale gas costs and increased consumption.
- > Non-fuel expenses increased by \$1,390,914, or 5.31%, in 2017. The non-fuel increase over 2016 was primarily due to an increase in operation and maintenance costs for both the electric and gas distribution plant as well as an increase in OPEB expense from 2016. These increases were offset by a decrease in pension expense from 2016. Pension expense was higher in 2016 due to an increase in the Departments' actuarially determined pension liability.
- > Depreciation expense increased by \$885,906, or 14.45% in 2017. The increase was a result of the 2016 completion of the Hadley Falls Unit #1 generator overhaul and Fish Exclusion Rack installation projects, as well as an overall increase in capital due to ongoing replacements of older Department infrastructure.
- > Other revenue and deductions increased by \$9,367,168, or 218% in 2017. Favorable market performance resulted in investment income which was \$3,985,680 higher in 2017. Further contributing to the variance was a one-time expense of \$5,479,612 in 2016 for plant retirements.
- > The Departments' total net position increased by \$9,641,610, or 12.05% in 2017 from the combined activities of HG&E, Holyoke Solar Cooperative, and the Massachusetts Clean Energy Cooperative. The increase from prior year was a result of a 218% increase in other revenue offset by an increase in non-fuel and depreciation expenses.

HOLYOKE GAS & ELECTRIC

MANAGEMENT'S DISCUSSION AND ANALYSIS
As of and for the years ended December 31, 2017, 2016, and 2015
UNAUDITED

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 12,000 customers 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 the customers.

The electric division operates and maintains five substations, 169+ miles of pole lines, 35+ miles of underground distribution, 9.25 miles of overhead transmission, 2474 transformers and 4,085 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 243,308 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, Seabrook Nuclear Power Station, and Wyman projects.

In addition to offering some of the lowest electric rates in the Commonwealth, in 2017 over 66% of the Departments generation was from renewable resources and 90% of its generation was carbon-free, far exceeding the Commonwealth's renewable portfolio standard goals.

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 Statements 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.

HOLYOKE GAS & ELECTRIC

MANAGEMENT'S DISCUSSION AND ANALYSIS As of and for the years ended December 31, 2017, 2016, and 2015 UNAUDITED

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 report information. 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.

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

Table 1
Condensed Statements of Net Position

	<u>2017</u>	<u>2016</u>	<u>2015</u>
Current and Other Assets	\$ 107,349,516	\$ 100,916,004	\$ 100,250,809
Capital Assets	<u>153,946,443</u>	<u>151,572,786</u>	<u>152,270,352</u>
Total Assets	<u>261,295,959</u>	<u>252,488,790</u>	<u>252,521,161</u>
DEFERRED OUTFLOWS OF RESOURCES	<u>13,651,645</u>	<u>10,409,130</u>	<u>5,065,152</u>
Long-term Debt Outstanding	86,843,997	91,798,159	96,777,262
Other Liabilities	<u>55,213,611</u>	<u>48,587,255</u>	<u>43,126,288</u>
Total Liabilities	<u>142,057,608</u>	<u>140,385,414</u>	<u>139,903,550</u>
DEFERRED INFLOWS OF RESOURCES	<u>43,245,381</u>	<u>42,509,501</u>	<u>41,269,849</u>
Net Investment in Capital Assets	75,636,861	68,881,826	65,711,006
Restricted for Debt Service	8,090,879	7,951,554	9,260,691
Unrestricted Assets	<u>5,916,875</u>	<u>3,169,625</u>	<u>1,441,217</u>
TOTAL NET POSITION	<u>\$ 89,644,615</u>	<u>\$ 80,003,005</u>	<u>\$ 76,412,914</u>

Current and other assets increased by \$6,433,512, or 6.38% in 2017. Most of the increases were in the Departments' rate stabilization and other investment accounts as a result of market performance.

Capital assets increased by \$2,373,657, or 1.57% in 2017. This was the result of ongoing capital improvement and replacement projects undertaken by the Department.

Long-term bonds payable decreased by \$4,954,162, or 5.40% in 2017 due to scheduled debt repayments during the year. No new long-term debt was issued by the Department in 2017.

HOLYOKE GAS & ELECTRIC

MANAGEMENT'S DISCUSSION AND ANALYSIS
As of and for the years ended December 31, 2017, 2016, and 2015
UNAUDITED

UTILITY FINANCIAL ANALYSIS (cont.)

Other liabilities increased by \$6,626,356, or 13.64% in 2017 due to an increase in the Departments margin account. The margin account was utilized by the Department on short term basis to provide cash flow for the 2017 operations of the utility.

Change in Net Position

Net investment in capital assets, which are discussed more in the capital assets section, increased by \$6,755,035 in 2017 as a result of plant replacements and additions associated with the ongoing capital improvement plan.

Net position restricted for debt service increased by \$139,325 due to an appreciation of funds in collateral accounts for bonds and notes payable.

Unrestricted net position is the net amount of assets, deferred outflows of resources, liabilities, and deferred inflows of resources that are not "invested in capital assets" or "restricted for debt service". unrestricted assets increased \$2,747,250 in 2017.

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

	2017	2016	2015
OPERATING REVENUES	\$ 66,721,756	\$ 67,291,468	\$ 70,214,791
OPERATING EXPENSES	61,082,108	58,336,073	61,329,836
Operating Income	5,639,648	8,955,395	8,884,955
OTHER REVENUES (EXPENSES)	5,082,492	(4,284,676)	(1,724,698)
Change in Net Position before Transfers	10,722,140	4,670,719	7,160,257
TRANSFERS	(1,080,530)	(1,080,628)	(1,075,249)
Change in Net Position	9,641,610	3,590,091	6,085,008
NET POSITION - Beginning of Year	80,003,005	76,412,914	93,247,464
Cumulative Effect of a change in acct. principle	-	-	(22,919,558)
NET POSITION - End of Year	\$ 89,644,615	\$ 80,003,005	\$ 76,412,914

HOLYOKE GAS & ELECTRIC

MANAGEMENT'S DISCUSSION AND ANALYSIS
As of and for the years ended December 31, 2017, 2016, and 2015
UNAUDITED

UTILITY FINANCIAL ANALYSIS (cont.)

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. The increase in net position represents results from operating activities.

During 2017, operating revenues decreased \$569,712 or .85%. The biggest change occurred in electric operating revenue which decreased \$2.1M primarily as a result of a decline in renewable energy certificate (REC) sales. Gas revenue on the other hand increased due to higher wholesale natural gas costs.

Operating expenses increased by \$2,746,035 or 4.71% overall. This was due to increased fuel costs (\$469,216), an increase in operating & maintenance costs (\$1,390,914) and higher depreciation expenses (\$885,906) discussed in the financial highlights section.

The Departments' total net position increased by \$9,641,610, or 12.05% in 2017 from the combined activities of HG&E, Holyoke Solar Cooperative, and the Massachusetts Clean Energy Cooperative. The increase from prior year was a result of a 218% increase in other revenue offset by an increase in non-fuel and depreciation expenses.

Table 3
Condensed Statements of Cash Flows

	<u>2017</u>	<u>2016</u>	<u>2015</u>
CASH FLOWS FROM OPERATING ACTIVITIES	\$ 10,895,812	\$ 15,173,622	\$ 17,707,940
CASH FLOWS FROM INVESTING ACTIVITIES	19,172,897	9,113,966	281,529
NET CASH USED IN NONCAPITAL FINANCING ACTIVITIES	<u>(1,080,530)</u>	<u>(1,080,628)</u>	<u>(1,075,249)</u>
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES	<u>(17,638,754)</u>	<u>(19,746,981)</u>	<u>(35,040,772)</u>
Increase in Cash and Cash Equivalents	11,349,425	3,459,979	(18,126,552)
CASH AND CASH EQUIVALENTS - Beginning of Year	<u>57,375,962</u>	<u>53,915,983</u>	<u>72,042,535</u>
CASH AND CASH EQUIVALENTS - END OF YEAR	<u>\$ 68,725,387</u>	<u>\$ 57,375,962</u>	<u>\$ 53,915,983</u>
NONCASH FINANCING ACTIVITY			
Change in costs recoverable in future - pollution	\$ 146,452	\$ 146,770	\$ 74,360
Loss on retirement of fixed assets	\$ 166,102	\$ 4,921,735	\$ 149,050
Amortization of premium on bonds payable	\$ 851,963	\$ 853,851	\$ 850,953

HOLYOKE GAS & ELECTRIC

MANAGEMENT'S DISCUSSION AND ANALYSIS As of and for the years ended December 31, 2017, 2016, and 2015 UNAUDITED

UTILITY FINANCIAL ANALYSIS (cont.)

Cash flows from operating activities decreased by \$ 4,277,810 primarily because of an increase in cash paid to suppliers (\$2,111,034) and an increase in cash paid to employees (\$1,396,578). These increases were the result of increased gas fuel costs, an increase in operation and maintenance activities during 2017 as well as the rising costs of employee benefits and the addition of several full time positions in 2017.

Cash flows from investing activities increased by \$10,058,931. Investment income and unrealized gains were \$3,985,680 higher in 2017 than 2016, while the purchase and sale of investments also showed higher cash inflow in net proceeds in 2017. Proceeds from the margin credit account also increased \$3,240,613 as the margin was utilized by the Department on short term basis to provide cash flow for the 2017 operations of the utility.

Cash flows from capital and related financing activities decreased by \$2,108,227 in 2017. The decrease from 2016 represents normal cash payments on plant and equipment as well as payments on bonds and notes.

Cash & cash equivalents increased by \$11,349,425.

Table 4
Capital Assets – Electric

	<u>2017</u>	<u>2016</u>	<u>2015</u>
Capital Assets			
Land	\$ 4,773,373	\$ 4,773,373	\$ 4,773,373
Plant, property, and equipment	<u>189,525,887</u>	<u>184,525,730</u>	<u>157,078,591</u>
Total Capital Assets	194,299,260	189,299,103	161,851,964
Construction Work in Progress	1,712,183	1,297,536	32,175,601
Less: Accumulated Depreciation	<u>(67,159,881)</u>	<u>(62,782,639)</u>	<u>(64,183,766)</u>
NET CAPITAL ASSETS ELECTRIC	<u>\$ 128,851,562</u>	<u>\$ 127,814,000</u>	<u>\$129,843,799</u>

Plant, property and equipment increased by over \$5,000,157, or 2.71% in 2017 as a result of ongoing replacements of the electric division's substation, transmission and distribution infrastructure.

Construction work in progress increased by over \$414,647 primarily due to the Holyoke 17L substation replacement project that is currently ongoing.

Accumulated depreciation increased by \$4,377,242 as a result of an increase in depreciation expense associated with the 2016 completion of the Hadley Falls Unit #1 and Fish Exclusion Rack installation projects, as well as an overall increase in capital due to ongoing replacements of older Department infrastructure.

HOLYOKE GAS & ELECTRIC

MANAGEMENT'S DISCUSSION AND ANALYSIS
As of and for the years ended December 31, 2017, 2016, and 2015
UNAUDITED

UTILITY FINANCIAL ANALYSIS (cont.)

Table 5
Capital Assets – Gas

	<u>2017</u>	<u>2016</u>	<u>2015</u>
Capital Assets			
Land	\$ 214,304	\$ 214,304	\$ 214,304
Plant, property, and equipment	<u>52,163,744</u>	<u>49,330,471</u>	<u>47,247,449</u>
Total Capital Assets	52,378,048	49,544,775	47,461,753
Construction Work in Progress	49,967	334,815	72,492
Less: Accumulated Depreciation	<u>(27,333,134)</u>	<u>(26,120,804)</u>	<u>(25,107,692)</u>
NET CAPITAL ASSETS GAS	<u>\$ 25,094,881</u>	<u>\$ 23,758,786</u>	<u>\$ 22,426,553</u>

Plant, property and equipment increased by \$2,833,273, or 5.74% in 2017 due to ongoing replacements of bare steel and cast iron services & mains. During 2017, net capital assets increased \$1,336,095 which was mostly maintenance capital in nature. Land values remained the same in 2017.

Further details on capital assets are included in Note 3.

LONG-TERM DEBT

As of December 31, 2017, Holyoke Gas & Electric had \$70,065,000 in bonds payable as well as \$8,651,816 in notes payable. The bonds and notes payable have decreased \$ 3,533,333 and \$ 685,066 respectively since 2016. No new long term debt was issued during 2017.

Details of the existing debt are included in Note 8.

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.

HOLYOKE GAS & ELECTRIC

MANAGEMENT'S DISCUSSION AND ANALYSIS

As of and for the years ended December 31, 2017, 2016, and 2015
UNAUDITED

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

As of December 31, 2017 and 2016

	2017	2016
ASSETS		
CURRENT ASSETS		
Cash and investments	\$ 6,838,698	\$ 11,719,033
Restricted Assets		
Collateralized investments for margin account	8,277,541	2,518,464
Redemption account	2,654,222	2,603,076
Customer accounts receivable - net	7,235,669	6,147,769
Accounts receivable - City of Holyoke	15,090	15,000
Note receivable - current portion	1,755,616	1,733,284
Materials and supplies	2,865,142	2,873,861
Fuel for electric generation and gas in storage	495,331	488,668
Prepaid expense	2,378,827	2,439,047
Other receivables	1,593,022	1,439,894
Total Current Assets	34,109,158	31,978,096
NONCURRENT ASSETS		
Restricted Assets		
Accounts required under bond indenture/note payable	9,489,454	9,366,286
Customers' deposits	1,562,522	1,334,854
Note receivable - after one year	8,367,755	8,805,374
Hi-Lite assistance loans	2,141,562	2,336,735
Other Assets		
Purchased power accounts	362,755	359,357
Rate stabilization accounts	49,983,776	45,229,647
Costs recoverable in future - pollution	170,724	317,176
Other investments	188,390	188,390
Accrued other post employment benefits	43,421	3,423
Intangible assets	929,999	996,666
Capital Assets		
Plant, property and equipment in service	246,677,307	238,843,878
Construction in progress	1,762,150	1,632,351
	248,439,457	240,476,229
Less: Accumulated depreciation	94,493,014	88,903,443
Total Capital Assets	153,946,443	151,572,786
Total Noncurrent Assets	227,186,801	220,510,694
Total Assets	261,295,959	252,488,790
DEFERRED OUTFLOWS OF RESOURCES		
Pension related amounts	13,651,645	10,409,130

See accompanying notes to financial statements.

	<u>2017</u>	<u>2016</u>
LIABILITIES		
CURRENT LIABILITIES		
Accounts payable	\$ 5,900,174	\$ 5,812,392
Customers' deposits	1,255,783	1,195,346
Accrued liabilities	1,044,253	898,084
Current portion - accrued compensated absences	191,782	199,289
Current portion - accrued environmental costs	165,000	140,000
Accrued charges - current	294,067	81,118
Liabilities Payable from Restricted Assets		
Margin credit account	8,277,541	2,518,464
Current portion - leases, bonds and notes payable	4,392,293	4,225,720
Accrued interest	1,444,759	1,507,425
Total Current Liabilities	<u>22,965,652</u>	<u>16,577,838</u>
LONG-TERM LIABILITIES AND CREDITS		
Bonds payable - long-term	66,386,667	70,065,000
Plus: Premium on bonds payable	<u>8,003,660</u>	<u>8,855,623</u>
	74,390,327	78,920,623
Notes payable - long-term	7,977,832	8,651,816
Leases payable - long term	83,545	-
Accrued compensated absences	2,992,039	2,960,450
Accrued environmental costs	-	165,000
Unearned revenue	2,487,820	1,964,616
Reserve fund for note receivable	444,737	444,737
Net pension liability	<u>30,715,656</u>	<u>30,700,334</u>
Total Long-Term Liabilities and Credits	<u>119,091,956</u>	<u>123,807,576</u>
Total Liabilities	<u>142,057,608</u>	<u>140,385,414</u>
DEFERRED INFLOWS OF RESOURCES		
Pension related amounts	1,975,532	1,239,652
Rate stabilization reserve	<u>41,269,849</u>	<u>41,269,849</u>
Total Deferred Inflows of Resources	<u>43,245,381</u>	<u>42,509,501</u>
NET POSITION		
Net investment in capital assets	75,636,861	68,881,826
Restricted for debt service	8,090,879	7,951,554
Unrestricted	<u>5,916,875</u>	<u>3,169,625</u>
TOTAL NET POSITION	<u>\$ 89,644,615</u>	<u>\$ 80,003,005</u>

See accompanying notes to financial statements.

HOLYOKE GAS AND ELECTRIC

STATEMENTS OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION

For the Years Ended December 31, 2017 and 2016

	2017	2016
OPERATING REVENUES		
Gas charges for service	\$ 20,880,587	\$ 19,325,699
Electric and telecommunications charges for service	<u>45,841,169</u>	<u>47,965,769</u>
Total Operating Revenues	<u>66,721,756</u>	<u>67,291,468</u>
OPERATING EXPENSES		
Gas operation and maintenance	17,226,845	15,966,656
Depreciation - gas plant and equipment	<u>1,488,197</u>	<u>1,425,706</u>
Total Gas Operating Expenses	<u>18,715,042</u>	<u>17,392,362</u>
Electric and telecommunications operation and maintenance	36,839,576	36,239,636
Depreciation - electric and telecom plant and equipment	<u>5,527,490</u>	<u>4,704,075</u>
Total Electric and Telecommunications Operating Expenses	<u>42,367,066</u>	<u>40,943,711</u>
Total Operating Expenses	<u>61,082,108</u>	<u>58,336,073</u>
OPERATING INCOME		
Gas	2,165,545	1,933,337
Electric and telecommunications	<u>3,474,103</u>	<u>7,022,058</u>
Total Operating Income	<u>5,639,648</u>	<u>8,955,395</u>
OTHER REVENUES (EXPENSES)		
Investment income - net of fees	3,446,422	2,503,841
Net gain (loss) on investments	4,240,937	1,197,838
Interest expense	(2,917,304)	(3,001,149)
Miscellaneous income (expense)	901,246	874,510
Amortization of intangible assets	(66,667)	(66,667)
Net gain (loss) - plant retirements	(567,432)	(5,479,612)
Net gain - merchandise jobbing	136,967	129,873
Mt. Tom property assessment expense	(11,909)	(363,542)
Taxes - other	<u>(79,768)</u>	<u>(79,768)</u>
Total Other Revenues (Expenses)	<u>5,082,492</u>	<u>(4,284,676)</u>
Change in Net Position Before Transfers	10,722,140	4,670,719
TRANSFERS		
Payment in lieu of taxes - City of Holyoke	<u>(1,080,530)</u>	<u>(1,080,628)</u>
Change in Net Position	9,641,610	3,590,091
NET POSITION - Beginning of Year	<u>80,003,005</u>	<u>76,412,914</u>
NET POSITION - END OF YEAR	<u>\$ 89,644,615</u>	<u>\$ 80,003,005</u>

See accompanying notes to financial statements.

HOLYOKE GAS AND ELECTRIC

STATEMENTS OF CASH FLOWS For the Year Ended December 31, 2017 and 2016

	2017	2016
CASH FLOWS FROM OPERATING ACTIVITIES		
Cash received from customers	\$ 67,219,089	\$ 67,989,287
Cash paid to suppliers	(41,543,342)	(39,432,308)
Cash paid to employees	(14,779,935)	(13,383,357)
Net Cash Flows From Operating Activities	10,895,812	15,173,622
CASH FLOWS FROM INVESTING ACTIVITIES		
Proceeds from sale of investments	7,482,162	9,099,444
Purchase of investments	(2,170,988)	(5,281,719)
Investment income (loss) - net of fees	7,687,359	3,701,679
Disbursement on customer loan	-	(1,317,995)
Proceeds from margin credit account	5,759,077	2,518,464
Repayments on notes receivable	415,287	394,093
Net Cash Flows From Investing Activities	19,172,897	9,113,966
NET CASH USED IN NONCAPITAL FINANCING ACTIVITIES		
Payment in lieu of taxes and other property taxes	(1,080,530)	(1,080,628)
Net Cash Used in Noncapital Financing Activities	(1,080,530)	(1,080,628)
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES		
Net investment in plant, property and equipment	(9,629,522)	(11,805,763)
Payments on bonds and notes payable	(4,218,399)	(4,073,479)
Interest paid on bonds, notes and leases payable	(3,790,833)	(3,867,739)
Net Cash Flows From Capital and Related Financing Activities	(17,638,754)	(19,746,981)
Increase in Cash and Cash Equivalents	11,349,425	3,459,979
CASH AND CASH EQUIVALENTS - Beginning of Year	57,375,962	53,915,983
CASH AND CASH EQUIVALENTS - END OF YEAR	\$ 68,725,387	\$ 57,375,962
SUPPLEMENTAL NONCASH FINANCING ACTIVITY		
Change in costs recoverable in future - pollution	\$ 146,452	\$ 146,770
Loss on retirement of fixed assets	\$ 166,102	\$ 4,921,735
Amortization of premium on bonds payable	\$ 851,963	\$ 853,851

See accompanying notes to financial statements.

	<u>2017</u>	<u>2016</u>
SCHEDULE OF RECONCILIATION OF OPERATING INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES		
Operating income	<u>\$ 5,639,648</u>	<u>\$ 8,955,395</u>
Adjustments to Reconcile Operating Income to Net Cash Provided by Operating Activities		
Depreciation	7,015,687	6,129,781
Non-operating Income	879,869	494,406
Changes in operating assets and liabilities (Increase) decrease in		
Accounts receivable	(1,087,900)	(826,051)
Materials and supplies	8,719	(44,095)
Fuel for electric generation and gas in storage	(6,663)	157,327
Prepaid expense	60,220	212,831
Accounts receivable - City of Holyoke	(90)	-
Other receivables	(153,128)	(92,030)
Hi-Lite assistance loans	195,173	282,965
Accounts payable	(196,605)	(327,066)
Customers' deposits	60,437	363,754
Accrued liabilities	841,222	498,862
Accrued compensated absences	24,082	105,377
Accrued other post employment benefits	(39,998)	(54,145)
Pension related deferrals and liabilities	(2,491,313)	(830,459)
Accrued environmental costs	<u>146,452</u>	<u>146,770</u>
Total Adjustments	<u>5,256,164</u>	<u>6,218,227</u>
NET CASH PROVIDED BY OPERATING ACTIVITIES	<u>\$ 10,895,812</u>	<u>\$ 15,173,622</u>

**RECONCILIATION OF CASH AND CASH EQUIVALENTS TO THE
STATEMENTS OF NET POSITION**

Cash and investments	\$ 6,838,698	\$ 11,719,033
Collateralized investments for margin account	8,277,541	2,518,464
Redemption account	2,654,222	2,603,076
Accounts required under bond indenture/note payable	9,489,454	9,366,286
Customer deposits	1,562,522	1,334,854
Purchased power accounts	362,755	359,357
Rate stabilization accounts	49,983,776	45,229,647
Other investments	<u>188,390</u>	<u>188,390</u>
Total Cash and Investments	79,357,358	73,319,107
Less: Noncash equivalents	<u>(10,631,971)</u>	<u>(15,943,145)</u>
CASH AND CASH EQUIVALENTS	<u>\$ 68,725,387</u>	<u>\$ 57,375,962</u>

See accompanying notes to financial statements.

HOLYOKE GAS AND ELECTRIC OPEB TRUST

STATEMENTS OF FIDUCIARY NET POSITION

FIDUCIARY FUND

As of December 31, 2017 and 2016

	<u>2017</u>	<u>2016</u>
ASSETS		
NONCURRENT ASSETS		
Restricted Assets		
Investments	\$ 8,828,728	\$ 6,788,366
Total Assets	<u>8,828,728</u>	<u>6,788,366</u>
LIABILITIES		
Total Liabilities	<u>-</u>	<u>-</u>
NET POSITION		
Net position restricted for OPEB	<u>\$ 8,828,728</u>	<u>\$ 6,788,366</u>

HOLYOKE GAS AND ELECTRIC OPEB TRUST

STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION

FIDUCIARY FUND

For the Years Ended December 31, 2017 and 2016

	<u>2017</u>	<u>2016</u>
ADDITIONS		
Employer contributions	\$ 1,200,000	\$ 1,200,000
Investment income	865,894	257,404
Employer contributions - direct payment of member benefits	<u>824,241</u>	<u>-</u>
Total Additions	<u>2,890,135</u>	<u>1,457,404</u>
DEDUCTIONS		
Benefit payments, including refunds of member contributions	824,241	-
Advisory fees	<u>25,532</u>	<u>19,329</u>
Total Deductions	<u>849,773</u>	<u>19,329</u>
Net increase in net position	2,040,362	1,438,075
NET POSITION - Beginning of Year	<u>6,788,366</u>	<u>5,350,291</u>
NET POSITION - END OF YEAR	<u>\$ 8,828,728</u>	<u>\$ 6,788,366</u>

See accompanying notes to financial statements.

HOLYOKE GAS AND ELECTRIC

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

NOTES TO FINANCIAL STATEMENTS

As of and for the Years Ended December 31, 2017 and 2016

NOTE 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. Component units are legally separate organizations for which the Department is financially accountable or other organizations for which the nature and significance of their relationship with the Department are such that their exclusion would cause the reporting entity’s financial statements to be misleading. The Department is financially accountable if (1) it appoints a voting majority of the organization’s governing body and it is able to impose its will on that organization, (2) it appoints a voting majority of the organization’s governing body and there is a potential for the organization to provide specific financial benefits to, or impose specific financial burdens on, the primary government, (3) the organization is fiscally dependent on and there is a potential for the organization to provide specific financial benefits to, or impose specific financial burdens on, the Department. Certain legally separate, tax exempt organizations should also be reported as a component unit if all of the following criteria are met: (1) the economic resources received or held by the separate organization are entirely or almost entirely for the direct benefit of the Department, its component units, or its constituents; (2) the Department or its component units, is entitled to, or has the ability to access, a majority of the economic resources received or held by the separate organization; and (3) the economic resources received or held by an individual organization that the Department, or its component units, is entitled to, or has the ability to otherwise access, are significant to the Department.

The Department provides gas, electric, water and telecommunications services to its customers, substantially all of whom are local residents and commercial and industrial businesses. Approximately 69% and 71% of the Department’s revenues were derived from its electric division in 2017 and 2016, respectively.

Component units are reported using one of two methods, discrete presentation or blending. Generally, component units should be discretely presented in a separate column in the financial statements. A component unit should be reported as part of the Department using the blending method if it meets any one of the following criteria: (1) the Department and the component unit have substantively the same governing body and a financial benefit or burden relationship exists, (2) the Department and the component unit have substantively the same governing body and management of the primary government has operational responsibility for the component unit, (3) the component unit serves or benefits, exclusively or almost exclusively, the Department rather than its citizens, or (4) the total debt of the component unit will be paid entirely or almost entirely from resources of the Department.

HOLYOKE GAS AND ELECTRIC

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

NOTES TO FINANCIAL STATEMENTS

As of and for the Years Ended December 31, 2017 and 2016

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)

REPORTING ENTITY (cont.)

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 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.

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.

HOLYOKE GAS AND ELECTRIC

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

NOTES TO FINANCIAL STATEMENTS

As of and for the Years Ended December 31, 2017 and 2016

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)

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 2015, the GASB issued Statement No. 74 - Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans. This statement establishes requirements for financial reporting and disclosures for governments that have defined benefit and defined contribution other postemployment benefit plans administered through a trust. The utility adopted this statement effective January 1, 2017.

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 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 Hydro-Transmission Corporation and New England Hydro-Transmission Electric Company. These investments represent 00.2653% (percent) of the issued common stock of these untraded companies. In addition, the Department has invested \$168,000 with the Public Utility Mutual Insurance Company (PUMIC). See Note 15 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.

HOLYOKE GAS AND ELECTRIC

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

NOTES TO FINANCIAL STATEMENTS
As of and for the Years Ended December 31, 2017 and 2016

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)

ASSETS, DEFERRED OUTFLOWS OF RESOURCES, LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND NET POSITION (cont.)

Accounts Receivable

Accounts receivable are stated net of an allowance for uncollectible accounts of \$515,204 at December 31, 2017 and 2016. 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.

Hi-Lite Assistance Loans

Hi-Lite assistance loans are receivables from residential and commercial customers for loans used to make energy efficient improvements to their property, secured by municipal liens. Loan amounts and terms vary based on the project type, but are generally 3 to 5 years with 0% interest.

Materials, Supplies and Fuel

Materials, supplies and fuel are valued at average cost. 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

Additions to and replacements of plant, property and equipment are recorded at cost. 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.

Interest Capitalized

The Department follows the policy of capitalizing interest as a component of the cost of plant, property and equipment in service constructed for its own use and when a specific debt issue is borrowed for a specific project consistent with GASB accounting rules. During the years ended December 31, 2017 and 2016, there was no interest capitalized.

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.

HOLYOKE GAS AND ELECTRIC

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

NOTES TO FINANCIAL STATEMENTS

As of and for the Years Ended December 31, 2017 and 2016

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)

ASSETS, DEFERRED OUTFLOWS OF RESOURCES, LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND NET POSITION (cont.)

Line of Credit - Margin Credit Account

The Department received funds through the use of a margin account with their investment advisor as of December 31, 2017 and 2016. 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.

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.

Pensions

For purposes of measuring the net pension liability, and deferred outflows 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.

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

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

NOTES TO FINANCIAL STATEMENTS

As of and for the Years Ended December 31, 2017 and 2016

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)

ASSETS, DEFERRED OUTFLOWS OF RESOURCES, LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND NET POSITION (cont.)

Long-Term Obligations

Long-term debt and other obligations are reported as liabilities. Bond premiums 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.

Unearned Revenues

The Department collects 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 balance sheet.

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 for debt service, 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, 2017 and 2016 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

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NOTES TO FINANCIAL STATEMENTS

As of and for the Years Ended December 31, 2017 and 2016

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)

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, 2017 and 2016 that have directly reduced Operating Revenue in the Statement of Revenue, Expenses and Changes in Net Position are as follows:

	<u>2017</u>	<u>2016</u>
Gas	\$ 1,912,921	\$ 1,696,793
Electric	<u>3,545,492</u>	<u>3,628,461</u>
Totals	<u>\$ 5,458,413</u>	<u>\$ 5,325,254</u>

Expense Allocation

Expenses associated with a particular division of the Department are charged to that division. For the years ended December 31, 2017 and 2016, 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 recoded 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.

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS

As of and for the Years Ended December 31, 2017 and 2016

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (cont.)

EFFECT OF NEW ACCOUNTING STANDARDS ON CURRENT PERIOD FINANCIAL STATEMENTS

GASB has approved GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, Statement No. 80, *Blending Requirements for Certain Component Units*, an amendment of GASB Statement No. 14, Statement No. 81, *Irrevocable Split-Interest Agreements*, Statement No. 83, *Certain Asset Retirement Obligations*, Statement No. 84, *Fiduciary Activities*, Statement No. 85, *Omnibus*, Statement No. 86, *Certain Debt Extinguishment Issues*, and Statement No. 87, *Leases*.

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.

NOTE 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. 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. Rate stabilization funds are amounts set aside to be used to stabilize current and future power costs. Postemployment benefit funds have been segregated by the Department to cover certain healthcare and life insurance benefits (See Notes 11 and 12).

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.

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS

As of and for the Years Ended December 31, 2017 and 2016

NOTE 2 – DEPOSITS AND INVESTMENTS (cont.)

The Department's deposits and investments as of December 31, 2017 were comprised of the following:

	Statement Balances	Carrying Value	Associated Risks
Demand deposits	\$ 3,955,682	\$ 10,813,084	Custodial credit risk
U.S. agencies – implicitly guaranteed	6,824,053	6,824,053	Credit risk, Custodial credit risk, Interest rate risk, Concentration of credit risk
State & local bonds	1,082,828	1,082,828	Credit risk, Custodial credit risk, Interest rate risk
Mutual funds – bond funds	4,917,506	4,917,506	Credit risk, Interest rate risk
Mutual funds – other than bond funds	62,011,915	62,011,915	N/A
Corporate bonds	1,693,188	1,693,188	Credit risk, Custodial credit risk, Interest rate risk
Certificates of deposit (CD) - negotiable	843,512	843,512	Credit risk, Custodial credit risk, Interest rate risk
	<u>\$ 81,328,684</u>	<u>\$ 88,186,086</u>	
Reconciliation to Statement of Net Position			
Cash and investments		\$ 6,838,698	
Collateralized investments for margin account		8,277,541	
Redemption account		2,654,222	
Accounts required under bond indenture/ notes payable		9,489,454	
Customer deposits		1,562,522	
Purchased power accounts		362,755	
Rate stabilization accounts		49,983,776	
Other investments		188,390	
OPEB Trust –Statement of fiduciary net position (separate financial statement)		<u>8,828,728</u>	
Total		<u>\$ 88,186,086</u>	

HOLYOKE GAS AND ELECTRIC

(Enterprise and Fiduciary Funds of the
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NOTES TO FINANCIAL STATEMENTS As of and for the Years Ended December 31, 2017 and 2016

NOTE 2 – DEPOSITS AND INVESTMENTS (cont.)

The Department's deposits and investments as of December 31, 2016 were comprised of the following:

	Statement Balances	Carrying Value	Associated Risks
Demand deposits	\$ 8,062,600	\$ 7,462,735	Custodial credit risk
U.S. agencies – implicitly guaranteed	10,696,754	10,696,754	Credit risk, Custodial credit risk, Interest rate risk, Concentration of credit risk
State & local bonds	1,097,398	1,097,398	Credit risk, Custodial credit risk, Interest rate risk
Mutual funds – bond funds	5,102,434	5,102,434	Credit risk, Interest rate risk
Mutual funds – other than bond funds	51,469,549	51,469,549	N/A
Corporate bonds	3,686,919	3,686,919	Credit risk, Custodial credit risk, Interest rate risk
Certificates of deposit (CD) - negotiable	591,684	591,684	Credit risk, Custodial credit risk, Interest rate risk
	<hr/>	<hr/>	
Totals	<u>\$ 80,707,338</u>	<u>\$ 80,107,473</u>	
Reconciliation to Statement of Net Position			
Cash and investments		\$ 11,719,033	
Collateralized investments for margin account		2,518,464	
Redemption account		2,603,076	
Accounts required under bond indenture/ notes payable		9,366,286	
Customer deposits		1,334,854	
Purchased power accounts		359,357	
Rate stabilization accounts		45,229,647	
Other investments		188,390	
OPEB Trust –Statement of fiduciary net position (separate financial statement)		<u>6,788,366</u>	
Total		<u>\$ 80,107,473</u>	

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS

As of and for the Years Ended December 31, 2017 and 2016

NOTE 2 – DEPOSITS AND INVESTMENTS (cont.)

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 \$575 million aggregate firm limit. Coverage limits per customer are not available. The value of investments subject to Lloyds of London coverage was \$6,934,517 in 2017 and \$6,880,876 in 2016 for the Department; and \$462,950 in 2017 and \$476,000 in 2016 for the OPEB trust.

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, 2017 are as follows:

- > Institutional bond quotes for U.S. government agency securities, and state & 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 corporate bonds and certificates of deposits

<u>Investment Type</u>	<u>Total</u>	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>
U.S. agencies – implicitly guaranteed	\$ 6,824,053	\$ -	\$ 6,824,053	\$ -
State & local bonds	1,082,828	-	1,082,828	-
Mutual funds – bond funds	4,917,506	4,917,506	-	-
Mutual funds – other than bond funds	62,011,915	62,011,915	-	-
Corporate bonds	1,693,188	-	1,693,188	-
Certificate of deposit	843,512	-	843,512	-
Totals	<u>\$ 77,373,002</u>	<u>\$ 66,929,421</u>	<u>\$ 10,443,581</u>	<u>\$ -</u>

HOLYOKE GAS AND ELECTRIC

(Enterprise and Fiduciary Funds of the
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NOTES TO FINANCIAL STATEMENTS As of and for the Years Ended December 31, 2017 and 2016

NOTE 2 – DEPOSITS AND INVESTMENTS (cont.)

FAIR VALUE (cont.)

The valuation methods for recurring fair value measurements as of December 31, 2016 are as follows:

- > Institutional bond quotes for U.S. government agency securities, and state & 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 corporate bonds and certificates of deposits

Investment Type	Total	Level 1	Level 2	Level 3
U.S. agencies – implicitly guaranteed	\$ 10,696,754	\$ -	\$ 10,696,754	\$ -
State & local bonds	1,097,398	-	1,097,398	-
Mutual funds – bond funds	5,102,434	5,102,434	-	-
Mutual funds – other than bond funds	51,469,549	51,469,549	-	-
Corporate bonds	3,686,919	-	3,686,919	-
Certificate of deposit	591,684	-	591,684	-
Totals	<u>\$ 72,644,738</u>	<u>\$ 56,571,983</u>	<u>\$ 16,072,755</u>	<u>\$ -</u>

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 \$5,574,325 in 2017 and \$5,596,316 in 2016.

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.

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NOTES TO FINANCIAL STATEMENTS

As of and for the Years Ended December 31, 2017 and 2016

NOTE 2 – DEPOSITS AND INVESTMENTS (cont.)

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.

At December 31, 2017, the Department's investments were as follows:

Investment Type	Fair Value	Maturity in Years		
		Less Than 1	1-4	5-10
U.S. agencies – implicitly guaranteed	\$ 6,824,053	\$ 1,005,248	\$ 5,325,213	\$ 493,592
State and local bonds	1,082,828	500,394	350,214	232,220
Mutual funds – bond funds	4,917,506	-	-	4,917,506
Corporate bonds	1,693,188	997,453	695,735	-
CDs – negotiable	<u>843,512</u>	<u>100,840</u>	<u>742,672</u>	-
Totals	<u>\$ 15,361,087</u>	<u>\$ 2,603,935</u>	<u>\$ 7,113,834</u>	<u>\$ 5,643,318</u>

At December 31, 2016, the Department's investments were as follows:

Investment Type	Fair Value	Maturity in Years		
		Less Than 1	1-4	5-10
U.S. agencies – implicitly guaranteed	\$ 10,696,754	\$ 1,748,436	\$ 7,441,374	\$ 1,506,944
State and local bonds	1,097,398	856,860	240,538	-
Mutual funds – bond funds	5,102,434	-	-	5,102,434
Corporate bonds	3,686,919	1,074,746	2,612,173	-
CDs – negotiable	<u>591,684</u>	-	<u>591,684</u>	-
Totals	<u>\$ 21,175,189</u>	<u>\$ 3,680,042</u>	<u>\$ 10,885,769</u>	<u>\$ 6,609,378</u>

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS
As of and for the Years Ended December 31, 2017 and 2016

NOTE 2 – DEPOSITS AND INVESTMENTS (cont.)

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, 2017, the Department's investments were rated as follows:

<u>Investment Type</u>	<u>Standard & Poor's</u>	<u>Moody's Investment Service</u>	<u>Composite</u>
U.S. Agencies – implicitly guaranteed	AA+	AAA	N/A
State and local bonds	AA+ to AA	AA2 to AAA	N/A
Mutual funds – bond funds	N/A	N/A	B
Corporate bonds	AA to BBB	AA2 to BAA3	N/A
CDs – negotiable	N/A	N/A	N/A

As of December 31, 2016, the Department's investments were rated as follows:

<u>Investment Type</u>	<u>Standard & Poor's</u>	<u>Moody's Investment Service</u>	<u>Composite</u>
U.S. Agencies – implicitly guaranteed	AA+ to AAA	AAA to AA2	N/A
State and local bonds	AA+ to AA	AA2 to A2	N/A
Mutual funds – bond funds	N/A	N/A	B to BBB
Corporate bonds	AAA to BBB	AAA to BAA2	N/A
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 2017 and 2016, there were no investments in any one issuer that represented greater than 5% of total investments.

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS
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NOTE 3 – PLANT, PROPERTY AND EQUIPMENT

Plant, property and equipment as of December 31, 2017 consist of the following:

	Balance 1/1/17	Increases	Decreases	Balance 12/31/17
Utility Plant not Being Depreciated				
Gas				
Land	\$ 214,304	\$ -	\$ -	\$ 214,304
Construction in progress	334,815	2,129,738	2,414,586	49,967
	<u>549,119</u>	<u>2,129,738</u>	<u>2,414,586</u>	<u>264,271</u>
Electric/Telecommunications				
Land	4,773,373	-	-	4,773,373
Construction in progress	1,297,536	4,850,760	4,436,113	1,712,183
	<u>6,070,909</u>	<u>4,850,760</u>	<u>4,436,113</u>	<u>6,485,556</u>
Total Utility Plant Not Being Depreciated	<u>6,620,028</u>	<u>6,980,498</u>	<u>6,850,699</u>	<u>6,749,827</u>
Utility Plant Being Depreciated				
Gas				
Plant investment	46,460,460	2,906,885	237,466	49,129,879
Office furniture and equipment	1,347,273	60,311	-	1,407,584
Transportation and communication equipment	1,247,539	167,188	63,645	1,351,082
Other	275,199	-	-	275,199
	<u>49,330,471</u>	<u>3,134,384</u>	<u>301,111</u>	<u>52,163,744</u>
Electric/Telecommunications				
Plant investment	175,952,890	5,710,151	1,042,699	180,620,342
Office furniture and equipment	2,998,807	178,064	-	3,176,871
Transportation and communication equipment	5,012,013	335,276	248,406	5,098,883
Other	562,020	67,770	-	629,790
	<u>184,525,730</u>	<u>6,291,261</u>	<u>1,291,105</u>	<u>189,525,886</u>
Total Utility Plant Being Depreciated	<u>233,856,201</u>	<u>9,425,645</u>	<u>1,592,216</u>	<u>241,689,630</u>

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NOTES TO FINANCIAL STATEMENTS
As of and for the Years Ended December 31, 2017 and 2016

NOTE 3 – PLANT, PROPERTY AND EQUIPMENT (cont.)

	Balance 1/1/17	Increases	Decreases	Balance 12/31/17
Less: Accumulated depreciation				
Gas				
Plant investment	\$ (23,750,048)	\$ (1,331,096)	\$ 203,939	\$ (24,877,205)
Office furniture and equipment	(1,129,765)	(43,544)	-	(1,173,309)
Transportation and communication equipment	(1,029,667)	(82,115)	63,645	(1,048,137)
Other	(211,324)	(23,159)	-	(234,483)
	<u>(26,120,804)</u>	<u>(1,479,914)</u>	<u>267,584</u>	<u>(27,333,134)</u>
Electric/Telecommunications				
Plant investment	(56,593,561)	(4,995,192)	910,125	(60,678,628)
Office furniture and equipment	(2,400,416)	(120,829)	-	(2,521,245)
Transportation and communication equipment	(3,378,411)	(391,549)	248,406	(3,521,554)
Other	(410,251)	(28,202)	-	(438,453)
	<u>(62,782,639)</u>	<u>(5,535,772)</u>	<u>1,158,531</u>	<u>(67,159,880)</u>
Total Accumulated Depreciation	<u>(88,903,443)</u>	<u>(7,015,686)</u>	<u>1,426,115</u>	<u>(94,493,014)</u>
Total Utility Plant Being Depreciated, Net				
Gas	23,209,667	1,654,472	33,527	24,830,612
Electric	121,743,091	755,486	132,575	122,366,002
	<u>144,952,758</u>	<u>2,409,958</u>	<u>166,102</u>	<u>147,196,614</u>
Total Utility Plant, Net				
Gas	23,758,786	3,784,211	2,448,112	25,094,885
Electric	127,814,000	5,606,246	4,568,688	128,851,558
	<u>\$ 151,572,786</u>	<u>\$ 9,390,457</u>	<u>\$ 7,016,800</u>	<u>\$ 153,946,443</u>

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS
As of and for the Years Ended December 31, 2017 and 2016

NOTE 3 – PLANT, PROPERTY AND EQUIPMENT (cont.)

Plant, property and equipment as of December 31, 2016 consist of the following:

	Balance 1/1/16	Increases	Decreases	Balance 12/31/16
Utility Plant not Being Depreciated				
Gas				
Land	\$ 214,304	\$ -	\$ -	\$ 214,304
Construction in progress	72,492	2,017,696	1,755,373	334,815
	<u>286,796</u>	<u>2,017,696</u>	<u>1,755,373</u>	<u>549,119</u>
Electric/Telecommunications				
Land	4,773,373	-	-	4,773,373
Construction in progress	32,175,601	5,757,769	36,635,834	1,297,536
	<u>36,948,974</u>	<u>5,757,769</u>	<u>36,635,834</u>	<u>6,070,909</u>
Total Utility Plant Not Being Depreciated	<u>37,235,770</u>	<u>7,775,465</u>	<u>38,391,207</u>	<u>6,620,028</u>
Utility Plant Being Depreciated				
Gas				
Plant investment	44,351,540	2,441,379	332,459	46,460,460
Office furniture and equipment	1,317,410	29,863	-	1,347,273
Transportation and communication equipment	1,246,359	50,138	48,958	1,247,539
Other	332,140	-	56,941	275,199
	<u>47,247,449</u>	<u>2,521,380</u>	<u>438,358</u>	<u>49,330,471</u>
Electric/Telecommunications				
Plant investment	148,299,181	37,827,042	10,173,333	175,952,890
Office furniture and equipment	2,922,605	76,202	-	2,998,807
Transportation and communication equipment	5,073,548	505,061	566,596	5,012,013
Other	783,257	40,008	261,245	562,020
	<u>157,078,591</u>	<u>38,448,313</u>	<u>11,001,174</u>	<u>184,525,730</u>
Total Utility Plant Being Depreciated	<u>204,326,040</u>	<u>40,969,693</u>	<u>11,439,532</u>	<u>233,856,201</u>

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS
As of and for the Years Ended December 31, 2017 and 2016

NOTE 3 – PLANT, PROPERTY AND EQUIPMENT (cont.)

	Balance 1/1/16	Increases	Decreases	Balance 12/31/16
Less: Accumulated depreciation				
Gas				
Plant investment	\$ (22,827,415)	\$ (1,221,878)	\$ 299,245	\$ (23,750,048)
Office furniture and equipment	(1,085,662)	(44,103)	-	(1,129,765)
Transportation and communication equipment	(956,663)	(121,962)	48,958	(1,029,667)
Other	(237,952)	(38,693)	65,321	(211,324)
	<u>(25,107,692)</u>	<u>(1,426,636)</u>	<u>413,524</u>	<u>(26,120,804)</u>
Electric/Telecommunications				
Plant investment	(57,520,308)	(4,359,029)	5,285,776	(56,593,561)
Office furniture and equipment	(2,280,380)	(120,036)	-	(2,400,416)
Transportation and communication equipment	(3,738,757)	(206,250)	566,596	(3,378,411)
Other	(644,321)	(17,832)	251,902	(410,251)
	<u>(64,183,766)</u>	<u>(4,703,147)</u>	<u>6,104,274</u>	<u>(62,782,639)</u>
Total Accumulated Depreciation	<u>(89,291,458)</u>	<u>(6,129,783)</u>	<u>6,517,798</u>	<u>(88,903,443)</u>
Total Utility Plant Being Depreciated, Net				
Gas	22,139,757	1,094,744	24,834	23,209,667
Electric	92,894,825	33,745,166	4,896,900	121,743,091
	<u>115,034,582</u>	<u>34,839,910</u>	<u>4,921,734</u>	<u>144,952,758</u>
Total Utility Plant, Net				
Gas	22,426,553	3,112,440	1,780,207	23,758,786
Electric	129,843,799	39,502,935	41,532,734	127,814,000
	<u>\$ 152,270,352</u>	<u>\$ 42,615,375</u>	<u>\$ 43,312,941</u>	<u>\$ 151,572,786</u>

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS
As of and for the Years Ended December 31, 2017 and 2016

NOTE 4 – NOTE RECEIVABLE

	<u>2017</u>	<u>2016</u>
Note receivable from Holyoke Solar, LLC (separate non-related 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.	\$ 8,805,376	\$ 9,220,663
Note receivable from Scannell Solar, LLC due to the Solar Coop in one lump sum payment including interest at 5.25%, secured by the Solar Installation Property, matures in December 2017. If not paid off by maturity date, the loan converts to a 10 year loan including interest at 6.5% due December 2028.	1,317,995	1,317,995
Less: amount due within one year	<u>(1,755,616)</u>	<u>(1,733,284)</u>
Note Receivable - Due After One Year	<u>\$ 8,367,755</u>	<u>\$ 8,805,374</u>

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 balance at December 31, 2017 and 2016 was \$451,208 and \$450,309, respectively.

NOTE 5 – OTHER RECEIVABLES

Other receivables, all due within one year, consist of the following as of December 31, 2017 and 2016:

	<u>2017</u>	<u>2016</u>
Springfield Water and Sewer	\$ 33,979	\$ 621,406
Massachusetts Department of Transportation	217,860	-
Accrued interest receivable	47,065	76,307
Miscellaneous other receivables	<u>1,294,118</u>	<u>742,181</u>
Totals	<u>\$ 1,593,022</u>	<u>\$ 1,439,894</u>

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS

As of and for the Years Ended December 31, 2017 and 2016

NOTE 6 – INTANGIBLE ASSETS

		2017	
	Life in Years	Gross Carrying Amount	Accumulated Amortization
2001 franchise fees	30	\$ 2,000,000	\$ 1,070,001

		2016	
	Life in Years	Gross Carrying Amount	Accumulated Amortization
2001 franchise fees	30	\$ 2,000,000	\$ 1,003,334

Aggregate amortization expense was \$66,667 for the years ended December 31, 2017 and 2016. Estimated annual aggregate amortization expense is \$66,667 for the five years subsequent to 2017.

NOTE 7 – RATE STABILIZATION RESERVE

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 balance at December 31, 2017 and 2016 is \$41,269,849 and is reported as a deferred inflow of resources.

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS As of and for the Years Ended December 31, 2017 and 2016

NOTE 8 – LONG-TERM OBLIGATIONS

General Obligation Bonds – Issued through the City of Holyoke Original issue amount: \$30,532,000 Date of issue: April 2012 Bonds mature annually 2013-2031 Interest rates range from 2.0% - 5.0%	\$ 24,525,000
Revenue Bonds – Massachusetts Clean Energy Cooperative Corporation - Series 2013 Original issue amount: \$49,885,000 Date of issue: April 2013 Bonds mature annually 2015-2032 Interest rates range from 3.0% - 5.0%	44,915,000
Clean Renewable Energy Bond – Boatlock Hydroelectric Station Project - 2009 Series A Original issue amount: \$2,500,000 Date of issue: January 2009 Interest rate: 1.5% Secured by revenues of the Department	625,000
Less: Amount due within one year	<u>(3,678,333)</u>
Bonds Payable – Due After One Year	<u>\$ 66,386,667</u>

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

	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2018	\$ 3,678,333	\$ 3,252,917	\$ 6,931,250
2019	3,793,333	3,134,311	6,927,644
2020	3,953,334	2,974,103	6,927,437
2021	3,930,000	2,783,676	6,713,676
2022	4,085,000	2,626,476	6,711,476
2023 – 2027	23,415,000	10,145,686	33,560,686
2028 – 2032	<u>27,210,000</u>	<u>3,951,924</u>	<u>31,161,924</u>
Totals	<u>\$ 70,065,000</u>	<u>\$ 28,869,093</u>	<u>\$ 98,934,093</u>

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS

As of and for the Years Ended December 31, 2017 and 2016

NOTE 8 – LONG-TERM OBLIGATIONS (cont.)

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

	<u>2017</u>	<u>2016</u>
<u>Revenue Bonds</u>		
Debt service reserve fund	\$ 4,493,143	\$ 4,439,085
Redemption account		
Reserve and contingency fund	497,747	443,772
Principal account	1,067,500	1,028,482
Bond interest fund	1,088,975	1,130,822
<u>Clean Renewable Energy Bond</u>		
Debt service reserve fund	<u>257,867</u>	<u>257,097</u>
Sub-Total Related to Bonds	<u>7,405,232</u>	<u>7,299,258</u>
<u>Notes Payable</u>		
Collateral account	4,287,236	4,219,795
Reserve fund	<u>451,208</u>	<u>450,309</u>
Sub-Total Related to Notes	<u>4,738,444</u>	<u>4,670,104</u>
Total Funds Required Under Bond Indenture/Note Payable	<u>\$ 12,143,676</u>	<u>\$ 11,969,362</u>

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS

As of and for the Years Ended December 31, 2017 and 2016

NOTE 8 – LONG-TERM OBLIGATIONS (cont.)

Notes Payable

Note payable to bank, secured by revenues of the Department, monthly payments of \$20,587 including interest at 5.25% through maturity date of October 2018.	\$ 200,946
Note payable to bank, secured by all assets of the Holyoke Solar Cooperative, monthly payments of \$6,346 including interest at 4.47%, matures in September 2031.	781,427
Note payable to bank, secured by all assets of the Holyoke Solar Cooperative, monthly payments of \$29,820 including interest at 4.00%, matures in September 2031.	3,783,397
Note payable to bank, secured by all assets of the Holyoke Solar Cooperative, monthly payments of \$29,470 including interest at 3.40%, Matures in September 2031.	
A pledge of securities as collateral, with a value of \$4,223,658 at December 31, 2017 is also required under this note.	3,886,046
Less: Amount due within one year	<u>(673,984)</u>
Notes Payable – Due After One Year	<u>\$ 7,977,832</u>

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

	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2018	\$ 673,984	\$ 319,518	\$ 993,502
2019	491,383	288,484	779,867
2020	509,651	277,979	787,630
2021	530,228	257,402	787,630
2022	550,814	236,815	787,629
2023 – 2027	3,091,615	846,532	3,938,147
2028 – 2031	<u>2,804,141</u>	<u>215,410</u>	<u>3,019,551</u>
Totals	<u>\$ 8,651,816</u>	<u>\$ 2,442,140</u>	<u>\$ 11,093,956</u>

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS
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NOTE 8 – LONG-TERM OBLIGATIONS (cont.)

CHANGES IN LONG-TERM LIABILITIES

Long-term liability activities for the years ended December 31, 2017 are as follows:

	Balance 1/1/17	Additions	Reductions	Balance 12/31/17	Current Portion
Long-term bonds and loans					
Bonds payable	\$ 73,598,333	\$ -	\$ 3,533,333	\$ 70,065,000	\$ 3,678,333
Premium on bonds	8,855,623	-	851,963	8,003,660	-
Notes payable	9,336,882	-	685,066	8,651,816	673,984
Leases payable	7,321	167,188	50,988	123,521	39,976
	<u>91,798,159</u>	<u>167,188</u>	<u>5,121,350</u>	<u>86,843,997</u>	<u>4,392,293</u>
Other long-term liabilities					
Net pension liability	30,700,334	3,726,487	3,711,165	30,715,656	-
Compensated absences	3,159,739	223,371	199,289	3,183,821	191,782
Other postemployment benefits (asset)	(3,423)	1,979,075	2,019,073	(43,421)	-
Environmental costs	305,000	-	140,000	165,000	165,000
Reserve fund for note receivable	444,737	-	-	444,737	-
	<u>444,737</u>	<u>-</u>	<u>-</u>	<u>444,737</u>	<u>-</u>
Total Long-Term Liabilities	<u>\$ 126,404,546</u>	<u>\$ 6,096,121</u>	<u>\$ 11,190,877</u>	<u>\$ 121,309,790</u>	<u>\$ 4,749,075</u>

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS
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NOTE 8 – LONG-TERM OBLIGATIONS (cont.)

CHANGES IN LONG-TERM LIABILITIES (cont.)

Long-term liability activities for the years ended December 31, 2016 are as follows:

	Balance 1/1/16	Additions	Reductions	Balance 12/31/16	Current Portion
Long-term bonds and loans					
Bonds payable	\$ 77,016,666	\$ -	\$ 3,418,333	\$ 73,598,333	\$ 3,533,333
Premium on bonds	9,709,474	-	853,851	8,855,623	-
Notes payable	9,992,028	-	655,146	9,336,882	685,066
Leases payable	64,415	-	57,094	7,321	7,321
	<u>96,782,583</u>	<u>-</u>	<u>4,984,424</u>	<u>91,798,159</u>	<u>4,225,720</u>
Other long-term liabilities					
Net pension liability	27,426,467	6,869,958	3,596,091	30,700,334	-
Compensated absences	3,054,362	310,607	205,230	3,159,739	199,289
Other postemployment benefits (asset)	50,722	1,886,633	1,940,778	(3,423)	-
Environmental costs	449,000	-	144,000	305,000	140,000
Reserve fund for note receivable	444,737	-	-	444,737	-
	<u>444,737</u>	<u>-</u>	<u>-</u>	<u>444,737</u>	<u>-</u>
Total Long-Term Liabilities	<u>\$ 128,207,871</u>	<u>\$ 9,067,198</u>	<u>\$ 10,870,523</u>	<u>\$ 126,404,546</u>	<u>\$ 4,565,009</u>

REVENUE DEBT

The Department has pledged future revenues, net of certain operating expenses to repay revenue bonds issued in 2013. 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 \$64,693,750. Principal and interest paid in 2017 and 2016 were \$4,315,150 and \$4,314,150, respectively. Total customer net revenues in 2017 and 2016 were \$4,307,247 and \$4,310,279, respectively. Customer revenues began in 2016 to coincide with the first bond principal payment due.

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS As of and for the Years Ended December 31, 2017 and 2016

NOTE 9 – BLENDED COMPONENT UNITS

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

COMBINING SCHEDULE OF NET POSITION As of December 31, 2017

ASSETS	HGE	Holyoke Solar	Mass Clean Energy	Eliminations	Total
Current Assets					
Cash and investments	\$ 4,207,096	\$ 2,476,975	\$ 154,627	\$ -	\$ 6,838,698
Restricted Assets					
Collateralized investments for margin account	7,196,000	1,081,541	-	-	8,277,541
Redemption account	-	-	2,654,222	-	2,654,222
Customer accounts receivable - net	7,084,120	151,549	-	-	7,235,669
Accounts receivable - City of Holyoke	15,090	-	-	-	15,090
Note receivable - current portion	-	1,755,616	-	-	1,755,616
Materials and supplies	2,865,142	-	-	-	2,865,142
Fuel for electric generation and gas in storage	495,331	-	-	-	495,331
Prepaid expense	2,378,827	-	44,016,176	(44,016,176)	2,378,827
Other receivables	1,573,918	19,104	-	-	1,593,022
Total Current Assets	<u>25,815,524</u>	<u>5,484,785</u>	<u>46,825,025</u>	<u>(44,016,176)</u>	<u>34,109,158</u>
Noncurrent Assets					
Restricted Assets					
Accounts required under bond indenture/note payable	257,867	4,738,444	4,493,143	-	9,489,454
Customers' deposits	1,562,522	-	-	-	1,562,522
Other receivables - after one year	-	8,367,755	-	-	8,367,755
Hi-Lite assistant loans	2,141,562	-	-	-	2,141,562
Advances to other funds	431,000	-	-	(431,000)	-
Other Assets					
Purchased power accounts	362,755	-	-	-	362,755
Rate stabilization accounts	49,983,776	-	-	-	49,983,776
Costs recoverable in future - pollution	170,724	-	-	-	170,724
Other investments	188,390	-	-	-	188,390
Accrued other post employment benefits	43,421	-	-	-	43,421
Intangible assets	929,999	-	-	-	929,999
Capital Assets					
Plant, property and equipment in service	246,677,307	-	-	-	246,677,307
Construction in progress	1,762,150	-	-	-	1,762,150
	<u>248,439,457</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>248,439,457</u>
Less: Accumulated depreciation	(94,493,014)	-	-	-	(94,493,014)
Total Capital Assets	<u>153,946,443</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>153,946,443</u>
Total Noncurrent Assets	<u>210,018,459</u>	<u>13,106,199</u>	<u>4,493,143</u>	<u>(431,000)</u>	<u>227,186,801</u>
Total Assets	<u>235,833,983</u>	<u>18,590,984</u>	<u>51,318,168</u>	<u>(44,447,176)</u>	<u>261,295,959</u>
DEFERRED OUTFLOWS OF RESOURCES					
Pension related amounts	13,651,645	-	-	-	13,651,645

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NOTES TO FINANCIAL STATEMENTS As of and for the Years Ended December 31, 2017 and 2016

NOTE 9 – BLENDED COMPONENT UNITS (cont.)

COMBINING SCHEDULE OF NET POSITION (cont.) As of December 31, 2017

LIABILITIES	HGE	Holyoke Solar	Mass Clean Energy	Eliminations	Total
Current Liabilities					
Accounts payable	\$ 5,891,233	\$ 8,941	\$ -	\$ -	\$ 5,900,174
Customers' deposits	1,255,783	-	-	-	1,255,783
Accrued liabilities	1,044,253	-	-	-	1,044,253
Current portion - accrued compensated absences	191,782	-	-	-	191,782
Current portion - accrued environmental costs	165,000	-	-	-	165,000
Accrued charges - current	294,067	-	-	-	294,067
Liabilities Payable from Restricted Assets					
Margin credit account	7,196,000	1,081,541	-	-	8,277,541
Current portion - bonds and notes payable	1,784,255	473,038	2,135,000	-	4,392,293
Accrued interest	355,784	-	1,088,975	-	1,444,759
Total Current Liabilities	<u>18,178,157</u>	<u>1,563,520</u>	<u>3,223,975</u>	<u>-</u>	<u>22,965,652</u>
Long-Term Liabilities					
Bonds payable - long-term	23,606,667	-	42,780,000	-	66,386,667
Plus: Unamortized premium on bonds payable	2,066,100	-	5,937,560	-	8,003,660
	25,672,767	-	48,717,560	-	74,390,327
Notes payable - long-term	-	7,977,832	-	-	7,977,832
Leases payable - long term	83,545	-	-	-	83,545
Accrued compensated absences	2,992,039	-	-	-	2,992,039
Accrued environmental liability	-	-	-	-	-
Unearned revenue	46,503,996	-	-	(44,016,176)	2,487,820
Reserve account advance	-	444,737	431,000	(431,000)	444,737
Net pension liability	30,715,656	-	-	-	30,715,656
Total Long-Term Liabilities	<u>105,968,003</u>	<u>8,422,569</u>	<u>49,148,560</u>	<u>(44,447,176)</u>	<u>119,091,956</u>
Total Liabilities	<u>124,146,160</u>	<u>9,986,089</u>	<u>52,372,535</u>	<u>(44,447,176)</u>	<u>142,057,608</u>
DEFERRED INFLOWS OF RESOURCES					
Pension related amounts	1,975,532	-	-	-	1,975,532
Rate stabilization reserve	41,269,849	-	-	-	41,269,849
Total Deferred Inflows of Resources	<u>43,245,381</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>43,245,381</u>
NET POSITION					
Net investment in plant, property and equipment	126,489,421	-	-	(50,852,560)	75,636,861
Restricted for debt service	(97,917)	4,265,406	3,923,390	-	8,090,879
Unrestricted (deficit)	<u>(44,297,417)</u>	<u>4,339,489</u>	<u>(4,977,757)</u>	<u>50,852,560</u>	<u>5,916,875</u>
TOTAL NET POSITION (DEFICIT)	<u>\$ 82,094,087</u>	<u>\$ 8,604,895</u>	<u>\$ (1,054,367)</u>	<u>\$ -</u>	<u>\$ 89,644,615</u>

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NOTES TO FINANCIAL STATEMENTS As of and for the Years Ended December 31, 2017 and 2016

NOTE 9 – BLENDED COMPONENT UNITS (cont.)

COMBINING SCHEDULE OF REVENUES, EXPENSES AND CHANGES IN NET POSITION For the Year Ended December 31, 2017

	HGE	Holyoke Solar	Mass Clean Energy	Eliminations	Total
OPERATING REVENUES	<u>\$ 66,721,756</u>	<u>\$ 279,461</u>	<u>\$ 4,307,247</u>	<u>\$ (4,586,708)</u>	<u>\$ 66,721,756</u>
OPERATING EXPENSES					
Operation and maintenance	55,556,538	148,115	2,948,476	(4,586,708)	54,066,421
Depreciation - plant and equipment	<u>7,015,687</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>7,015,687</u>
Total Operating Expenses	<u>62,572,225</u>	<u>148,115</u>	<u>2,948,476</u>	<u>(4,586,708)</u>	<u>61,082,108</u>
Operating Income	<u>4,149,531</u>	<u>131,346</u>	<u>1,358,771</u>	<u>-</u>	<u>5,639,648</u>
NONOPERATING OTHER REVENUES (EXPENSES)					
Investment income - net of fees	2,690,416	684,777	71,229	-	3,446,422
Net gain (loss) on investments	3,990,320	207,086	43,531	-	4,240,937
Interest expense	(972,852)	(367,716)	(1,576,736)	-	(2,917,304)
Miscellaneous income (expense)	902,918	(1,672)	-	-	901,246
Amortization of intangible assets	(66,667)	-	-	-	(66,667)
Net gain (loss) - disposal of assets	(567,432)	-	-	-	(567,432)
Net gain - merchandise jobbing	136,967	-	-	-	136,967
Mt. Tom property assessment expense	(11,909)	-	-	-	(11,909)
Taxes - other	<u>(79,768)</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>(79,768)</u>
Total Other Revenues (Expenses)	<u>6,021,993</u>	<u>522,475</u>	<u>(1,461,976)</u>	<u>-</u>	<u>5,082,492</u>
Change in Net Position Before Transfers	10,171,524	653,821	(103,205)	-	10,722,140
TRANSFERS					
Payment in lieu of taxes - City of Holyoke	<u>(1,080,530)</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>(1,080,530)</u>
Change in Net Position	9,090,994	653,821	(103,205)	-	9,641,610
NET POSITION (Deficit) - Beginning of Year	<u>73,003,093</u>	<u>7,951,074</u>	<u>(951,162)</u>	<u>-</u>	<u>80,003,005</u>
NET POSITION (Deficit) - END OF YEAR	<u>\$ 82,094,087</u>	<u>\$ 8,604,895</u>	<u>\$ (1,054,367)</u>	<u>\$ -</u>	<u>\$ 89,644,615</u>

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS
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NOTE 9 – BLENDED COMPONENT UNITS (cont.)

CONDENSED COMBINING SCHEDULE OF CASH FLOWS For the Year Ended December 31, 2017

NET CASH FLOWS FROM (USED IN)	HGE	Holyoke Solar	Mass Clean Energy	Eliminations	Total
Operating activities	\$ 6,857,639	\$ 118,331	\$ 3,919,842	\$ -	\$ 10,895,812
Investing activities	14,991,475	1,136,382	3,045,040	-	19,172,897
Noncapital financing activities	(1,080,530)	-	-	-	(1,080,530)
Capital and related financing activities	(12,500,505)	(823,099)	(4,315,150)	-	(17,638,754)
Net Increase (Decrease) in Cash and Cash Equivalents	<u>8,268,079</u>	<u>431,614</u>	<u>2,649,732</u>	<u>-</u>	<u>11,349,425</u>
CASH AND CASH EQUIVALENTS - Beginning of Year	<u>51,654,008</u>	<u>3,634,707</u>	<u>2,087,247</u>	<u>-</u>	<u>57,375,962</u>
CASH AND CASH EQUIVALENTS - END OF YEAR	<u>\$ 59,922,087</u>	<u>\$ 4,066,321</u>	<u>\$ 4,736,979</u>	<u>\$ -</u>	<u>\$ 68,725,387</u>

HOLYOKE GAS AND ELECTRIC

(Enterprise and Fiduciary Funds of the
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NOTES TO FINANCIAL STATEMENTS

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NOTE 9 – BLENDED COMPONENT UNITS (cont.)

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

COMBINING SCHEDULE OF NET POSITION As of December 31, 2016

ASSETS	<u>HGE</u>	<u>Holyoke Solar</u>	<u>Mass Clean Energy</u>	<u>Eliminations</u>	<u>Total</u>
Current Assets					
Cash and investments	\$ 9,192,190	\$ 1,942,933	\$ 583,910	\$ -	\$ 11,719,033
Restricted Assets					
Collateralized investments for margin account	1,199,087	1,319,377	-	-	2,518,464
Redemption account	-	-	2,603,076	-	2,603,076
Customer accounts receivable - net	6,002,945	144,824	-	-	6,147,769
Accounts receivable - City of Holyoke	15,000	-	-	-	15,000
Note receivable - current portion	-	1,733,284	-	-	1,733,284
Materials and supplies	2,873,861	-	-	-	2,873,861
Fuel for electric generation and gas in storage	488,668	-	-	-	488,668
Prepaid expense	2,439,047	-	46,950,588	(46,950,588)	2,439,047
Other receivables	1,835,618	21,148	-	(416,872)	1,439,894
Total Current Assets	<u>24,046,416</u>	<u>5,161,566</u>	<u>50,137,574</u>	<u>(47,367,460)</u>	<u>31,978,096</u>
Noncurrent Assets					
Restricted Assets					
Accounts required under bond indenture/note payable	257,097	4,670,104	4,439,085	-	9,366,286
Customers' deposits	1,334,854	-	-	-	1,334,854
Other receivables - after one year	-	8,805,374	-	-	8,805,374
Hi-Lite assistant loans	2,336,735	-	-	-	2,336,735
Advances to other funds	431,000	-	-	(431,000)	-
Other Assets					
Purchased power accounts	359,357	-	-	-	359,357
Rate stabilization accounts	45,229,647	-	-	-	45,229,647
Costs recoverable in future - pollution	317,176	-	-	-	317,176
Other investments	188,390	-	-	-	188,390
Accrued other post employment benefits	3,423	-	-	-	3,423
Intangible assets	996,666	-	-	-	996,666
Capital Assets					
Plant, property and equipment in service	238,843,878	-	-	-	238,843,878
Construction in progress	1,632,351	-	-	-	1,632,351
	240,476,229	-	-	-	240,476,229
Less: Accumulated depreciation	(88,903,443)	-	-	-	(88,903,443)
Total Capital Assets	<u>151,572,786</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>151,572,786</u>
Total Noncurrent Assets	<u>203,027,131</u>	<u>13,475,478</u>	<u>4,439,085</u>	<u>(431,000)</u>	<u>220,510,694</u>
Total Assets	<u>227,073,547</u>	<u>18,637,044</u>	<u>54,576,659</u>	<u>(47,798,460)</u>	<u>252,488,790</u>
DEFERRED OUTFLOWS OF RESOURCES					
Pension related amounts	10,409,130	-	-	-	10,409,130

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NOTES TO FINANCIAL STATEMENTS

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NOTE 9 – BLENDED COMPONENT UNITS (cont.)

COMBINING SCHEDULE OF NET POSITION (cont.)

As of December 31, 2016

LIABILITIES	HGE	Holyoke Solar	Mass Clean Energy	Eliminations	Total
Current Liabilities					
Accounts payable	\$ 5,796,789	\$ 15,603	\$ 416,872	\$ (416,872)	\$ 5,812,392
Customers' deposits	1,195,346	-	-	-	1,195,346
Accrued liabilities	898,084	-	-	-	898,084
Current portion - accrued compensated absences	199,289	-	-	-	199,289
Current portion - accrued environmental costs	140,000	-	-	-	140,000
Accrued charges - current	81,118	-	-	-	81,118
Liabilities Payable from Restricted Assets					
Margin credit account	1,199,087	1,319,377	-	-	2,518,464
Current portion - bonds and notes payable	1,715,337	455,383	2,055,000	-	4,225,720
Accrued interest	377,350	-	1,130,075	-	1,507,425
Total Current Liabilities	11,602,400	1,790,363	3,601,947	(416,872)	16,577,838
Long-Term Liabilities					
Bonds payable - long-term	25,150,000	-	44,915,000	-	70,065,000
Plus: Unamortized premium on bonds payable	2,275,749	-	6,579,874	-	8,855,623
	27,425,749	-	51,494,874	-	78,920,623
Notes payable - long-term	200,946	8,450,870	-	-	8,651,816
Leases payable - long term	-	-	-	-	-
Accrued compensated absences	2,960,450	-	-	-	2,960,450
Accrued environmental liability	165,000	-	-	-	165,000
Unearned revenue	48,915,204	-	-	(46,950,588)	1,964,616
Reserve account advance	-	444,737	431,000	(431,000)	444,737
Net pension liability	30,700,334	-	-	-	30,700,334
Total Long-Term Liabilities	110,367,683	8,895,607	51,925,874	(47,381,588)	123,807,576
Total Liabilities	121,970,083	10,685,970	55,527,821	(47,798,460)	140,385,414
DEFERRED INFLOWS OF RESOURCES					
Pension related amounts	1,239,652	-	-	-	1,239,652
Rate stabilization reserve	41,269,849	-	-	-	41,269,849
Total Deferred Inflows of Resources	42,509,501	-	-	-	42,509,501
NET POSITION					
Net investment in plant, property and equipment	122,431,700	-	-	(53,549,874)	68,881,826
Restricted for debt service	(120,253)	4,214,721	3,857,086	-	7,951,554
Unrestricted (deficit)	(49,308,354)	3,736,353	(4,808,248)	53,549,874	3,169,625
TOTAL NET POSITION (DEFICIT)	\$ 73,003,093	\$ 7,951,074	\$ (951,162)	\$ -	\$ 80,003,005

HOLYOKE GAS AND ELECTRIC

(Enterprise and Fiduciary Funds of the
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NOTES TO FINANCIAL STATEMENTS
As of and for the Years Ended December 31, 2017 and 2016

NOTE 9 – BLENDED COMPONENT UNITS (cont.)

COMBINING SCHEDULE OF REVENUES, EXPENSES AND CHANGES IN NET POSITION For the Year Ended December 31, 2016

	<u>HGE</u>	<u>Holyoke Solar</u>	<u>Mass Clean Energy</u>	<u>Eliminations</u>	<u>Total</u>
OPERATING REVENUES	<u>\$ 67,291,468</u>	<u>\$ 298,883</u>	<u>\$ 4,310,279</u>	<u>\$ (4,609,162)</u>	<u>\$ 67,291,468</u>
OPERATING EXPENSES					
Operation and maintenance	53,696,037	161,448	2,957,969	(4,609,162)	52,206,292
Depreciation - plant and equipment	<u>6,129,781</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>6,129,781</u>
Total Operating Expenses	<u>59,825,818</u>	<u>161,448</u>	<u>2,957,969</u>	<u>(4,609,162)</u>	<u>58,336,073</u>
Operating Income	<u>7,465,650</u>	<u>137,435</u>	<u>1,352,310</u>	<u>-</u>	<u>8,955,395</u>
NONOPERATING OTHER REVENUES (EXPENSES)					
Investment income - net of fees	1,833,941	603,717	66,183	-	2,503,841
Net gain (loss) on investments	1,184,560	12,857	421	-	1,197,838
Interest expense	(994,602)	(351,580)	(1,654,967)	-	(3,001,149)
Miscellaneous income (expense)	878,706	(4,196)	-	-	874,510
Amortization of intangible assets	(66,667)	-	-	-	(66,667)
Net gain (loss) - disposal of assets	(5,479,612)	-	-	-	(5,479,612)
Net gain - merchandise jobbing	129,873	-	-	-	129,873
Mt. Tom property assessment expense	(363,542)	-	-	-	(363,542)
Taxes - other	<u>(79,768)</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>(79,768)</u>
Total Other Revenues (Expenses)	<u>(2,957,111)</u>	<u>260,798</u>	<u>(1,588,363)</u>	<u>-</u>	<u>(4,284,676)</u>
Change in Net Position Before Transfers	4,508,539	398,233	(236,053)	-	4,670,719
TRANSFERS					
Payment in lieu of taxes - City of Holyoke	<u>(1,080,628)</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>(1,080,628)</u>
Change in Net Position	3,427,911	398,233	(236,053)	-	3,590,091
NET POSITION (Deficit) - Beginning of Year	<u>69,575,182</u>	<u>7,552,841</u>	<u>(715,109)</u>	<u>-</u>	<u>76,412,914</u>
NET POSITION (Deficit) - END OF YEAR	<u>\$ 73,003,093</u>	<u>\$ 7,951,074</u>	<u>\$ (951,162)</u>	<u>\$ -</u>	<u>\$ 80,003,005</u>

HOLYOKE GAS AND ELECTRIC

(Enterprise and Fiduciary Funds of the
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NOTES TO FINANCIAL STATEMENTS As of and for the Years Ended December 31, 2017 and 2016

NOTE 9 – BLENDED COMPONENT UNITS (cont.)

CONDENSED COMBINING SCHEDULE OF CASH FLOWS For the Year Ended December 31, 2016

NET CASH FLOWS FROM (USED IN)	HGE	Holyoke Solar	Mass Clean Energy	Eliminations	Total
Operating activities	\$ 10,869,597	\$ 17,714	\$ 4,286,311	\$ -	\$ 15,173,622
Investing activities	6,676,071	1,881,950	555,945	-	9,113,966
Noncapital financing activities	(1,080,628)	-	-	-	(1,080,628)
Capital and related financing activities	(14,642,754)	(789,012)	(4,315,215)	-	(19,746,981)
Net Increase (Decrease) in Cash and Cash Equivalents	<u>1,822,286</u>	<u>1,110,652</u>	<u>527,041</u>	<u>-</u>	<u>3,459,979</u>
CASH AND CASH EQUIVALENTS - Beginning of Year	<u>49,831,722</u>	<u>2,524,055</u>	<u>1,560,206</u>	<u>-</u>	<u>53,915,983</u>
CASH AND CASH EQUIVALENTS - END OF YEAR	<u>\$ 51,654,008</u>	<u>\$ 3,634,707</u>	<u>\$ 2,087,247</u>	<u>\$ -</u>	<u>\$ 57,375,962</u>

NOTE 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 Administration (PERA).

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 percent 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: Cheryl Dugre, Executive Director, Holyoke Retirement Board, City Hall Annex - Room 207, Holyoke, Massachusetts 01040, 413 534 2179.

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS

As of and for the Years Ended December 31, 2017 and 2016

NOTE 10 – RETIREMENT PLANS (cont.)

PENSION LIABILITIES, PENSION EXPENSE, AND DEFERRED OUTFLOWS OF RESOURCES RELATED TO PENSIONS

At December 31, 2017, the Department reported a liability of \$30,715,656, for its proportionate share of the net pension liability. The net pension liability was measured as of December 31, 2016 and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of January 1, 2016 and rolled forward to December 31, 2016. 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, 2016 the Department's proportion was 21.066372% which was an increase of 0.327139% from its proportion measured as of January 1, 2016.

At December 31, 2016, the Department reported a liability of \$30,700,334, for its proportionate share of the net pension liability. The net pension liability was measured as of December 31, 2015 and the total pension liability used to calculate the net pension liability was determined by an actual valuation as of January 1, 2015 and rolled forward to December 31, 2015. 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, 2015 the Department's proportion was 20.739299% which was an increase of 0.272132% from its proportion measured as of January 1, 2015.

For the year ended December 31, 2017 and 2016, the Department recognized pension expense of \$1,219,856 and \$2,765,632, respectively.

At December 31, 2017 and 2016, the utility reported deferred outflows of resources from the following sources:

	<u>2017</u>	<u>2016</u>
	Deferred Outflows of Resources	Deferred Outflows of Resources
Net differences between project and actual earnings on pension plan	\$ 4,623,621	\$ 3,350,939
Changes of actuarial assumptions	3,307,958	2,055,301
Changes in proportion and differences between employer contributions and proportionate share of contributions	2,094,173	1,406,799
Employer contributions subsequent to the measurement date	<u>3,625,893</u>	<u>3,596,091</u>
Total	<u>\$ 13,651,645</u>	<u>\$ 10,409,130</u>

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS

As of and for the Years Ended December 31, 2017 and 2016

NOTE 10 – RETIREMENT PLANS (cont.)

PENSION LIABILITIES, PENSION EXPENSE, AND DEFERRED OUTFLOWS OF RESOURCES RELATED TO PENSIONS (cont.)

At December 31, 2017 and 2016, the utility reported deferred inflows of resources from the following sources:

	2017	2016
	Deferred Inflows of Resources	Deferred Inflows of Resources
Differences between projected and actual experiences	\$ 1,965,280	\$ 1,235,626
Differences in proportion and differences between employer contributions and proportionate share of contributions	10,252	4,026
Total	\$ 1,975,532	\$ 1,239,652

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, 2017. \$3,625,893 is reported for the Department. Other amounts reported as deferred outflows of resources related to pension will be recognized in pension expense as follows:

	Deferred Outflows of Resources	Deferred Inflows of Resources
<u>Year Ended December 31</u>		
2018	\$ 2,743,835	\$ 469,991
2019	2,743,834	469,991
2020	2,529,751	469,991
2021	1,472,345	370,878
2022	535,983	194,681
Thereafter	4	-
Total	\$ 10,025,752	\$ 1,975,532

Actuarial assumptions: The total pension liability was determined by an actuarial valuation as of December 31, 2015, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	3.50%
Salary Increases	4.25% - 4.75%
Investment Rate of Return	7.625%
Cost of Living Adjustments	3% of first \$12,000

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS

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NOTE 10 – RETIREMENT PLANS (cont.)

PENSION LIABILITIES, PENSION EXPENSE, AND DEFERRED OUTFLOWS OF RESOURCES RELATED TO PENSIONS (cont.)

Actuarial assumptions (cont.)

Pre-retirement:	RP-2000 Employee Mortality Table projected generationally using Scale BB2D from 2009
Healthy Retiree:	RP-2000 Healthy Annuitant Mortality Table projected using Scale BB2D from 2009
Disabled Retiree:	RP-2000 Healthy Annuitant Mortality Table projected generationally using Scale BB2D from 2015

There were no changes to the actuarial assumptions from the January 1, 2015 actuarial valuation.

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, 2017 are summarized in the following table:

<u>Asset Class</u>	<u>2017 Long-Term Expected Real Rate of Return</u>
Domestic equity	6.44%
International developed markets equity	7.40%
International emerging markets equity	9.42%
Core fixed income	2.02%
High-yield fixed income	4.43%
Real estate	5.00%
Commodities	4.43%
Hedge fund, GTAA, Risk parity	3.75%
Private equity	10.47%

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NOTE 10 – RETIREMENT PLANS (cont.)

PENSION LIABILITIES, PENSION EXPENSE, AND DEFERRED OUTFLOWS OF RESOURCES RELATED TO PENSIONS (cont.)

Discount Rate: The discount rate used to measure the total pension liability in 2017 and 2016 was 7.625%. 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 7.625%, 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 (6.625%) or 1-percentage point higher (8.625%) than the current rate.

The sensitivity analysis as of December 31, 2017 follows:

	<u>1% Decrease to Discount Rate (6.625%)</u>	<u>Current Discount Rate (7.625%)</u>	<u>1% Increase to Discount Rate (8.625%)</u>
The Department's proportionate share of the net position liability	\$ 40,269,051	\$ 30,715,656	\$ 22,646,905

The sensitivity analysis as of December 31, 2016 follows:

	<u>1% Decrease to Discount Rate (6.75%)</u>	<u>Current Discount Rate (7.75%)</u>	<u>1% Increase to Discount Rate (8.75%)</u>
The Department's proportionate share of the net position liability	\$ 39,876,380	\$ 30,700,334	\$ 22,951,497

NOTE 11 – OTHER POSTEMPLOYMENT BENEFITS – HOLYOKE GAS AND ELECTRIC

GASB Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*, requires that other postemployment benefits (OPEB), primarily healthcare, be accounted for on an accrual basis rather than on a pay-as-you-go basis. The effect is the recognition of an actuarially required contribution as an expense on the consolidated statement of revenues, expenses and change in net position when a future retiree earns their postemployment benefits, rather than when they use their postemployment benefit. To the extent that an entity does not fund their actuarially required contribution, a postemployment benefit liability is recognized on the statement of net position over time.

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS

As of and for the Years Ended December 31, 2017 and 2016

NOTE 11 – OTHER POSTEMPLOYMENT BENEFITS – HOLYOKE GAS AND ELECTRIC (cont.)

PLAN DESCRIPTION

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 cost-sharing multiple- employer postemployment welfare benefit plan.

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 was \$819,073 for 182 retirees and \$740,778 for 182 retirees in 2017 and 2016, respectively. In 2017 and 2016, the Department contributed assets into a separate legal trust, Holyoke Gas and Electric OPEB Trust, for the payment of future OPEB obligations. Contributions were \$1,200,000 in 2017 and 2016.

ANNUAL OPEB COST AND NET OPEB OBLIGATION

The Department's annual OPEB cost (expense) is calculated based on the annual required contribution (ARC) of the employer, an amount that was actuarially determined in accordance with the parameters of GASB Statement No. 45. The projected unit credit method was used in the actuarial valuations prepared as of December 31, 2015, which is the basis for the 2017 ARC calculation.

The following table shows the elements of the Department's annual OPEB cost, the amounts actually contributed, and changes in the Department's net OPEB obligation as of December 31, 2017 and 2016:

	<u>2017</u>	<u>2016</u>
Annual required contribution	\$ 1,978,662	\$ 1,891,532
Interest on net OPEB obligation	(214)	3,170
Adjustment to annual required contribution	<u>627</u>	<u>(8,069)</u>
Annual OPEB cost	1,979,075	1,886,633
Contributions made	<u>(2,019,073)</u>	<u>(1,940,778)</u>
Change in Net OPEB Obligation	(39,998)	(54,145)
Net OPEB Obligation (Asset) – Beginning	<u>(3,423)</u>	<u>50,722</u>
Net OPEB Obligation (Asset) – Ending	<u>\$ (43,421)</u>	<u>\$ (3,423)</u>

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS

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NOTE 11 – OTHER POSTEMPLOYMENT BENEFITS – HOLYOKE GAS AND ELECTRIC (cont.)

ANNUAL OPEB COST AND NET OPEB OBLIGATION (cont.)

The Department's annual OPEB cost, the percentage of annual OPEB cost contributed, and the net OPEB obligation for year ended December 31, 2017 and the two preceding years were:

<u>Period Ended</u>	<u>Annual OPEB Cost</u>	<u>Percentage of Annual OPEB Costs Contributed</u>	<u>Net OPEB Obligation (Asset)</u>
December 31, 2017	\$1,979,075	102.0%	\$ (43,421)
December 31, 2016	1,886,633	102.9%	(3,423)
December 31, 2015	1,634,479	114.2%	50,722

FUNDED STATUS AND FUNDING PROGRESS

The most recent actuarial valuation date was December 31, 2015. The funded status of the plan as of December 31, 2015 was as follows:

Actuarial accrued liability (AAL)	\$ 14,805,656
Actuarial value of plan assets	<u>5,350,291</u>
Unfunded Actuarial Accrued Liability (UAAL)	<u>\$ 9,455,365</u>
Funded ratio (actuarial value of plan assets/AAL)	36.1%
Covered payroll (active plan members)	N/A
UAAL as a percentage of covered payroll	N/A

ACTUARIAL METHODS AND ASSUMPTIONS

Actuarial valuations of an ongoing plan involve estimates for the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. Amounts determined regarding the funded status of the plan and annual required contributions of the employer are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. The schedule of funding progress, presented as required supplementary information following the notes to the financial statements, presents multiyear trend information that shows whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liabilities for benefits.

HOLYOKE GAS AND ELECTRIC

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NOTE 11 – OTHER POSTEMPLOYMENT BENEFITS - HOLYOKE GAS AND ELECTRIC (cont.)

ACTUARIAL METHODS AND ASSUMPTIONS (cont.)

Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employer and plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing benefit costs between the employer and plan members to that point. The methods and assumptions used include techniques that are designed to reduce short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations.

In the June 30, 2015, actuarial valuation, the projected unit credit actuarial cost method was used. The actuarial assumptions include a 6.25% investment rate of return and an annual healthcare cost trend rate of 10.0% for non-medicare plans and 5.5% for medicare plans initially, and then 7.5% reduced by decrements of 0.5% for five years to an ultimate rate of 5.0%. Both rates include a 3.5% inflation assumption. The actuarial value of Retiree Health Plan assets was determined using techniques that spread the effects of short-term volatility in the market value of investments over a three-year period. The plans' unfunded actuarial accrued liability is being amortized as a level percentage of projected payroll on a closed basis. The amortization period at December 31, 2017 and 2016 were 6 and 7 years, respectively.

NOTE 12 – OTHER POSTEMPLOYMENT BENEFITS ADMINISTERED THROUGH A TRUST – FIDUCIARY FUND

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 cost-sharing multiple- 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

Plan membership At June 30, 2015, the Holyoke Gas and Electric Department plan membership consisted of the following:

Inactive plan members or beneficiaries currently receiving benefit payments	181
Active plan members	<u>106</u>
Total Members	<u>287</u>

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).

HOLYOKE GAS AND ELECTRIC

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NOTE 12 – OTHER POSTEMPLOYMENT BENEFITS ADMINISTERED THROUGH A TRUST – FIDUCIARY FUND (cont.)

PLAN DESCRIPTION (cont.)

Contributions For the year ended December 31, 2017, the Department's average contribution rate was 16.61 percent of covered-employee payroll. Plan members are not required to contribute to the plan.

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 was the Department's investment allocation as of December 31, 2017:

<u>Asset Class</u>	<u>Allocation</u>
Mutual funds, ETFs and closed-end funds	86.3%
Cash and cash equivalents	<u>13.7</u>
Total	<u><u>100%</u></u>

NET OPEB LIABILITY OF THE DEPARTMENT

The components of the net OPEB liability of the Department at December 31, 2017, were as follows:

Total OPEB liability	\$ 16,554,872
Plan fiduciary net position	<u>8,828,728</u>
Department's Net OPEB Liability	<u><u>\$ 7,726,144</u></u>
Plan fiduciary net position as a percentage of the total OPEB liability	<u><u>53.33%</u></u>

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS

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NOTE 12 – OTHER POSTEMPLOYMENT BENEFITS ADMINISTERED THROUGH A TRUST – FIDUCIARY FUND (cont.)

NET OPEB LIABILITY OF THE DEPARTMENT (cont.)

Actuarial assumptions The total OPEB liability was determined by an actuarial valuation as of June 30, 2015, using the following actuarial assumptions, applied to all periods included in the measurement, unless otherwise specified:

Inflation	3.5%
	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
Salary increases	
Investment rate of return	6.25%
Non-Medicare medical/prescription drug cost Healthcare cost trend rates	10.0%, then 7.5%, decreasing 0.5% per year for 5 years to an ultimate level of 5.0% per year
Medicare medical/prescription drug cost Healthcare cost trend rates	5.5%, then 7.5%, decreasing 0.5% per year for 5 years to an ultimate level of 5.0% per year
Dental/Administrative Healthcare cost trend rates	5.0%
Pre-retirement Mortality Rates	RP-2000 Employee Mortality Table projected generationally with Scale BB2D from 2009
Healthy Mortality Rates	RP-2000 Healthy Annuitant Mortality Table projected generationally with Scale BB2D from 2009
Disabled Mortality Rates	RP-2000 Healthy Annuitant Mortality Table projected generationally with Scale BB2D from 2015
Asset Valuation Method	Market Value

GASB Statement No. 74 requires that the total OPEB liability should be determined by an actuarial valuation as of the Plan's most recent fiscal year end, or updated procedures should be performed to roll forward an actuarial valuation of the Plan as of a date no more than 24 months earlier than the Plan's fiscal year end. The June 30, 2015 actuarial valuation is as of a date more than 24 months before the Plan's fiscal year end. The Department has determined that the difference between the June 30, 2015 and December 31, 2015 valuation is not material.

HOLYOKE GAS AND ELECTRIC

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NOTE 12 – OTHER POSTEMPLOYMENT BENEFITS ADMINISTERED THROUGH A TRUST – FIDUCIARY FUND (cont.)

NET OPEB LIABILITY OF THE DEPARTMENT (cont.)

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, 2017 are summarized in the following table:

Asset Class	2017 Long-Term Expected Real Rate of Return
Domestic equity	6.44%
International developed markets equity	7.40%
International emerging markets equity	9.42%
Core fixed income	2.02%
High-yield fixed income	4.43%
Real estate	5.00%
Commodities	4.43%
Hedge fund, GTAA, Risk parity	3.75%
Private equity	10.47%

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 Bond Buyer 20-Bond General Obligation Index (3.78% as of December 31, 2016 and 3.44% as of December 31, 2017). The blending is based on the sufficiency of projected assets to make projected benefit payments.

Sensitivity of the net OPEB liability to changes in the discount rate The following presents the net OPEB liability of the Department, as well as what the Department's net OPEB liability 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:

	1% Decrease (5.25%)	Discount Rate (6.25%)	1% Increase (7.25%)
Net OPEB liability	\$ 9,807,922	\$ 7,726,144	\$ 6,005,289

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS
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NOTE 12 – OTHER POSTEMPLOYMENT BENEFITS ADMINISTERED THROUGH A TRUST – FIDUCIARY FUND (cont.)

NET OPEB LIABILITY OF THE DEPARTMENT (cont.)

Sensitivity of the net OPEB liability to changes in the healthcare cost trend rates The following presents the net OPEB liability of the Department, as well as what the Department's net OPEB liability 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:

	<u>1% Decrease</u>	<u>Healthcare Cost Trend Rates</u>	<u>1% Increase</u>
Net OPEB liability	\$ 5,665,817	\$ 7,726,144	\$ 10,275,336

NOTE 13 – 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 2017 and 2016.

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 \$24,498 in 2017 and \$110,824 in 2016. One of the Department's commissioners has a financial interest in this company, requiring disclosure.

NOTE 14 – 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 2018 through 2021, where commitments were made by end of 2017 in the amount of \$740,082 for 2018 and \$703,032 for the three year period from 2019-2021.

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS

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NOTE 14 – COMMITMENTS AND CONTINGENCES (cont.)

PURCHASED POWER CONTRACTS (cont.)

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 end of 2017 resulting in revenues to the Department in the amount of \$2,598,758 for 2018 based on 253,297 certificates and \$206,000 for 2019 based on 10,000 certificates.

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 that expired on October 31, 2015, and was extended formally to December 31, 2015 then again verbally through February 29, 2016. The conditions are currently on a month to month basis with a new multi-year agreement planned between parties before year end of 2018.

Solar power - In December, 2010, the Department, through its subsidiary Holyoke Solar Cooperative, signed a 20 year solar Power Purchase Agreement with Holyoke Solar, LLC (the Seller). The Department has agreed to purchase the electricity produced by two grid-connected solar power facilities which will vary between \$265,000 and \$425,000 annually. 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 (the Seller). The Department agreed to purchase the electricity produced by the photovoltaic solar electric generation system for an annual payment of between \$48,000 - \$72,000 beginning in February 2013. After the initial term, this agreement shall automatically renew for successive one-year terms, up to a maximum of ten 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, for a 0.997 MW-dc project. The annual energy payment will vary between \$54,200 and \$61,200 over a twenty-five (25) year contract term beginning October 2015.

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 twenty (20) year PPA's signed in October 2015 – with annual total energy payments that will vary between \$101,000 and \$104,000. Below is a summary for each solar project.

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NOTES TO FINANCIAL STATEMENTS
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NOTE 14 – COMMITMENTS AND CONTINGENCES (cont.)

PURCHASED POWER CONTRACTS (cont.)

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 end of 2017 resulting in revenues to the Department in the amount of \$2,598,758 for 2018 based on 253,297 certificates and \$206,000 for 2019 based on 10,000 certificates.

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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 twenty (20) year PPA's signed in October 2015 – with annual total energy payments that will vary between \$101,000 and \$104,000. Below is a summary for each solar project.

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS

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NOTE 14 – COMMITMENTS AND CONTINGENCES (cont.)

PURCHASED POWER CONTRACTS (cont.)

Date of PPA	System Name	MW-DC	Annual Energy Payment	Commercial Operation Date
July 2016	Mt. Tom Solar	5.7647	\$303,460 to \$335,460 over term	2-3-17
October 2016	AEGIS	0.9487	\$48,366 to \$53,466 over term	1-4-17
October 2016	Gary Rome	0.7638	\$37,943 to \$41,944 over term	1-6-17
December 2016	Conklin	0.8000	\$47,745 to \$49,689 over term	2-24-17

The Department contracted for several 20 year solar PPA's during 2017 with various solar developers. Below is a summary for each solar project.

Date of PPA	System Name	MW-DC	Annual Energy Payment	Commercial Operation Date
January 2017	Riverside Roof	0.1750	\$7,686 to \$10,012 over term	5-8-17
June 2017	Walnut Roof	0.1485	\$7,686 to \$9,616 over term	11-22-17
June 2017	Hadley Mills	0.4150	\$22,915 to \$28,902 over term	12-29-17
September 2017	Jackson Street	0.1517	\$7,987 to \$8,786 over term	Pending Est. 4-1-18
November 2017	Boys & Girls Club	0.2189	\$11,531 to \$12,683 over term	Pending Est. 4-1-18
October 2015 & reassigned December 2017	Kelly Way 2	0.6000	\$50,547 to \$51,792 over term	Pending Est. 4-1-18

Long-Term Power Transactions -- In December 2011, the Department signed a ten year contract with Nextera Energy Power Marketing to purchase on-peak physical energy each year at an estimated cost of \$2,400,000. For the four (4) years remaining to the contract, the total future commitment is \$9,640,752.

In September, 2015, the Department executed a four (4) year contract starting October 1, 2015 with Nextera Energy Power Marketing for 2.5 MW of around-the-clock energy each year. The annual energy payment will be around \$995,793 and for the 1.9 years remaining to the contract, the total future commitment is \$1,740,478. At the same time, the Department executed a four (4) year contract with the Massachusetts Green High Performance Computing Center, Inc. locking in the Energy Only piece of the rate to cover this transaction.

In December 2013, the Department signed a twenty-five (25) year PPA for 6.032 MW of energy and capacity out of the Hancock Wind Project, located in Hancock County, Maine. The annual energy payment will be about \$813,200 based on an estimate of 14,267 MWh per year over the contract term for this project that had an estimated commercial operation date of December 2016.

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS
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NOTE 14 – COMMITMENTS AND CONTINGENCES (cont.)

PURCHASED POWER CONTRACTS (cont.)

In October 2015, the Department contracted with MMWEC to participate at 10.00 MW 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 2.1 MW for life of unit with expected COD beginning June 2021. If the project clears the FCA, HG&E's estimated portion of construction costs is approximately \$9,100,000. As the project is MMWEC owned, the Department will not carry project debt on its books. The annual total costs will vary between \$355,784 and \$380,237 over the thirty (30) year life of unit.

In December 2015, the Department contracted with Scuderi Clean Energy, LLC under a twenty (20) year PPA for a 4.200 MW natural gas generator. Expected Commercial Operation date is April 1, 2018. 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 twenty (20) year PPA for a 3,000 kW-AC lithium-ion battery based energy storage system (ESS) located at the Mt Tom Solar facility. Expected Commercial Operation date is March 31, 2018. The annual fixed capacity payment will be \$360,000. The Department negotiated liquid damages to be paid by Mt. Tom Solar, LLC if the ESS is not operational during monthly transmission or annual capacity events.

Long-Term Capacity Transaction – In January 2016, the Department contracted with PSEG through MMWEC under a five (5) year Capacity Load Obligation Transfer contract for 15 MW. This capacity hedge begins June 1, 2019 and 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.

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NOTE 14 – COMMITMENTS AND CONTINGENCES (cont.)

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 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). Among other things, the PSAs require each Project Participant to pay its pro rata share of MMWEC's costs related to the Project, which include debt service on the revenue bonds issued by MMWEC to finance the Project, plus 10% of MMWEC's debt service to be paid into a Reserve and Contingency Fund. 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 to an additional amount not to exceed 25% of their original 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.

MMWEC has issued separate issues of revenue bonds for each of its eight Projects, which are payable solely from, and secured solely by, the revenues derived from the Project to which the bonds relate, plus available funds pledged under MMWEC's Amended and Restated General Bond Resolution (GBR) with respect to the bonds of that Project. The MMWEC revenues derived from each Project are used solely to provide for the payment of the bonds of any bond issue relating to such Project and to pay MMWEC's cost of owning and operating such Project and are not used to provide for the payment of the bonds of any bond issue relating to any other Project.

MMWEC operates the Stony Brook Intermediate Project and the Stony Brook Peaking Project, both fossil-fueled power plants. MMWEC has a 3.7% interest in the W.F. Wyman Unit No. 4 plant, which is operated and owned by its majority owner, FPL Energy Wyman IV, LLC, a subsidiary of NextEra Energy Resources LLC, and a 4.8% ownership interest in the Millstone Unit 3 nuclear unit, operated by Dominion Nuclear Connecticut, Inc. (DNCI), the majority owner and an indirect subsidiary of Dominion Resources, Inc. DNCI also owns and operates the Millstone Unit 2 nuclear unit. The operating license for the Millstone Unit 3 nuclear unit extends to November 25, 2045.

A substantial portion of MMWEC's plant investment and financing program is an 11.6% ownership interest in the Seabrook Station nuclear generating unit operated by NextEra Energy Seabrook, LLC (NextEra Seabrook) the majority owner and an indirect subsidiary of NextEra Energy Resources LLC. The operating license for Seabrook Station extends to March 15, 2030. NextEra Seabrook has submitted an application to extend the Seabrook Station operating license for an additional 20 years.

Pursuant to the PSAs, the MMWEC Seabrook and Millstone Project Participants are liable for their proportionate share of the costs associated with decommissioning the plants, which costs are being funded through monthly Project billings. Also, the 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.

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS

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NOTE 14 – COMMITMENTS AND CONTINGENCES (cont.)

MASSACHUSETTS MUNICIPAL WHOLESALE ELECTRIC COMPANY (cont.)

The Department has entered into PSAs and Power Purchase Agreements (PPAs) with MMWEC. Under both the PSAs and PPAs, the Department is required to make certain payments to MMWEC payable solely from Department revenues. Under the PSAs, each Participant is unconditionally obligated to make all 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).

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

As of December 31, 2017, total capital expenditures for MMWEC's Projects amounted to \$1,583,481,000 of which \$45,442,000 represents the amount associated with the Department's Project Capability. MMWEC's debt outstanding for the Projects includes Power Supply Project Revenue Bonds totaling \$10,680,000, of which \$210,000 is associated with the Department's share of Project Capability. As of December 31, 2017, MMWEC's total future debt service requirement on outstanding bonds issued for the Projects is \$11,425,000 of which \$217,000 is anticipated to be billed to the Department in the future.

The estimated aggregate amount of the Department's required payments under the PSAs and PPAs, exclusive of the Reserve and Contingency Fund billings, to MMWEC at December 31, 2017 and estimated for future years is shown below.

For the Years Ended December 31,

2018	\$	217,000
2019		<u>-</u>
Total	\$	<u>217,000</u>

In addition, under the PSAs, the Department is required to pay its share of the operation and maintenance (O&M) costs of the Projects in which they participate. The Department's total O&M costs including debt service under the PSAs were \$2,975,000 and \$4,167,000 for the years ended December 31, 2017 and 2016, respectively.

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

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.

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS

As of and for the Years Ended December 31, 2017 and 2016

NOTE 14 – COMMITMENTS AND CONTINGENCES (cont.)

HYDROELECTRIC FACILITY

As part of the Department's purchase of hydroelectric generating assets and a distribution franchise in 2001, FERC required certain modifications to the hydroelectric facility. As of 2017, the Department has spent approximately \$32.5 million. Most of the commitments have been fulfilled.

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.

Effective February 2003, the Department increased the gas rates in order to collect additional dollars for clean-up of the gas works site and is accruing amounts, based on management's best estimate of the probable and reasonably estimable costs related to this clean-up. The current estimate for the remaining clean-up of only the land site is approximately \$165,000. 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-seven 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 expired March 31, 2017.

LINE OF CREDIT – MARGIN ACCOUNT

As of December 31, 2017 and 2016, the Department received funds of \$8,277,541 and \$2,518,464, respectively, on a line of credit from LPL Financial Investment Advisors. The current interest rate on the line of credit is 3.25%. The interest rate is calculated as a 4.5% discount of LPL base lending rate. The current LPL interest rate on balances over \$1,000,000 is 7.75%. The Department receives a 4.5% discount and is therefore paying 3.25%. The interest rate is subject to change at any time and is based on commercially recognized interest rates, industry conditions relating to the extension of credit and general market conditions. The Department intends to utilize interest and dividend income earned in 2018 to pay down the line of credit. LPL has been authorized to automatically utilize dividend and interest income to pay down the line of credit.

HOLYOKE GAS AND ELECTRIC

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NOTE 14 – COMMITMENTS AND CONTINGENCES (cont.)

CLAIMS AND JUDGMENTS

From time to time, the utility is party to various pending claims and legal proceedings. Although the outcome of such matters cannot be forecasted with certainty, it is the opinion of management and the utility's legal counsel that the likelihood is remote that any such claims or proceedings, other than those listed above, will have a material adverse effect on the utility's financial position or results of operations.

NOTE 15 – RISK MANAGEMENT

The utility 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 utility 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.

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 utility 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 \$400,000 and general liability insurance through the risk pool for \$50,000 to \$10,000,000 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

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

NOTES TO FINANCIAL STATEMENTS

As of and for the Years Ended December 31, 2017 and 2016

NOTE 16 – SUBSEQUENT EVENTS

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

The Department is currently operating as the Emergency Operator for Mass Broadband Institute (MBI), and has a draft agreement with MBI to become their Network Operator. Axia is currently acting as the MBI Network Operator. The agreement has not been executed as of the date the financial statements were issued.

The Department elected to finance the design and construction of the Holyoke 17L substation replacement through Holyoke Solar. This loan was approved by Peoples Bank on March 28, 2018 and executed on April 25, 2018. The total amount to be financed is \$9,500,000. The interest rate on the loan is 3.94%.

The outstanding Scannell Solar, LLC loan was paid off to the Department on April 27, 2018.

The Department increased electric rates by 4.5% effective January 1, 2018.

REQUIRED SUPPLEMENTARY INFORMATION

HOLYOKE GAS AND ELECTRIC

SCHEDULE OF PROPORTIONATE SHARE OF THE NET PENSION LIABILITY 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.

	<u>2017</u>	<u>2016</u>	<u>2015</u>
Holyoke Gas and Electric's proportion of the net pension liability	21.0663720%	20.7392330%	20.4671670%
Holyoke Gas and Electric's proportionate share of the net pension liability	\$ 30,715,656	\$ 30,700,334	\$ 27,426,467
Holyoke Gas and Electric's covered employee payroll	\$ 11,381,012	\$ 10,862,753	\$ 10,776,026
Plan fiduciary net position as a percentage of the total pension liability	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*

	<u>2017</u>	<u>2016</u>	<u>2015</u>
Contractually required contributions	\$ 3,711,165	\$ 3,596,091	\$ 3,526,919
Contributions in relation to the contractually required contributions	(3,711,165)	(3,596,091)	(3,526,919)
Contributions deficiency (excess)	-	-	-
Holyoke Gas and Electric's covered-employee payroll	11,779,347	11,381,012	10,862,753
Contributions as a percentage of covered-employee payroll	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.

See independent auditors' report and accompanying notes to required supplementary information.

HOLYOKE GAS AND ELECTRIC

SCHEDULE OF FUNDING PROGRESS OTHER POST-EMPLOYMENT BENEFITS December 31, 2017 and 2016

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Liability (AAL) - Projected Unit Credit (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
12/31/2015	\$ 5,350,291	\$ 14,805,656	9,455,365	36.1%	N/A	N/A
12/31/2014	4,411,653	11,362,451	6,950,798	38.8%	N/A	N/A
6/30/2013	-	10,596,663	10,596,663	0.0%	N/A	N/A

Note: the studies completed prior to December 31, 2014 related to the City of Holyoke as a whole and were completed as of the city's fiscal year end. A new study was completed for the Department due to a change in funded status during October 2014. The December 31, 2015 study is the latest study available.

See independent auditors' report.

HOLYOKE GAS AND ELECTRIC

SCHEDULE OF CHANGES OF THE NET OPEB LIABILITY City of Holyoke Retirement System Last 10 Fiscal Years*

	<u>2017</u>
Total OPEB Liability	
Service Cost	\$ 526,946
Interest Cost	998,426
Benefit payments, including refunds of member contributions	<u>(824,241)</u>
Net change in total OPEB liability	<u>701,131</u>
 Total OPEB Liability - Beginning	 <u>15,853,741</u>
 Total OPEB Liability - Ending	 <u>\$ 16,554,872</u>
 Plan Fiduciary Net Position	
Contributions - employer	\$ 2,024,241
Net investment income	840,362
Benefit payments, including refunds of member contributions	<u>(824,241)</u>
Net change in fiduciary net position	<u>2,040,362</u>
 Plan Fiduciary Net Position - Beginning	 <u>6,788,366</u>
 Plan Fiduciary Net Position - Ending	 <u>\$ 8,828,728</u>
 Net OPEB Liability	
Net OPEB liability	\$ 7,726,144
Plan's fiduciary net position as a percentage of the total OPEB liability	53.33%
Covered-employee payroll	12,187,515
Net OPEB liability as a percentage of covered-employee payroll	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 one year is available for disclosure.

See independent auditors' report and accompanying notes to required supplementary information.

HOLYOKE GAS AND ELECTRIC

SCHEDULE OF CONTRIBUTIONS - OTHER POST-EMPLOYMENT BENEFITS City of Holyoke Retirement System Last 10 Fiscal Years*

	<u>2017</u>
Actuarially determined contribution	\$ 1,978,662
Contributions in relation to the actuarially determined contribution	<u>2,024,241</u>
Contribution Deficiency (Excess)	<u>\$ (45,579)</u>
Covered-employee payroll	12,187,515
Contributions as a percentage of covered-employee payroll	16.61%

* 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 one year is available for disclosure.

See independent auditors' report and accompanying notes to required supplementary information.

HOLYOKE GAS AND ELECTRIC

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION - PENSIONS For the Year Ended December 31, 2017

Changes of benefit terms: There were no changes of benefit terms for any participating employer in the City of Holyoke Retirement System.

Changes of assumptions: There were no changes of assumptions for any participating employer in the City of Holyoke Retirement System.

See independent auditors' report

HOLYOKE GAS AND ELECTRIC

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION – OTHER POST-EMPLOYMENT BENEFITS

For the Year Ended December 31, 2017

Factors significantly affecting trends in the amounts reported:

Inflation	3.50%	
		Service-related increases for Group 1: 6.0% per year decreasing over 9 years to 4.25% per year
Salary increases		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%	
Pre-retirement Mortality Rates		RP-2000 Employee Mortality Table projected generationally with Scale BB2D from 2009
Healthy Mortality Rates		RP-2000 Healthy Annuitant Mortality Table projected generationally with Scale BB2D from 2009
Disabled Mortality Rates		RP-2000 Healthy Annuitant Mortality Table projected generationally with Scale BB2D from 2015

Significant Methods and assumptions used in calculating actuarially determined contributions:

Valuation Date		Actuarially determined contribution for fiscal year ending December 31, 2017 was determined with the June 30, 2015 actuarial valuation
Actuarial cost method		Projected Unit Credit Method
Amortization method		Level percent of payroll
Remaining amortization period		7 years from December 31, 2015
Asset valuation method		Market value
Discount rate		6.25%
Inflation		3.50%
Health care trend rates*		10.0%, then 7.5% decreasing by 0.5% for 5 years to an ultimate level of 5.0% per year
<i>Non-Medicare medical/prescription drug</i>		5.5%, then 7.5% decreasing by 0.5% for 5 years to an ultimate level of 5.0% per year
<i>Medicare medical/prescription drug</i>		5.0%
<i>Dental/Administrative</i>		5.0%
<i>Contributions</i>		Retiree contributions for medical and prescription drug coverage are expected to increase with medical trend

*Trends reflect known increases for the first year

See independent auditors' report

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

For the Years Ended December 31, 2017 and 2016

	<u>2017</u>	<u>2016</u>
OPERATING REVENUES		
Residential	\$ 8,579,285	\$ 7,864,188
Commercial	8,998,370	7,955,508
Industrial	1,827,713	1,686,142
Municipal	682,126	590,110
Departmental sales	80,897	69,793
Sales for resale	757,398	1,196,459
Uncollectible accounts	<u>(45,202)</u>	<u>(36,501)</u>
Total Operating Revenues	<u>\$ 20,880,587</u>	<u>\$ 19,325,699</u>
COST OF GAS SOLD		
Purchases - natural gas	\$ 8,853,326	\$ 7,549,836
Liquid natural gas processed	564,050	720,169
Environmental response	140,000	144,000
Supplies and expenses	<u>179,715</u>	<u>194,340</u>
Total Cost of Gas Sold	<u>\$ 9,737,091</u>	<u>\$ 8,608,345</u>
DISTRIBUTION		
Salaries and Wages		
System control and load dispatch	\$ 356,336	\$ 350,566
Supervision and engineering	240,412	243,107
Customer installation	549,497	486,942
Operation	584,045	496,989
Maintenance	905,819	961,422
Supplies and expenses	<u>1,102,999</u>	<u>1,207,893</u>
Total Distribution	<u>\$ 3,739,108</u>	<u>\$ 3,746,919</u>
CUSTOMER ACCOUNTS		
Salaries and Wages		
Meter reading	\$ 63,799	\$ 67,022
Accounting and collection	155,047	151,140
Supplies and expenses	<u>60,193</u>	<u>73,266</u>
Total Customer Accounts	<u>\$ 279,039</u>	<u>\$ 291,428</u>
GENERAL AND ADMINISTRATIVE		
Salaries	\$ 936,921	\$ 815,247
Pensions and benefits	1,672,894	1,742,419
Insurance	151,767	145,522
General supplies and expenses	<u>710,025</u>	<u>616,776</u>
Total General and Administrative	<u>\$ 3,471,607</u>	<u>\$ 3,319,964</u>

HOLYOKE GAS AND ELECTRIC

SCHEDULES OF OPERATING REVENUES AND EXPENSES - ELECTRIC AND TELECOMMUNICATIONS DIVISIONS For the Years Ended December 31, 2017 and 2016

	2017	2016
OPERATING REVENUES		
Electric Sales		
Residential	\$ 12,403,431	\$ 12,562,062
Commercial	21,214,721	21,281,406
Industrial	5,601,088	5,678,877
Municipal	2,678,368	2,625,507
Interdepartmental	292,883	295,062
Water	6,300	6,300
Renewable energy revenue	804,986	2,773,448
Cobble Mountain operation - net	574,360	610,503
Telecommunication sales	2,423,055	2,245,051
Uncollectible accounts - electric/hydro	(156,928)	(111,003)
Uncollectible accounts - telecommunications	(1,095)	(1,444)
Total Operating Revenues	\$ 45,841,169	\$ 47,965,769
COST OF ELECTRICITY/STEAM/WATER SOLD		
Purchases - electricity	\$ 12,906,594	\$ 13,842,914
Salaries and Wages		
Production	1,316,394	1,300,502
Maintenance	1,490,619	1,440,040
Supplies and expenses	2,124,681	1,928,167
Cost of water sold	389,347	387,705
Total Cost of Electricity/Steam/Water Sold	\$ 18,227,635	\$ 18,899,328
ELECTRIC TRANSMISSION		
Salaries and wages	\$ 705,698	\$ 742,080
Supplies and expenses	511,541	106,214
Transmission by others	3,432,507	3,189,401
Total Electric Transmission	\$ 4,649,746	\$ 4,037,695
DISTRIBUTION		
Electric		
Salaries and Wages		
Lines, equipment and street lights	\$ 2,729,498	\$ 2,130,214
Customer installations	228,661	210,653
Supplies and expenses	2,393,141	2,372,330
Telecommunications distribution	1,346,978	1,201,718
Total Distribution	\$ 6,698,278	\$ 5,914,915
CUSTOMER ACCOUNTS		
Electric		
Salaries and Wages		
Meter reading	\$ 124,541	\$ 123,506
Accounting and collection	287,941	280,689
Supplies and expenses	105,607	126,748
Total Customer Accounts	\$ 518,089	\$ 530,943
GENERAL AND ADMINISTRATIVE		
Electric		
Salaries	\$ 1,714,237	\$ 1,563,156
Pensions and benefits	3,381,025	3,975,417
Insurance	518,820	517,793
General supplies and expenses	2,108,907	1,695,949
Telecommunications general and administrative	512,956	594,185
Total General and Administrative	\$ 8,235,945	\$ 8,346,500

