

A photograph of a city street at dusk. In the foreground, a large, glowing street lamp is out of focus. The street is lined with cars, and several other street lamps are visible. In the background, there are buildings and traffic lights. The sky is a deep blue, and the overall atmosphere is that of a busy city at twilight.

 **HGE**[&]

2016

2016 ANNUAL REPORT



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

Submitted herewith is the One Hundred and Fourteenth Annual Report of the City of Holyoke Gas & Electric Department (HG&E) for the year ending December 31, 2016.

2016 was an exciting and productive year for HG&E. We completed major capital improvement projects on schedule, closed the year with strong financial performance, and maintained some of the most competitive rates in the region.

While this year was five percent warmer than the ten-year average, HG&E set an all-time record for peak natural gas consumption on February 14, 2016. The Gas Division continues to operate its LNG storage and vaporizing system, providing the extra gas needed to meet peak demand. The division also continued its ongoing distribution system upgrade program with replacements of bare steel services and cast iron mains.

The Electric Division continued an aggressive capital improvement program, helping to reduce costs and improve system reliability. During 2016, in efforts to enhance its low-cost clean energy portfolio, the Department worked with various solar developers to break ground on six new solar projects totaling approximately 10 MW. In 2016, 55.92% of the Department's generation was from renewable resources (hydro, solar, and wind) and 82.89% of its generation was carbon free.

In the Hydro Division, a number of projects were completed that will contribute to future generation capacity and reliability. Specifically, the Hadley Falls Unit 1 overhaul, which was completed in April 2016, will increase generating capacity of the unit by 10.8% or 1.7 MW. In addition, HG&E began testing the new downstream fish passage facilities that were completed in December of 2015.

The Telecommunications Division continued strong sales growth in fiber-optic internet and hosted business telephone delivered over the HG&E 10G network. In addition to serving as Department and city IT technical support, the Department continued management and expansion of fiber-optic wide area network (WAN) service contracts for customers with multilocation requirements. HG&E also made significant investments to improve its cybersecurity posture.

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 2016, HG&E provided safety and environmental education programs to more than 5,000 Holyoke students and seniors. In addition, HG&E employees volunteered over 3,000 hours in support of local community organizations.

We thank the 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 2016, THE DEPARTMENT INSTALLED 71 SERVICE LINES TO NEW CUSTOMERS AND REPLACED OR RETIRED 300 EXISTING OLDER SERVICES IN HOLYOKE.

NEW SERVICES

In 2016, the Department installed 71 service lines to new customers. The Department also replaced or retired 300 existing older services in Holyoke by installing new plastic pipe or inserting it through older existing steel lines.

Per HG&E's Distribution Integrity Management Plan (DIMP), which was implemented in August 2011, the Department embarked on a ten-year bare steel service replacement program. There are currently approximately 1,533 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 a total of one mile of small diameter, wrought iron, and cast iron pipes with new plastic pipes on View Street, Davis Street, Gates Street, Caston Street, Orchard Street, Loomis Avenue, and Pinehurst Street. An additional 400 feet of pipe was abandoned, the majority of it on Nonotuck Street. The new plastic mains are generally 4" or 6" in diameter.

On Richard Eger Drive and Lower Westfield Road, the Department replaced 1,600 feet of steel main with new 2" plastic mains and also replaced eight residential gas services in the area. In Southamptton, mains were extended on two new subdivisions, Woodmare Lane and Halons Way. Approximately, 1,700 feet of 2" plastic pipe was installed to serve these new streets.

In all, the Department installed over 8,918' of new mains and 356 new and replacement services. HG&E's natural gas distribution system now consists of over 185 miles of mains and 7,959 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 3,800 lines in 2016, or about one-half of the service pipes in the system. The combined surveys accounted for the detection of 177 leaks, mostly minor. All leaks were investigated and prioritized. A total of 286 leaks were repaired and/or eliminated in 2016, and the remainder were monitored throughout the year or scheduled for repair, consistent with the applicable safety regulations.



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Serviceman Gavin O'Hara

GAS SUPPLY AND FLOW CONTROL

The Department delivered 2,165,338 dekatherms (DTH) of gas in 2016, with a peak daily send-out of 19,729 DTH on February 14, which represented a new system peak. Of that, 12,314 DTH was delivered over the pipeline and 7,415 DTH was supplemented by liquefied natural gas (LNG). This year was five percent warmer than the ten-year average, with 5,906 heating degree days compared to the ten-year average of 6,202. 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, if needed.

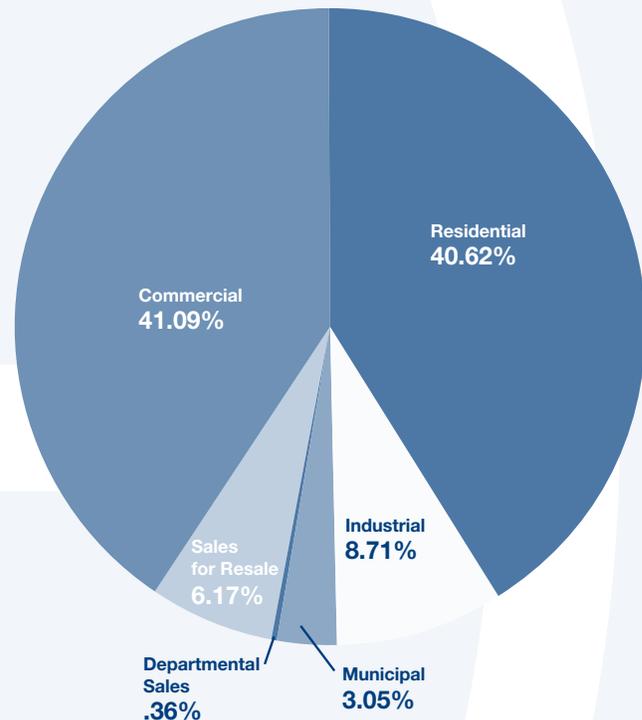
The Whiting Farms and Route 5 regulator stations were rebuilt; new regulators and safeties were installed. This station feeds the south end of the low pressure system on Route 5. The upgrade of the Old Gas Works regulator station was also completed, 184 feet of 16-inch pipe was installed from the regulator station to feed a large portion of the downtown area. The new pipe, along with the previously installed regulators, will make the station more reliable into the future.

SERVICE

The Department completed 4,472 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 1,612 gas meters were changed to comply with the state-mandated seven-year meter exchange requirement. The Service Department completed a total of 3,203 corrosion inspections as service orders for gas and electric meter turn-ons and turn-offs 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 read meters that were being transferred between customers.

SERVICE DEPARTMENT EMPLOYEES ATTENDED OVER 1,200 HOURS OF TRAINING IN 2016, INCLUDING NEW TECHNOLOGY, GAS PROCEDURES (OQ), AND SAFETY.

2016 GAS REVENUES





ELECTRIC PRODUCTION

HYDROELECTRIC FACILITIES

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 Unit 1 Modernizing Plans: The Hadley Falls Unit 1 overhaul began on May 18, 2015, and commissioning was completed in April 2016. The Department received a \$1,000,000 grant from the Massachusetts Department of Energy Resources (DOER) for the project. A baseline index test was completed on the unit. An independent third-party analysis was performed and confirmed that the unit met its contract guarantees for a capacity increase of 1.7 MW, or 10.8% capacity.

Emergency Generators: Emergency generators were replaced at the Gatehouse, Overflow #3, and Overflow #4. Work included replacement of generators, transfer switches, and tie-in to electrical control system.

Hadley Station City Water Line Replacement: The Department completed phase 1 of the Hadley Station city water line replacement project. The water line was replaced from the Hadley Station entrance gate to the 12" city water line adjacent to Conklin Furniture. The new 8" pipe replaces the existing 6" pipe.

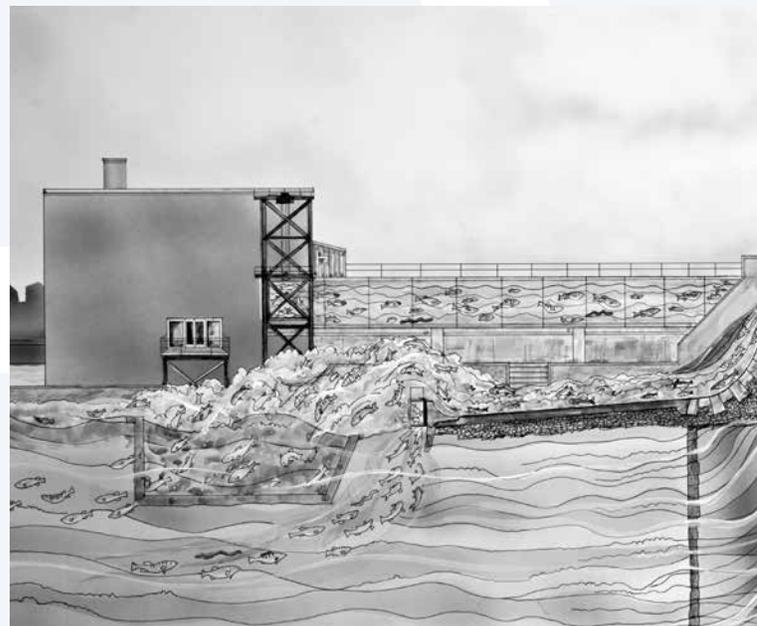
Hadley Station Downstream Fish Passage Project: The Department completed the installation of the new downstream fish passage facility in December 2015. In 2016, HG&E began testing the new facilities. As part of the testing phase, radio tagging studies were deployed, including: monitoring movements of American eels as well as adult and juvenile American shad. Results of the testing are expected to be available in the first Quarter of 2017.

All 2016 wetlands monitoring and reporting requirements were completed. Additional monitoring and reporting will be required in 2017.

Visitor Center for new Hadley Station Facility: In September 2016, a contract was awarded for the fabrication and installation of a new modular building (48'x26') at Hadley Station. By the end of the 2016, concrete foundations and floor slabs were placed and utilities were extended to the new foundations. Building delivery is scheduled for mid-January 2018 and will be completed in the first quarter of the year.

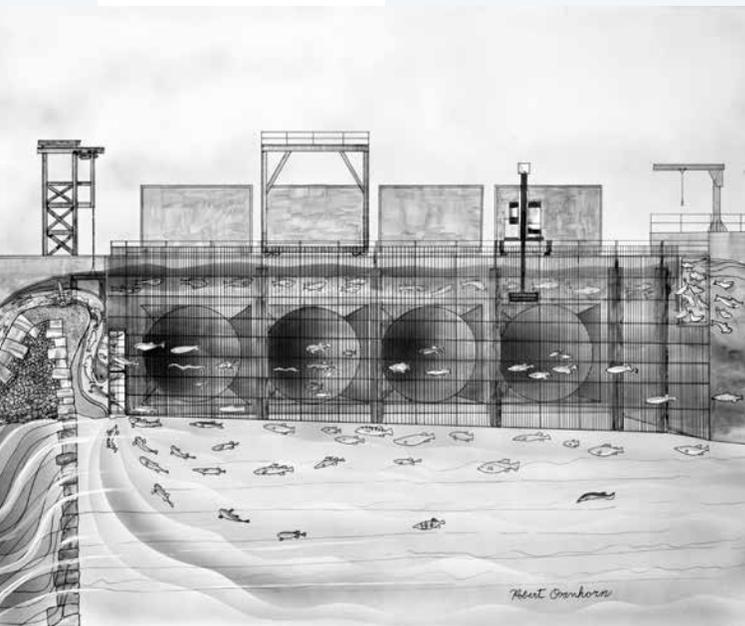
Riverside #8 Intake Rack Replacement: A new galvanized steel intake rack was installed in September 2016.

HYDRO



View of Hadley Station in 2016 after recent improvements in downstream passage.

PRO



City Hydro #3: Installation of new rubber membrane roof with insulation and replacement of louver/station vents.

Riverside A/B Building: Installation of new rubber membrane roof with insulation was fabricated and installed.

OTHER PROJECTS

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

Chemical Station: Replacement of the tailrace weir for both units.

Rubber Dam: Performed repair to small tear in bladder #2.

Hadley Station Headworks: Replacement of steel grating with serrated nonslip grating.

Hadley Station Gantry Crane Replacement: The Department awarded a contract in September for the replacement of the Hadley Station Gantry Crane. The crane will be replaced in 2017.

Overflow #4: Installation of new galvanized steel fencing at the railroad bridge to restrict access to the 3rd Level Canal.

PRODUCTION: ADDITIONAL ACTIVITIES

ENVIRONMENTAL PROJECTS INCLUDED:

- Monitoring of invasive plant species along the impoundment, and ongoing efforts to control water chestnuts in Log Pond Cove.
- Annual water quality monitoring of project operations.

Robert E. Barrett Fishway Operations: In 2016, 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.



The Holyoke Dam at Hadley Falls Station

2016 FISH PASSAGE

The fish lift at the Robert E. Barrett Fishway assists migrating fish 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 comprises 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 this year included:

AMERICAN SHAD	385,930
ATLANTIC SALMON	3
BLUEBACK HERRING	137
GIZZARD SHAD	598
SEA LAMPREY	35,249
SHORTNOSE STURGEON	94
STRIPED BASS	638

In addition to the fishlift, there are 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 2016 was 38,449.

In 2016, the public viewing facility at the Barrett Fishway was open from May 4 through June 12 and attracted 8,039 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 initiatives.

2016 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 2016 Shad Derby was held on the weekends of May 14-15 & 21-22. The event attracted 131 registrants in the Senior Division and 30 registrants in the Junior Division. Richard Pianka of Cromwell, Connecticut, won the first place award in the 2016 Senior Division with a 4 lbs. 9.5 oz. shad. Connor Riopelli, of Holyoke led the Junior Division with a 4 lbs. 2.5 oz. shad. The John DiNapoli Award for the first shad caught by a youth went to Conner St. Cyr of Spencer.



ELECTRIC DIVISION



LED street lights at Veteran's Park

ELECTRIC OPERATIONS

In 2016, a number of projects were completed which will increase the reliability of the Department's electric substation and transmission infrastructure.

THESE PROJECTS INCLUDED:

Holyoke Substation Replacement – Phase I: This project entails replacing the existing 115/13.8kV dual transformer substation, which is currently near the end of its life and is over firm capacity. In 2016, the Department developed a cost / benefit analysis of the various upgrade options, determined the best option, created a preliminary design and station arrangement, developed an implementation plan and schedule, and started the regulatory approval process. In 2017, final regulatory approval will be obtained and bids will be issued for major equipment and a general contractor. In addition, the Department will start preliminary demolition and construction activities to make room for the new station. The project is currently planned to be completed in late 2019.

West Holyoke Substation Replacement – Phase I: This project entails replacing the existing 13.8/4.8kV dual transformer substation with a 13.8kV switching station. All 4.8kV distribution load had previously been converted to 13.8kV. In 2016, the department demolished the old transformers and 4.8kV switchgear, completed a design for the new switching

station, ordered major equipment, and completed all site work, including installation of new ductbank and bases for the new switchgear. HG&E provided design assistance to Electric Distribution for a new 13.8kV feeder out of Ingleside Substation to serve some of the converted 4.8kV load. In 2017, installation and commissioning of the new switchgear and installation of a new SCADA RTU for remote monitoring will be completed.

Protection System Maintenance Plan (PSMP): This project entailed designing and implementing a program for testing and maintaining the Department's protection systems for bulk electric system equipment. This was a NERC regulatory requirement. As part of the program, 28 CT/PT checks and 34 trip circuit verification checks were completed on various equipment.

SCADA Replacement: This project entailed replacing all server and workstation hardware, and upgrading to the latest revision of the master station software.

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, 331 maintenance orders were completed, including major maintenance and/or testing on:

- **Four (4) 13.8/4.8kV power transformers and LTCs at Highland and Walnut Substations**
- **Thirty-three (33) 15kV vacuum circuit breakers at Holyoke and Ingleside Substations**
- **Three (3) 115kV SF6 circuit breakers at North Canal 44P Substation**
- **One (1) 125 VDC station battery system at Holyoke Substation**
- **Three (3) 115kV CCVTs at Ingleside Substation**

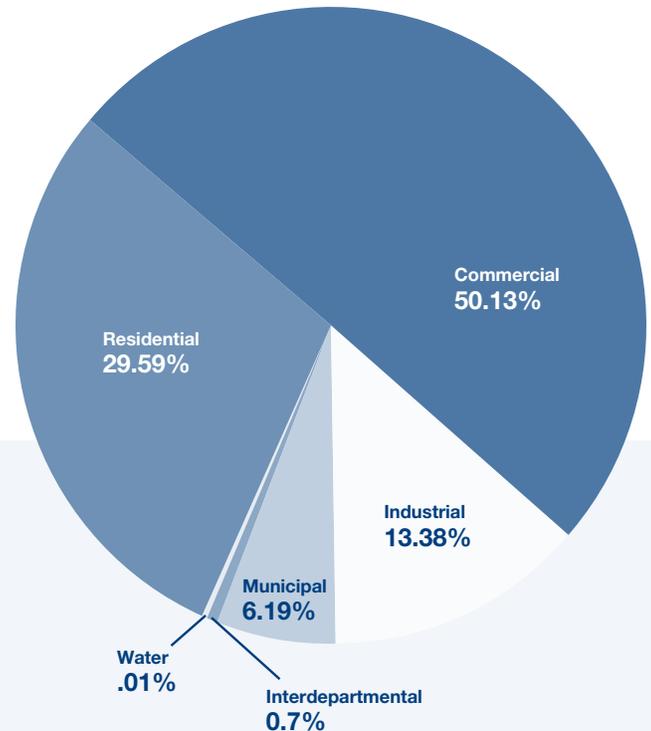
Support for electric distribution and hydroelectric production during the year included the preparation of 130 switching orders with clearances issued for planned and emergency high-voltage work, assistance with the replacement of four transmission poles, assistance with the replacement of the Cobble Mountain generator lead lines, and assistance with the interconnection processes for various solar projects. Maintenance/repair operations were also performed as required on various 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

Electric distribution system improvements in 2016 included the replacement of a 300' section of underground primary cable at the Loomis House on Jarvis Avenue and ground-mounted, oil-filled transformers with pole-mounted, FR3-filled transformers at the site of the former Mt. Tom Substation. The primary metering equipment at the Open Square complex on Dwight Street was also removed, and a new 1000kVA padmount transformer replaced an existing 2500kVA station type transformer to reduce system losses.

The last phase of a two-year project to convert the WH1 circuit (located on Westfield Road between the I-91 overpass and Homestead Avenue between Westfield Road and Lower Westfield Road, including all nearby streets) from 4800v to 13800v was completed. System upgrades included replacing approximately 7,500' of overhead primary wire, 2,200' of secondary main and services, and 50 wood poles. In the process, a new circuit from Ingleside Substation (52W10) was constructed to include the Blueberry Hill area, homes along Homestead Avenue between Lower Westfield Road and Whitney Avenue, and Sealed Air Corporation from the nearby 52W9 circuit along with the newly converted section of the WH1 circuit. Approximately 1,500' of new underground getaway cable was installed as part of this new circuit. Additional tie points to nearby circuits, improved wildlife protection, and connectivity to new switchgear are among the reliability improvements made as part of this project.

2016 ELECTRIC DIVISION REVENUES



The initial phase of a long-term project involving the removal or replacement of our existing vacuum switches began in 2016. The project will involve replacing all 94 existing 15kV Trayer vacuum switches located in various manholes throughout the city that are used in isolating and/or sectionalizing a circuit for the purposes of load shifting, outage restoration, and/or maintenance work. The Department developed specifications for the replacement switches along with provisions for distribution automation capabilities in the future as well as an implementation plan and cost schedule for future planning. Eleven vacuum switches were removed or replaced with air break switches throughout the year.

New underground cable was installed to the Massachusetts Green High Performance Computer Center (MGHPCC), replacing the temporary overhead section constructed in 2012. The approximately 800' length of underground cable, which consisted of two dedicated circuits from North Canal Substation, was installed underneath the Second Level Canal to manholes on either side of the canal connecting to existing nearby underground facilities. Four high-density polyethylene conduits were directionally bored underneath the canal to these new manholes to accommodate the two underground circuits and new fiber-optic cable with a spare conduit available for future use. The two circuits from North Canal Substation to the MGHPCC are now fully underground.



Mt. Tom Solar Project

Fifteen manhole feed-thru device locations were either removed or replaced with above-ground termination cabinets as part of an effort to improve safety and reliability. These feed-thru devices were located in manholes throughout various parts of the city and used to isolate customers in cases of maintenance work and outages but could not be safely operable when energized. The new termination cabinets now provide the ability to de-energize the cable that needs to be worked on without disrupting other customers. In the case of an outage, the cable is terminated with fused elbows, which isolates the outage to just the customer(s) served from that cable.

The Department completed the replacement of all remaining high-pressure sodium (HPS) lights with more efficient light emitting diode (LED) lighting technology. A total of 1,062 HPS street lights, predominantly comprised of flood lights, were replaced with new LED fixtures. These LED fixtures, on average, will further reduce the city's street light consumption by approximately 65%, reduce Department lighting maintenance costs, will last 3-4 times longer than a typical HPS flood lights, and provide a better light for customers who rent these lights from us on a monthly basis.

Four services on Magnolia Avenue, Northampton Street, Calumet Road, and Taylor Street were relocated from heavily overgrown areas with difficult accessibility to the street. This will provide these customers with not only a more reliable electric service but also 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. HG&E had testing performed on 70 new and used transformers – 57 pole top units and 13 padmount units. HG&E also performed 280 manhole inspections throughout various areas of the city. Stray voltage testing of approximately 20% of the city was also completed on Northampton Street between South Street and Lower Westfield Road. There were 150 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 completed on all distribution circuits throughout the city. There were 16 transformers upgraded or replaced due to overload conditions, leaking, and/or in poor condition, and enhanced wildlife protection was installed on all air break switches throughout the city, which continued to reduce outage time in 2016.

Five new electric services for the Pride gas station on Dwight Street, Gary Rome Hyundai on Whiting Farms Road, and Ingleside Square (Applebee's, McDonald's, and Fairfield Inn & Suites) on Lower Westfield Road were completed, resulting in a net additional connected load of 800kVA. There were also two new homes that required new electric services resulting in a connected load of 10kVA. The new homes were constructed on available lots on Michelle Lane.

In summary for 2016, HG&E set 155 poles and removed 65. A net 5,927kVA connected load was removed from the distribution system. Some 17,052 circuit feet of underground cable was installed while 12,701 was removed. Similarly, 139,859 circuit feet of overhead wire was installed while 134,210 was removed. Approximately 2.03 miles of PVC conduit was installed. There was a net increase of 23 contract lights in the total number of contract lights and a net decrease of four street lights in the total number of street lights on the distribution system.

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 unscheduled outages (see chart below).

ELECTRIC DISTRIBUTION SYSTEM RELIABILITY STATISTICS

STATISTIC	2016	2015
ASAI	99.996%	99.996%
CAIDI	37.37 min	37.83 min
SAIDI	6.23 min	21.12 min
SAIFI	0.17 outages	0.60 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 third 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, which 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. The Fixed Network had an average daily read rate of 99.63% for 2016 with an initial design of 99%. The overall remote read rate for the Department was 97.46%, which includes all meters without RF capability. The Department reviewed options to increase the overall remote read rate. It was decided that implementing an Advanced Metering Infrastructure (AMI) in parallel with the Fixed Network would be more advantageous than expanding the Fixed Network since the AMI could provide the technology to support commercial and industrial billing and future distribution automation. An invitation for bid (IFB) for the AMI was created and sent out to vendors at the end of 2016. The AMI project is expected to be completed by the end of 2017.

In 2016, the Department replaced 31 ION (high-end revenue-grade) meters at various substations, hydro-generation stations, and solar sites. With these existing meters being over 10 years old, the ION meters started losing accuracy and meter failures began to occur. The new ION meters are more accurate and come with a 10-year warranty as well as overall improvement in processing speed and memory. In addition, five ION meters were installed at Boatlock and Chemical for each generator. This allows the Department to see and record generation by unit, which could not be done before since each station had an ION meter which totaled all generation. The Department installed two ION meters for the two individual transformers at the Open Square facility, and the existing primary meter was removed. The Department installed five ION meters at the Kelly Way, Bobala Road, Gary Rome Hyundai, and the former Mt. Tom coal plant and Parsons Paper solar sites. A total of 13 transformer, station service, and generation meters were tested at North Canal substation and Cobble Mountain, Boatlock, and Skinner generation stations to meet ISO-NE's OP-18 metering requirements with three meters tested as part of replacement. 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 (CTs) 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 on and offs, tagging notifications, meter reads, and collections. In total, 5,162 credit-related duties were performed in 2016.

In summary, there was a net total of 59 electric meters installed, 104 electric meters replaced, and 273 electric meters retired – 232 customer meters having an average age of 13.76 years and 41 substation and generation ION meters having an average age of 12 years. A total of 540 electric meters were tested and calibrated, 16 power quality checks, 530 turn-ons and 374 turn-offs, 11 electric successions performed, and 126 vacant with consumption/no consumption reports investigated for metering problems and/or theft of service. There were 36 current transformer installs and nine removals. There were three potential transformer removals. There was one surge protector removed from the system in addition to 19 other surge protectors replaced due to age. On the gas side, 1,657 meters were removed and tested, 1,718 meters were installed, and another 1,934 meters were sealed.

WHOLESALE POWER

As part of the Department's 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 to our future cost of power. The Department purchases its 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 our future energy cost to ensure stable low 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 street light consumption by 60%. The city realized over \$100,000 in savings from these replacements in 2016.

During 2016, the Department proactively pursued low-cost "carbon-free" projects to secure and further enhance its clean energy portfolio. Six new solar projects totaling 9.5694MW DC began construction in late 2016 with estimated commercial operation dates in early January 2017. HG&E's County Road ground-mounted solar project produced 1,173MWh, Constellation Solar projects produced 5,524MWh, and RICAR roof-top solar projects produced 1,217MWh of carbon-free power for the Department in 2016.

Residential and commercial customers continue to invest in renewable solar technologies resulting in 38,857 kWh of load reduction on the system in 2016. The harnessing of solar energy from these projects within Holyoke is offsetting the Department's demand and reducing future costs for all customers.

POWER SUPPLY

2016 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	1,844	2,662	9/1/25
MILLSTONE 3 - MIX 1	NUCLEAR	1986	1,334	1,334	11/25/45 *
MILLSTONE 3 - PROJ 3	NUCLEAR	1986	2,325	2,325	11/25/45 *
SEABROOK - MIX 1	NUCLEAR	1990	147	147	3/15/30 *
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	#2 OIL	1978	4,199	4,152	LOU *
PEAKING UNITS					
NYPA PEAK	HYDRO	1985	395	395	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 ****
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 ****
RICAR	SOLAR	2015	797	797	10/1/40 ****
HANCOCK WIND	WIND	2016	6,032	6,032	12/14/2041
C2 SSG - DINN	SOLAR	2016	549	549	12/27/2036 ****
C2 SSG - KELLY WAY	SOALR	2016	549	549	12/27/2036 ****

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 life of unit

*** Analysis and Relicensing

**** Load Reducer



HG&E contracted with MMWEC in December 2013, under a 25-year PPA for 6.032MW of energy and capacity out of the Hancock Wind Project, located in Hancock County, Maine. This project came on line in December 2016, producing 662 MWh of carbon-free power for the Department.

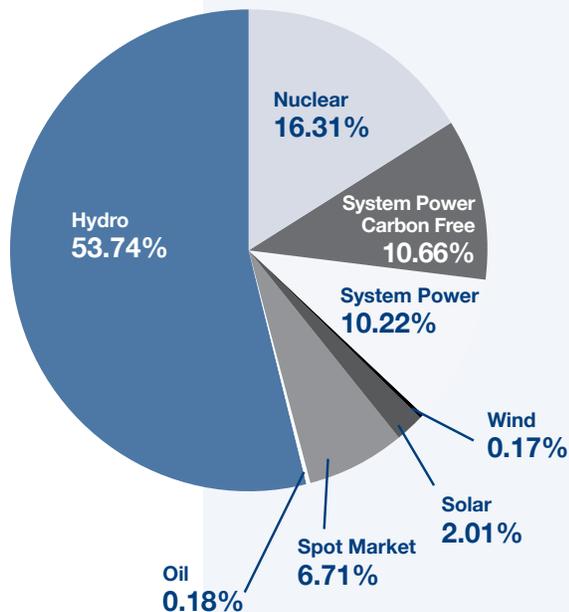
In 2011, HG&E executed a ten-year Power Transaction, which included Nuclear Certificates with Nextera Energy Power Marketing, LLC. Year five of this transaction produced 40,800 MWh of carbon- and emission-free power for the Department in 2016 and helped to stabilize rates for all customers.

A total of 188,585 MWh of net generation was produced from the Department-owned hydro resources, which continued to help drive down the overall cost of power. During 2016, the hydro preference power credits to our residential customers remained at 1.2¢/kWh throughout the year, which generated total savings of \$1,171,127, \$981,543 from Department-owned hydro and \$189,584 from NYPA entitlements.

The hydroelectric system, including the Hadley Falls Dam and the Holyoke Canal hydro facilities, was certified by the Low Impact Hydropower Institute (LIHI) effective January 1, 2012, allowing the Department to register for Massachusetts Class I and II status. A Massachusetts Class I Statement of Qualification Application (Hadley Falls 1&2) was submitted and approved with an April 2016 effective date by the Department of Energy Resources (DOER) in October 2016. 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 \$2,708,110 of revenue to the Department in 2016.

In 2016, 55.92% of the Department's generation was from renewable resources (hydro, solar, and wind) and 82.89% of its generation was carbon free (renewable and nuclear). The following graph 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 the System Power Carbon Free represents a long-term on peak bilateral contract with nuclear certificates attached.

HOLYOKE GAS & ELECTRIC DEPARTMENT 2016 TOTAL ENTITLEMENTS



The Department's average annual carbon dioxide emissions per MWh for 2016 is 60.55 pounds, compared to an average of 741 pounds for New England. The following chart is a summary of the Department's carbon footprint.

Fuel Type	Energy	CO ₂ Emissions	
	(MWh)	(Tons)	(lbs. CO ₂ /MWh)
Oil	678	640	3.34
Hydro	205,718	0	
Nuclear	62,443	0	
System Power Carbon Free	40,800	0	
System Power	39,130	1,420	7.41
Wind	663	0	
Solar	7,683	0	
Spot Market	25,708	9,531	49.8
Total	382,822	11,590	60.55

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 4.65% from \$98.70/kW-year to \$103.86/kW-year in June 2016. The Department's RNS annual charge of \$6,103,886 was offset by 9.25 circuit miles of PTF revenues of \$3,116,947 and peak shaving solar and hydro offsets of \$224,336, reducing the Department's annual RNS charge to \$2,762,602.

TELECOMMUNICATIONS



From left: Telecommunications
Operations Manager Kirk Jonah; Electric
Superintendent Brian Beauregard; Network
Engineer Timothy Haas

In 2016, the Department continued strong sales growth in fiber-optic internet and commercial network services. Through a third-party provider, HG&E continues to execute contracts for hosted business telephone service delivered over the HGE.net commercial network. The Department continued management and expansion of multiple fiber-optic wide area network (WAN) service contracts for customers with multilocation requirements. The Department continues to manage and operate a 10G network. HG&E continues to support internal information technology (IT) needs in addition to providing support for the City of Holyoke IT operations.

COMMERCIAL NETWORK UPGRADES

HG&E's commercial network, now in its 18th year of operation, provides high-speed network connectivity via fiber-optic 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 this network. The platforms in service are industry standard Carrier Ethernet and IP (Internet Protocol) supporting speeds up to 10 Gbps (Gigabits per second).

Ongoing investment in this network continues as customer needs grow and application requirements evolve. In 2016, HG&E completed an upgrade and migration of 11 customer fiber access nodes throughout the network to a new, next-generation gigabit access platform.

COMMERCIAL NETWORK EXPANSION

In 2016, the Department continued to expand fiber optic wide area networking (WAN) services to the Pioneer Valley. Within the expanded service territory, HG&E continues to focus on providing fiber-optic WAN services for large institutions, in addition to a 10 Gig (Gigabit), six-site customer Carrier Ethernet transport network. Since implementing Commercial Managed Router Services in 2013, the Department manages large fiber-optic WAN services on behalf of clients. In 2016, HG&E completed a 10G network diversity project on behalf of a large health care provider.

CARRIER INTERCONNECTION

HG&E developed interconnect relationships with other fiber Ethernet carriers to service our core customers with locations outside of the footprint of Holyoke, Chicopee, Downtown Springfield, and throughout the Pioneer Valley. The Department has leveraged these high-speed interconnect arrangements to extend its networking value to the bulk of the Pioneer Valley.

UTILITY OPERATIONS NETWORK UPGRADES

In addition to provisioning and maintaining retail commercial network customers, HG&E's Telecommunication Division continued its support for the design, operation, and maintenance of the Department's internal operations network and information intelligence needs.

CITY OF HOLYOKE NETWORK CONSULTING

HG&E is responsible for ongoing maintenance, installation, and operation for the City of Holyoke's network. In addition to maintaining the City's servers, the Department continued PC support, hardware replacement, and security improvements.

TELECOMMUNICATIONS HELP DESK

HG&E administers a centralized help desk, accepting support calls from customers. In 2016 the help desk received 2,274 tickets and closed 2,188 tickets, solving 1,071 issues for Department employees, 690 for the City of Holyoke, and 427 for commercial customers.

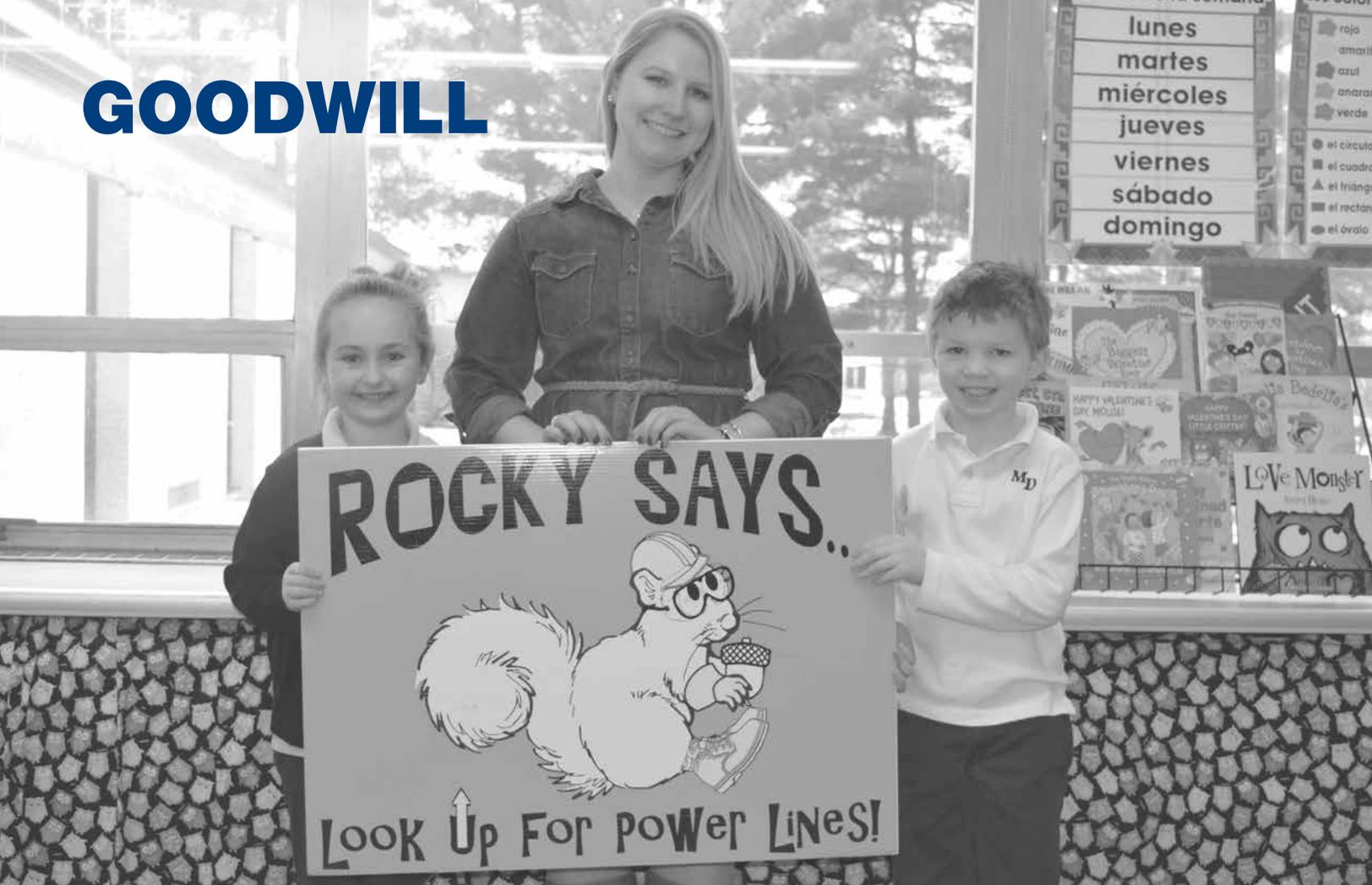
CYBERSECURITY

As external and internal cyber threats continue to evolve, HG&E has responded with increased funding, personnel, and support for cyber-security policies and technology practices.

WHOLESALE BROADBAND SERVICES

HG&E secured two wholesale customers that are building or have built residential fiber-optic broadband networks in rural localities throughout Western Massachusetts. Leveraging its current network and ISP infrastructure, HG&E is scaling support for those 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 achieve their broadband goals.

GOODWILL



Community involvement is a central belief of the public power philosophy, and the Department is proud of the role it takes in making Holyoke a better place to call home.

In 2016, 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, \$136,275 in sponsorships and over \$10,648 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. Alex Glanville was admitted as the candidate for 2016.

ECONOMIC DEVELOPMENT

In 2016, the Department provided \$5,149 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 2015, \$81,048 was provided under this program.

HG&E also promotes economic growth through our Commercial and Residential Energy Conservation Programs. These plans offer interest-free financial assistance to our customers while helping to make their homes and businesses more energy efficient. In 2016, the Department paid out \$684,046 in zero-interest assistance to Holyoke home and business owners.

MUNICIPAL BENEFITS

The Department contributed \$1,080,940 to the City of Holyoke's General Fund during 2016 in lieu of tax payment. Payment discounts of \$315,576 were provided on the city's utility accounts. Beyond these direct financial benefits, HG&E continues to provide other valuable services to the city including: offering low-cost street lighting, low-cost maintenance on city-owned gas and electric equipment, and low municipal rates to city departments on their gas and electric accounts.

CONTRIBUTION	AMOUNT
Nonprofit Sponsorships	\$136,275
Nonprofit Labor	\$10,648
Cadet Engineer Scholarship	\$56,250
Payment in Lieu of Taxes	\$1,080,940
Municipal Payment Discounts	\$315,576
Discounted Street Lighting	\$421,231
Economic Development Discount	\$5,149
New Homeowner Discount	\$81,048
Energy Conservation Assistance	\$684,046
TOTAL COMMUNITY SUPPORT	\$2,791,163



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, 2016 and 2015, 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, 2016 and 2015, 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.

To the Utility Commission
Holyoke Gas and Electric

Emphasis of Matter

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, 2016 and 2015 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.

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
June 7, 2017

MANAGEMENT'S DISCUSSION AND ANALYSIS
As of and for the years ended December 31, 2016, 2015, and 2014
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, 2016, 2015, and 2014. You are invited to read this narrative in conjunction with the utility's financial statements.

FINANCIAL HIGHLIGHTS

- > Operating Revenues for the utility decreased by \$2,923,323, or 4.2%, from 2015. Electric Operating Revenues increased by \$641,351, or 1.4%, which was primarily due an increase in renewable energy certificate (REC) sales. Natural gas Operating Revenue, on the other hand, decreased \$3,564,674, or 15.6%. Natural gas consumption was down 6.8% from 2015 and wholesale natural gas costs were lower, which resulted in a decrease in the corresponding Purchased Gas Adjustment (PGA) component of the gas rates in 2016.
- > Total Operating Expenses decreased by \$2,993,763 in 2016 (\$58,336,073 in 2016 vs. \$61,329,836 in 2015). Total Gas Operating Expenses were down \$2,380,348 (or 12.0%) due to lower wholesale gas costs and lower consumption (down 6.8% from 2015). Total Electric Operating Expenses were down \$613,415 (1.5%) due to lower wholesale power costs. In 2015 power costs were higher as Hadley Falls Unit #1 was out of service to be overhauled and replacement power was purchased on the wholesale market.
- > Non-fuel expenses increased by \$1,524,438, or 7.9%, in 2016. The non-fuel increase over 2015 was primarily due to a credit to the OPEB and pension expense in 2015 of \$1.1 Million that resulted from updated actuarial valuations for 2015. The balance of the non-fuel increase was due to an increase in maintenance of both electric and gas distribution plant.
- > Depreciation Expense increased by \$348,596 from 2016 to 2015, largely due to the addition of hydro assets to plant.
- > Other Revenue and Deductions decreased by \$2,559,978 compared to 2015. This variance was primarily due to a one-time expense of \$5.5 Million due to plant retirements, which resulted from a periodic review of all plant asset books. This variance was offset by an unrealized net gain on investments, which was \$5.03 Million higher than 2015.
- > Payment in lieu of taxes (PILOT) increased by \$5,379 in 2016 due to a credit issued in 2015 for overpayment on a solar project PILOT payment.
- > The Departments' total net position increased by \$3,590,091 from the combined activities of HG&E, Holyoke Solar Cooperative, and the Massachusetts Clean Energy Cooperative.

HOLYOKE GAS & ELECTRIC

MANAGEMENT'S DISCUSSION AND ANALYSIS As of and for the years ended December 31, 2016, 2015, and 2014 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, 2573 transformers and 4,095 streetlights. There are approximately 17,534 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 188,585 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 2016 over 56% of the electricity sold by the Department at retail came from renewable resources and over 83% of electricity sold 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, 2016, 2015, and 2014 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>2016</u>	<u>2015</u>	<u>2014</u>
Current and Other Assets	\$ 98,397,540	\$ 100,250,809	\$ 122,158,151
Capital Assets	<u>151,572,786</u>	<u>152,270,352</u>	<u>127,950,242</u>
Total Assets	<u>249,970,326</u>	<u>252,521,161</u>	<u>250,108,393</u>
Deferred Outflows of Resources	<u>10,409,130</u>	<u>5,065,152</u>	<u>-</u>
Long-term Debt Outstanding	91,798,159	96,777,262	100,653,904
Other Liabilities	<u>46,068,791</u>	<u>43,126,288</u>	<u>14,937,176</u>
Total Liabilities	<u>137,866,950</u>	<u>139,903,550</u>	<u>115,591,080</u>
Deferred Inflows of Resources	42,509,501	41,269,849	41,269,849
Net Investment in Capital Assets	68,881,826	65,711,006	60,479,338
Restricted For Debt Service	8,328,904	9,260,691	9,211,193
Unrestricted Assets	<u>2,792,275</u>	<u>1,441,217</u>	<u>23,556,933</u>
Total Net Position	<u>\$ 80,003,005</u>	<u>\$ 76,412,914</u>	<u>\$ 93,247,464</u>

Current and Other Assets decreased by \$1,853,269 due to a decrease in Cash partially offset by increase in investments.

Capital assets decreased by \$697,566 in 2016. Asset retirements of Capital Assets no longer in service contributed to overall decrease.

Long-term bonds payable decreased by \$4,979,103 due to scheduled debt repayments during 2016.

Other liabilities increased by \$2,942,503 primarily due to the change in actuarial valuation of pension liability as required by GASB 68.

HOLYOKE GAS & ELECTRIC

MANAGEMENT'S DISCUSSION AND ANALYSIS
As of and for the years ended December 31, 2016, 2015, and 2014
UNAUDITED

UTILITY FINANCIAL ANALYSIS (cont.)

Change in Net Position

Net investment in capital assets, which are discussed more in the Capital Assets section, increased by \$3,170,820 in 2016 as a result of plant replacements and additions associated with the ongoing capital improvement plan.

Net Position Restricted for Debt Service decreased by \$931,787 due to a decrease in restricted balance on notes payable debt.

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 \$1,351,058 in 2016.

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

	<u>2016</u>	<u>2015</u>	<u>2014</u>
OPERATING REVENUES	\$ 67,291,468	\$ 70,214,791	\$ 70,939,669
OPERATING EXPENSES	<u>58,336,073</u>	<u>61,329,836</u>	<u>62,011,108</u>
Operating Income	<u>8,955,395</u>	<u>8,884,955</u>	<u>8,928,561</u>
OTHER REVENUES (EXPENSES)	<u>(4,284,676)</u>	<u>(1,724,698)</u>	<u>114,181</u>
Change in Net Position before Transfers	<u>4,670,719</u>	<u>7,160,257</u>	<u>9,042,742</u>
TRANSFERS	<u>(1,080,628)</u>	<u>(1,075,249)</u>	<u>(1,086,595)</u>
Change in Net Position	<u>3,590,091</u>	<u>6,085,008</u>	<u>7,956,147</u>
NET POSITION - Beginning of Year	76,412,914	93,247,464	85,291,317
Cumulative Effect of a change in acct. principle	<u>-</u>	<u>(22,919,558)</u>	<u>-</u>
NET POSITION - End of Year	<u>\$ 80,003,005</u>	<u>\$ 76,412,914</u>	<u>\$ 93,247,464</u>

As previously noted, the Statements 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.

HOLYOKE GAS & ELECTRIC

MANAGEMENT'S DISCUSSION AND ANALYSIS
As of and for the years ended December 31, 2016, 2015, and 2014
UNAUDITED

UTILITY FINANCIAL ANALYSIS (cont.)

During 2016, operating revenues decreased \$2,923,323 or 4.2%. The biggest change occurred in Gas Operating Revenue which decreased \$3.6 Million with lower consumption and lower fuel costs caused by a decrease in the corresponding Purchased Gas Adjustment (PGA), a component of the gas rate.

Operating expenses decreased by \$2,993,763 due to lower fuel costs (\$4,866,797) which were partially offset by higher Operating and Maintenance costs (\$1,524,438) and higher depreciation costs (\$348,596).

PILOT payments to the City of Holyoke increased in 2016 by \$5,379 due to a credit issued in 2015 for an overbill on a Solar Pilot that was recognized in 2015.

A change in Net Position of \$3,590,091 was primarily due to an increase in the consolidated net position of activities of HG&E, Holyoke Solar and Mass Clean Energy Cooperative.

Table 3
Condensed Statements of Cash Flows

	<u>2016</u>	<u>2015</u>	<u>2014</u>
CASH FLOWS FROM OPERATING ACTIVITIES	\$ 15,173,662	\$ 17,707,940	\$ 9,459,
CASH FLOWS FROM INVESTING ACTIVITIES	6,595,502	281,529	9,495,
NET CASH USED IN NONCAPITAL FINANCING ACTIVITIES	(1,080,628)	(1,075,249)	(1,086,
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES	(19,746,981)	(35,040,772)	(17,165,
Increase in Cash and Cash Equivalents	941,555	(18,126,552)	703,
CASH AND CASH EQUIVALENTS - Beginning of Year	53,915,983	72,042,535	71,339,
CASH AND CASH EQUIVALENTS - END OF YEAR	<u>\$ 54,857,538</u>	<u>\$ 53,915,983</u>	<u>\$ 72,042,</u>
NONCASH FINANCING ACTIVITY			
Change in costs recoverable in future - pollution	\$ 146,770	\$ 74,360	\$ 523,
Loss on retirement of fixed assets	\$ 4,921,735	\$ 149,050	\$ 82,
Amortization of premium on bonds payable	\$ 853,851	\$ 850,953	\$ 836,

Cash Flows from operating activities: Cash flow from operations decreased by over \$ 2.5 million primarily because of decreased cash received from customers (\$ 5.6 Million) and a decrease in cash paid to suppliers (\$3.1 Million).

HOLYOKE GAS & ELECTRIC

MANAGEMENT'S DISCUSSION AND ANALYSIS As of and for the years ended December 31, 2016, 2015, and 2014 UNAUDITED

UTILITY FINANCIAL ANALYSIS (cont.)

Cash Flows from investing activities increased by over \$6.3 Million. Investment income and unrealized gains were \$4.2 Million higher in 2016 than 2015, while the purchase and sale of investments also showed cash inflow in net proceeds for the same time period.

Cash flows from Capital and related Financing Activities decreased by over \$15.3 Million in 2016 due to the completion of large capital projects in 2015 (refurbishment of Hadley Falls Unit #1 and new downstream fish passage facilities). Capital expenditures in 2016 were more reflective of a typical annual capital budget.

Cash & Cash equivalents increased by \$941,515.

Table 4
Capital Assets - Electric

	<u>2016</u>	<u>2015</u>	<u>2014</u>
Capital Assets			
Land	\$ 4,773,373	\$ 4,773,373	\$ 5,443,873
Plant, property, and equipment	<u>184,525,730</u>	<u>157,078,591</u>	<u>147,885,050</u>
Total Capital Assets	189,299,103	161,851,964	153,328,923
Construction Work in Progress	1,297,536	32,175,601	13,756,521
Less: Accumulated depreciation	<u>(62,782,639)</u>	<u>(64,186,766)</u>	<u>(60,305,293)</u>
Net Capital Assets – Electric	<u>\$ 127,814,000</u>	<u>\$ 129,843,799</u>	<u>\$ 106,780,151</u>

Land values remained the same in 2016

Plant, Property and Equipment increased by over \$27.4 million due to Hadley 1 and Fish Exclusion rack being moved from Construction in progress to capital accounts.

Construction Work In Progress decreased by over \$30.9 million primarily due to the completion of Hadley Falls Station and Fish Exclusion Rack Capital projects.

Accumulated Depreciation decreased by \$1.4 Million as write offs of fully depreciated assets were removed from asset base in various electric division.

HOLYOKE GAS & ELECTRIC

MANAGEMENT'S DISCUSSION AND ANALYSIS As of and for the years ended December 31, 2016, 2015, and 2014 UNAUDITED

UTILITY FINANCIAL ANALYSIS (cont.)

Table 5
Capital Assets – Gas

	<u>2016</u>	<u>2015</u>	<u>2014</u>
Capital Assets			
Land	\$ 214,304	\$ 214,304	\$ 288,804
Plant, property, and equipment	<u>49,330,471</u>	<u>47,247,449</u>	<u>44,791,532</u>
Total Capital Assets	49,544,775	47,461,753	45,080,336
Construction Work in Progress	334,815	72,492	(6,647)
Less: Accumulated depreciation	<u>(26,120,804)</u>	<u>(25,107,692)</u>	<u>(23,903,598)</u>
Net Capital Assets – Gas	<u>\$ 23,758,786</u>	<u>\$ 22,426,553</u>	<u>\$ 21,170,091</u>

Plant, Property and Equipment increased by \$2.1 Million due to ongoing replacements of bare steel and cast iron services & mains. During 2016, net capital assets increased \$1,332,233 which was mostly maintenance capital in nature.

Further details on capital assets are included in Note 3.

LONG-TERM DEBT

As of December 31, 2016, Holyoke Gas & Electric had \$73,598,333 in bonds payable as well as \$9,336,882 outstanding in notes payable. The bonds and notes payable have decreased \$ 3,418,333 and \$ 655,146 respectively since 2015. No new bonds or notes payable were issued during 2016.

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, 2016, 2015, and 2014
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, 2016 and 2015

	<u>2016</u>	<u>2015</u>
ASSETS		
CURRENT ASSETS		
Cash and investments	\$ 12,327,671	\$ 16,147,935
Restricted Assets		
Redemption account	2,603,076	2,574,798
Customer accounts receivable - net	6,147,769	5,321,718
Accounts receivable - City of Holyoke	15,000	15,000
Note receivable - current portion	1,733,284	394,093
Materials and supplies	2,873,861	2,829,766
Fuel for electric generation and gas in storage	488,668	645,995
Prepaid expense	2,439,047	2,651,878
Other receivables	1,439,894	1,347,864
Total Current Assets	<u>30,068,270</u>	<u>31,929,047</u>
NONCURRENT ASSETS		
Restricted Assets		
Accounts required under bond indenture/note payable	9,366,286	10,711,502
Customers' deposits	726,216	654,203
Note receivable - after one year	8,805,374	9,220,663
Hi-Lite assistance loans	2,336,735	2,619,700
Other Assets		
Purchased power accounts	359,357	356,629
Rate stabilization accounts	45,229,647	43,043,396
Costs recoverable in future - pollution	317,176	463,946
Other investments	188,390	188,390
Accrued other post employment benefits	3,423	-
Intangible assets	996,666	1,063,333
Capital Assets		
Plant, property and equipment in service	238,843,878	209,313,717
Construction in progress	1,632,351	32,248,093
	<u>240,476,229</u>	<u>241,561,810</u>
Less: Accumulated depreciation	88,903,443	89,291,458
Total Capital Assets	<u>151,572,786</u>	<u>152,270,352</u>
Total Noncurrent Assets	<u>219,902,056</u>	<u>220,592,114</u>
Total Assets	<u>249,970,326</u>	<u>252,521,161</u>
DEFERRED OUTFLOWS OF RESOURCES		
Pension related amounts	<u>10,409,130</u>	<u>5,065,152</u>

	<u>2016</u>	<u>2015</u>
LIABILITIES		
CURRENT LIABILITIES		
Accounts payable	\$ 5,812,392	\$ 6,898,967
Customers' deposits	1,195,346	831,592
Accrued liabilities	898,084	790,084
Current portion - accrued compensated absences	199,289	205,230
Current portion - accrued environmental costs	140,000	144,000
Accrued charges - current	81,118	45,762
Liabilities Payable from Restricted Assets		
Current portion - bonds and notes payable	4,225,720	4,132,573
Accrued interest	<u>1,507,425</u>	<u>1,559,664</u>
Total Current Liabilities	<u>14,059,374</u>	<u>14,607,872</u>
LONG-TERM LIABILITIES AND CREDITS		
Bonds payable - long-term	70,065,000	73,598,333
Plus: Premium on bonds payable	<u>8,855,623</u>	<u>9,709,474</u>
	78,920,623	83,307,807
Notes payable - long-term	8,651,816	9,336,882
Leases payable - long term	-	5,321
Accrued compensated absences	2,960,450	2,849,132
Accrued environmental costs	165,000	305,000
Accrued other post employment benefits	-	50,722
Unearned revenue	1,964,616	1,569,610
Reserve fund for note receivable	444,737	444,737
Net pension liability	<u>30,700,334</u>	<u>27,426,467</u>
Total Long-Term Liabilities and Credits	<u>123,807,576</u>	<u>125,295,678</u>
Total Liabilities	<u>137,866,950</u>	<u>139,903,550</u>
DEFERRED INFLOWS OF RESOURCES		
Pension related amounts	1,239,652	-
Rate stabilization reserve	<u>41,269,849</u>	<u>41,269,849</u>
Total Deferred Inflows of Resources	<u>42,509,501</u>	<u>41,269,849</u>
NET POSITION		
Net investment in capital assets	68,881,826	65,711,006
Restricted for debt service	8,328,904	9,260,691
Unrestricted	<u>2,792,275</u>	<u>1,441,217</u>
TOTAL NET POSITION	<u>\$ 80,003,005</u>	<u>\$ 76,412,914</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, 2016 and 2015

	2016	2015
OPERATING REVENUES		
Gas charges for service	\$ 19,325,699	\$ 22,890,373
Electric and telecommunications charges for service	<u>47,965,769</u>	<u>47,324,418</u>
Total Operating Revenues	<u>67,291,468</u>	<u>70,214,791</u>
OPERATING EXPENSES		
Gas operation and maintenance	15,966,656	18,419,794
Depreciation - gas plant and equipment	<u>1,425,706</u>	<u>1,352,916</u>
Total Gas Operating Expenses	<u>17,392,362</u>	<u>19,772,710</u>
Electric and telecommunications operation and maintenance	36,239,636	37,128,857
Depreciation - electric and telecom plant and equipment	<u>4,704,075</u>	<u>4,428,269</u>
Total Electric and Telecommunications Operating Expenses	<u>40,943,711</u>	<u>41,557,126</u>
Total Operating Expenses	<u>58,336,073</u>	<u>61,329,836</u>
OPERATING INCOME		
Gas	1,933,337	3,117,663
Electric and telecommunications	<u>7,022,058</u>	<u>5,767,292</u>
Total Operating Income	<u>8,955,395</u>	<u>8,884,955</u>
OTHER REVENUES (EXPENSES)		
Investment income - net of fees	2,503,841	3,357,392
Net gain (loss) on investments	1,197,838	(3,829,661)
Interest expense	(3,001,149)	(3,127,717)
Miscellaneous income (expense)	874,510	872,829
Amortization of intangible assets	(66,667)	(66,667)
Net gain (loss) - plant retirements	(5,479,612)	1,016,794
Net gain - merchandise jobbing	129,873	164,240
Mt. Tom property assessment expense	(363,542)	(32,140)
Taxes - other	<u>(79,768)</u>	<u>(79,768)</u>
Total Other Revenues (Expenses)	<u>(4,284,676)</u>	<u>(1,724,698)</u>
Change in Net Position Before Transfers	4,670,719	7,160,257
TRANSFERS		
Payment in lieu of taxes - City of Holyoke	<u>(1,080,628)</u>	<u>(1,075,249)</u>
Change in Net Position	3,590,091	6,085,008
NET POSITION - Beginning of Year	<u>76,412,914</u>	<u>93,247,464</u>
Cumulative effect of a change in accounting principle	<u>-</u>	<u>(22,919,558)</u>
NET POSITION - END OF YEAR	<u>\$ 80,003,005</u>	<u>\$ 76,412,914</u>

See accompanying notes to financial statements.

	<u>2016</u>	<u>2015</u>
CASH FLOWS FROM OPERATING ACTIVITIES		
Cash received from customers	\$ 67,989,287	\$ 73,590,065
Cash paid to suppliers	(39,432,308)	(42,479,763)
Cash paid to employees	<u>(13,383,357)</u>	<u>(13,402,362)</u>
Net Cash Flows From Operating Activities	<u>15,173,622</u>	<u>17,707,940</u>
CASH FLOWS FROM INVESTING ACTIVITIES		
Proceeds from sale of investments	9,099,444	6,942,144
Purchase of investments	(5,281,719)	(6,562,326)
Investment income (loss) - net of fees	3,701,679	(472,269)
Disbursement on customer loan	(1,317,995)	-
Repayments on notes receivable	<u>394,093</u>	<u>373,980</u>
Net Cash Flows From Investing Activities	<u>6,595,502</u>	<u>281,529</u>
NET CASH USED IN NONCAPITAL FINANCING ACTIVITIES		
Payment in lieu of taxes and other property taxes	<u>(1,080,628)</u>	<u>(1,075,249)</u>
Net Cash Used in Noncapital Financing Activities	<u>(1,080,628)</u>	<u>(1,075,249)</u>
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES		
Net investment in plant, property and equipment	(11,805,763)	(30,072,758)
Proceeds from the sale of land	-	1,999,978
Payments on bonds and notes payable	(4,073,479)	(2,976,954)
Interest paid on bonds, notes and leases payable	<u>(3,867,739)</u>	<u>(3,991,038)</u>
Net Cash Flows From Capital and Related Financing Activities	<u>(19,746,981)</u>	<u>(35,040,772)</u>
Increase in Cash and Cash Equivalents	941,515	(18,126,552)
CASH AND CASH EQUIVALENTS - Beginning of Year	<u>53,915,983</u>	<u>72,042,535</u>
CASH AND CASH EQUIVALENTS - END OF YEAR	<u>\$ 54,857,498</u>	<u>\$ 53,915,983</u>
SUPPLEMENTAL NONCASH FINANCING ACTIVITY		
Change in costs recoverable in future - pollution	<u>\$ 146,770</u>	<u>\$ 74,360</u>
Loss on retirement of fixed assets	<u>\$ 4,921,735</u>	<u>\$ 149,050</u>
Amortization of premium on bonds payable	<u>\$ 853,851</u>	<u>\$ 850,953</u>

	<u>2016</u>	<u>2015</u>
SCHEDULE OF RECONCILIATION OF OPERATING INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES		
Operating income	\$ 8,955,395	\$ 8,884,955
Adjustments to Reconcile Operating Income to Net Cash		
Provided by Operating Activities		
Depreciation	6,129,781	5,781,185
Non-operating Income	494,406	858,494
Changes in operating assets and liabilities		
(Increase) decrease in		
Accounts receivable	(826,051)	1,399,904
Materials and supplies	(44,095)	181,189
Fuel for electric generation and gas in storage	157,327	526,471
Prepaid expense	212,831	406,379
Accounts receivable - City of Holyoke	-	15,000
Other receivables	(92,030)	304,485
Hi-Lite assistance loans	282,965	67,483
Accounts payable	(327,066)	(671,077)
Customers' deposits	363,754	139,100
Accrued liabilities	498,862	396,413
Accrued compensated absences	105,377	149,254
Accrued other post employment benefits	(54,145)	(232,466)
Pension related deferrals and liabilities	(830,459)	(558,243)
Accrued environmental costs	146,770	59,414
Total Adjustments	<u>6,218,227</u>	<u>8,822,985</u>
NET CASH PROVIDED BY OPERATING ACTIVITIES	\$ 15,173,622	\$ 17,707,940
 RECONCILIATION OF CASH AND CASH EQUIVALENTS TO THE STATEMENTS OF NET POSITION		
Cash and investments	\$ 12,327,671	\$ 16,147,935
Redemption account	2,603,076	2,574,798
Accounts required under bond indenture/note payable	9,366,286	10,711,502
Customer deposits	726,216	654,203
Purchased power accounts	359,357	356,629
Rate stabilization accounts	45,229,647	43,043,396
Other investments	188,390	188,390
Total Cash and Investments	<u>70,800,643</u>	<u>73,676,853</u>
Less: Noncash equivalents	<u>(15,943,145)</u>	<u>(19,760,870)</u>
CASH AND CASH EQUIVALENTS	\$ 54,857,498	\$ 53,915,983

See accompanying notes to financial statements.

HOLYOKE GAS AND ELECTRIC OPEB TRUST

STATEMENTS OF FIDUCIARY NET POSITION FIDUCIARY FUND

As of December 31, 2016 and 2015

	<u>2016</u>	<u>2015</u>
	ASSETS	
NONCURRENT ASSETS		
Restricted Assets		
Investments	\$ 6,788,366	\$ 5,350,291
Total Assets	<u>6,788,366</u>	<u>5,350,291</u>
	LIABILITIES	
Total Liabilities	<u>-</u>	<u>-</u>
	NET POSITION	
Held in trust for other post employment benefits	<u>\$ 6,788,366</u>	<u>\$ 5,350,291</u>

See accompanying notes to financial statements.

HOLYOKE GAS AND ELECTRIC OPEB TRUST

STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION FIDUCIARY FUND

For the Years Ended December 31, 2016 and 2015

	<u>2016</u>	<u>2015</u>
ADDITIONS		
Employer contributions	\$ 1,200,000	\$ 1,207,106
Investment income (loss)	<u>257,404</u>	<u>(250,044)</u>
Total Additions	<u>1,457,404</u>	<u>957,062</u>
DEDUCTIONS		
Advisory fees	<u>19,329</u>	<u>15,671</u>
Total Deductions	<u>19,329</u>	<u>15,671</u>
CHANGE IN NET POSITION	1,438,075	941,391
NET POSITION - Beginning of Year	<u>5,350,291</u>	<u>4,408,900</u>
NET POSITION - END OF YEAR	<u>\$ 6,788,366</u>	<u>\$ 5,350,291</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, 2016 and 2015

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 71% and 67% of the Department’s revenues were derived from its electric division in 2016 and 2015, 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, 2016 and 2015

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, 2016 and 2015

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 February 2015, the GASB issued statement No. 72 - Fair Value Measurement and Application. The statement addresses accounting and financial reporting issues to fair value measurements. It defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. This standard was implemented January 1, 2016.

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 14 for additional information related to PUMIC. These investments are carried at original cost.

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

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

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, 2016 and 2015

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, 2016 and 2015. 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, 2016 and 2015, there was no interest capitalized.

Intangible Assets

Intangible assets are recorded at cost. Intangible assets subject to amortization include customer contracts and franchise area fee associated with the December, 2001 hydroelectric project purchase. Customer contracts and 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, 2016 and 2015

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

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

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.

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.

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, 2016 and 2015

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

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

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 and liabilities 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, 2016 and 2015 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

(Enterprise and Fiduciary Funds of the
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NOTES TO FINANCIAL STATEMENTS
As of and for the Years Ended December 31, 2016 and 2015

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, 2016 and 2015 that have directly reduced Operating Revenue in the Statement of Revenue, Expenses and Changes in Net Position are as follows:

	<u>2016</u>	<u>2015</u>
Gas	\$ 1,696,793	\$ 2,167,443
Electric	<u>3,628,461</u>	<u>3,921,265</u>
Totals	<u>\$ 5,325,254</u>	<u>\$ 6,088,708</u>

Expense Allocation

Expenses associated with a particular division of the Department are charged to that division. For the years ended December 31, 2016 and 2015, 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, 2016 and 2015

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

EFFECT OF NEW ACCOUNTING STANDARDS ON CURRENT PERIOD FINANCIAL STATEMENTS

GASB has approved GASB Statement No. 73, *Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68*, Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*, 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*, and Statement No. 82, *Pension Issues, an amendment of GASB Statements No. 67, No. 68, and No. 73*.

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 Note 11).

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, 2016 and 2015

NOTE 2 – DEPOSITS AND INVESTMENTS (cont.)

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

	<u>Statement Balances</u>	<u>Carrying Value</u>	<u>Associated Risks</u>
Demand deposits	\$ 6,649,031	\$ 4,944,271	Custodial credit risk
U.S. agencies – implicitly guaranteed	4,651,194	4,651,194	Credit risk, Custodial credit risk, Interest rate risk, Concentration of credit risk
U.S. agencies – explicitly guaranteed	6,045,560	6,045,560	Custodial credit risk, Interest rate 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>\$ 79,293,769</u>	<u>\$ 77,589,009</u>	
Reconciliation to Statement of Net Position			
Cash and investments		\$ 12,327,671	
Redemption account		2,603,076	
Accounts required under bond indenture/ notes payable		9,366,286	
Customer deposits		726,216	
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>\$ 77,589,009</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, 2016 and 2015

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 \$6,880,876 in 2016 and \$12,798,518 in 2015 for the Department; and \$476,000 in 2016 and \$457,106 in 2015 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, 2016 are as follows:

- > Institutional bond quotes for U.S. government agency securities, and state & local bonds
- > Quoted market prices for mutual funds – bond funds, mutual funds – other bond funds, corporate bonds, and certificates of deposits

Investment Type	Total	Level 1	Level 2	Level 3
U.S. agencies – implicitly guaranteed	\$ 4,651,194	\$ -	\$ 4,651,194	\$ -
U.S. agencies – explicitly guaranteed	6,045,560	-	6,045,560	-
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>

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS As of and for the Years Ended December 31, 2016 and 2015

NOTE 2 – DEPOSITS AND INVESTMENTS (cont.)

FAIR VALUE (cont.)

The valuation methods for recurring fair value measurements as of December 31, 2015 are as follows:

- > Institutional bond quotes for U.S. government agency securities, U.S. treasuries, and state & local bonds
- > Quoted market prices for mutual funds – bond funds, mutual funds – other bond funds, corporate bonds, and certificates of deposits

Investment Type	Total	Level 1	Level 2	Level 3
U.S. agencies – implicitly guaranteed	\$ 4,338,813	\$ -	\$ 4,338,813	\$ -
U.S. agencies – explicitly guaranteed	7,457,946	-	7,457,946	-
State & local bonds	1,109,824	-	1,109,824	-
Mutual funds – bond funds	4,234,172	4,234,172	-	-
U.S. Treasuries	165,632	165,632	-	-
Mutual funds – other than bond funds	41,394,299	41,394,299	-	-
Corporate bonds	6,019,395	-	6,019,395	-
Certificate of deposit	480,873	-	480,873	-
Totals	<u>\$ 65,200,954</u>	<u>\$ 45,794,103</u>	<u>\$ 19,406,851</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 \$5,596,316 in 2016 and \$11,098,097 in 2015.

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.

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, 2016 and 2015

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, 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	\$ 4,651,194	\$ 1,086,443	\$ 2,057,807	\$ 1,506,944
U.S. agencies – explicitly guaranteed	6,045,560	661,993	5,383,567	-
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	591,684	-	591,684	-
Totals	<u>\$ 21,175,189</u>	<u>\$ 3,680,042</u>	<u>\$ 10,885,769</u>	<u>\$ 6,609,378</u>

At December 31, 2015, 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	\$ 4,338,813	\$ 1,073,880	\$ 2,149,895	\$ 1,115,038
U.S. agencies – explicitly guaranteed	7,457,946	994,108	6,014,229	449,609
U.S. Treasuries	165,632	165,632	-	-
State and local bonds	1,109,824	-	859,799	250,025
Mutual funds – bond funds	4,234,172	-	-	4,234,172
Corporate bonds	6,019,395	1,433,322	4,586,073	-
CDs – negotiable	480,873	-	480,873	-
Totals	<u>\$ 23,806,655</u>	<u>\$ 3,666,942</u>	<u>\$ 14,090,869</u>	<u>\$ 6,048,844</u>

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS As of and for the Years Ended December 31, 2016 and 2015

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, 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

As of December 31, 2015, 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. Investments in any one issuer that represented greater than 5% of total investments included Federal Farm Credit Bank (5.12%) in 2015 and no such investments in 2016.

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS As of and for the Years Ended December 31, 2016 and 2015

NOTE 3 – PLANT, PROPERTY AND EQUIPMENT

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

(Enterprise and Fiduciary Funds of the
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NOTES TO FINANCIAL STATEMENTS As of and for the Years Ended December 31, 2016 and 2015

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, 2016 and 2015

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

Plant, property and equipment as of December 31, 2015 consist of the following:

	Balance 1/1/15	Increases	Decreases	Balance 12/31/15
Utility Plant not Being Depreciated				
Gas				
Land	\$ 288,804	\$ -	\$ 74,500	\$ 214,304
Construction in progress	(6,647)	2,121,712	2,042,573	72,492
	<u>282,157</u>	<u>2,121,712</u>	<u>2,117,073</u>	<u>286,796</u>
Electric/Telecommunications				
Land	5,443,873	-	670,500	4,773,373
Construction in progress	13,756,521	27,358,529	8,939,449	32,175,601
	<u>19,200,394</u>	<u>27,358,529</u>	<u>9,609,949</u>	<u>36,948,974</u>
Total Utility Plant Not Being Depreciated	<u>19,482,551</u>	<u>29,480,241</u>	<u>11,727,022</u>	<u>37,235,770</u>
Utility Plant Being Depreciated				
Gas				
Plant investment	41,979,904	2,484,771	113,135	44,351,540
Office furniture and equipment	1,317,158	252	-	1,317,410
Transportation and communication equipment	1,164,217	143,388	61,246	1,246,359
Other	330,253	1,887	-	332,140
	<u>44,791,532</u>	<u>2,630,298</u>	<u>174,381</u>	<u>47,247,449</u>
Electric/Telecommunications				
Plant investment	139,389,737	9,495,296	585,852	148,299,181
Office furniture and equipment	2,895,788	26,817	-	2,922,605
Transportation and communication equipment	4,877,253	311,095	114,800	5,073,548
Other	722,272	60,985	-	783,257
	<u>147,885,050</u>	<u>9,894,193</u>	<u>700,652</u>	<u>157,078,591</u>
Total Utility Plant Being Depreciated	<u>192,676,582</u>	<u>12,524,491</u>	<u>875,033</u>	<u>204,326,040</u>

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NOTES TO FINANCIAL STATEMENTS As of and for the Years Ended December 31, 2016 and 2015

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

	Balance 1/1/15	Increases	Decreases	Balance 12/31/15
Less: Accumulated depreciation				
Gas				
Plant investment	\$ (21,758,589)	\$ (1,153,762)	\$ 84,936	\$ (22,827,415)
Office furniture and equipment	(1,035,767)	(49,895)	-	(1,085,662)
Transportation and communication equipment	(900,579)	(117,330)	61,246	(956,663)
Other	(208,663)	(29,289)	-	(237,952)
	<u>(23,903,598)</u>	<u>(1,350,276)</u>	<u>146,182</u>	<u>(25,107,692)</u>
Electric/Telecommunications				
Plant investment	(53,969,921)	(3,988,018)	437,631	(57,520,308)
Office furniture and equipment	(2,155,877)	(124,503)	-	(2,280,380)
Transportation and communication equipment	(3,571,566)	(281,991)	114,800	(3,738,757)
Other	(607,929)	(36,392)	-	(644,321)
	<u>(60,305,293)</u>	<u>(4,430,904)</u>	<u>552,431</u>	<u>(64,183,766)</u>
Total Accumulated Depreciation	<u>(84,208,891)</u>	<u>(5,781,180)</u>	<u>698,613</u>	<u>(89,291,458)</u>
Total Utility Plant Being Depreciated, Net				
Gas	20,887,934	1,280,022	28,199	22,139,757
Electric	87,579,757	5,463,289	148,221	92,894,825
	<u>108,467,691</u>	<u>6,743,311</u>	<u>176,420</u>	<u>115,034,582</u>
Total Utility Plant, Net				
Gas	21,170,091	3,401,734	2,145,272	22,426,553
Electric	106,780,151	32,821,818	9,758,170	129,843,799
	<u>\$ 127,950,242</u>	<u>\$ 36,223,552</u>	<u>\$ 11,903,442</u>	<u>\$ 152,270,352</u>

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS As of and for the Years Ended December 31, 2016 and 2015

NOTE 4 – NOTE RECEIVABLE

	<u>2016</u>	<u>2015</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.	\$ 9,220,663	\$ 9,614,756
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 June 2017.	1,317,995	-
Less: amount due within one year	<u>(1,733,284)</u>	<u>(394,093)</u>
Note Receivable - Due After One Year	<u>\$ 8,805,374</u>	<u>\$ 9,220,663</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, 2016 and 2015 was \$450,309 and \$449,412.

NOTE 5 – OTHER RECEIVABLES

Other receivables, all due within one year, consist of the following as of December 31, 2016 and 2015:

	<u>2016</u>	<u>2015</u>
Springfield Water and Sewer	\$ 621,406	\$ -
Massachusetts Department of Transportation	-	573,388
Accrued interest receivable	76,307	117,631
Miscellaneous other receivables	<u>742,181</u>	<u>656,845</u>
Totals	<u>\$ 1,439,894</u>	<u>\$ 1,347,864</u>

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS

As of and for the Years Ended December 31, 2016 and 2015

NOTE 6 – INTANGIBLE ASSETS

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

	Life in Years	2015	
		Gross Carrying Amount	Accumulated Amortization
2001 customer contracts and franchise costs	30	\$ 2,000,000	\$ 936,667

Aggregate amortization expense was \$66,667 for the years ended December 31, 2016 and 2015.
Estimated annual aggregate amortization expense is \$66,667 for the five years subsequent to 2016.

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, 2016 and 2015 is \$41,269,849 and is reported as a deferred inflow of resources.

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, 2016 and 2015

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%	\$ 25,795,000
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%	46,970,000
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	<u>833,333</u>
Less: Amount due within one year	<u>(3,533,333)</u>
Bonds Payable – Due After One Year	<u>\$ 70,065,000</u>

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

	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2017	\$ 3,533,333	\$ 3,401,786	\$ 6,935,119
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 – 2026	22,375,000	11,185,526	33,560,526
2027 – 2031	28,230,000	5,333,310	33,563,310
2032	<u>4,105,000</u>	<u>205,250</u>	<u>4,310,250</u>
Totals	<u>\$ 73,598,333</u>	<u>\$ 32,270,879</u>	<u>\$ 105,869,212</u>

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, 2016 and 2015

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>2016</u>	<u>2015</u>
<u>Revenue Bonds</u>		
Project fund	\$ -	\$ 443,602
Debt service reserve fund	4,439,085	4,408,003
Redemption account		
Reserve and contingency fund	443,772	417,497
Principal account	1,028,482	987,319
Bond interest fund	1,130,822	1,169,982
<u>Clean Renewable Energy Bond</u>		
Debt service reserve fund	<u>257,097</u>	<u>256,329</u>
Sub-Total Related to Bonds	<u>7,299,258</u>	<u>7,682,732</u>
<u>Notes Payable</u>		
Collateral account	4,219,795	5,154,156
Reserve fund	<u>450,309</u>	<u>449,412</u>
Sub-Total Related to Notes	<u>4,670,104</u>	<u>5,603,568</u>
Total Funds Required Under Bond Indenture/Note Payable	<u>\$ 11,969,362</u>	<u>\$ 13,286,300</u>

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, 2016 and 2015

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.	\$ 430,629
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.	821,181
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.	3,983,387
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, 2016 is also required under this note.	4,101,685
Less: Amount due within one year	<u>(685,066)</u>
Notes Payable – Due After One Year	<u>\$ 8,651,816</u>

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

	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2017	\$ 685,066	\$ 349,612	\$ 1,034,678
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 – 2026	2,975,947	962,200	3,938,147
2027 – 2031	<u>3,470,623</u>	<u>336,557</u>	<u>3,807,180</u>
Totals	<u>\$ 9,336,882</u>	<u>\$ 2,791,752</u>	<u>\$ 12,128,634</u>

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, 2016 and 2015

NOTE 8 – LONG-TERM OBLIGATIONS (cont.)

CHANGES IN LONG-TERM LIABILITIES

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	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>

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, 2016 and 2015

NOTE 8 – LONG-TERM OBLIGATIONS (cont.)

CHANGES IN LONG-TERM LIABILITIES (cont.)

Long-term liability activities for the years ended December 31, 2015 are as follows:

	Balance 1/1/15	Additions	Reductions	Balance 12/31/15	Current Portion
Long-term bonds and loans					
Bonds payable	\$ 79,365,000	\$ -	\$ 2,348,334	\$ 77,016,666	\$ 3,418,333
Premium on bonds	10,560,427	-	850,953	9,709,474	-
Notes payable	10,620,648	-	628,620	9,992,028	655,146
Leases payable	172,244	-	107,829	64,415	59,094
	<u>100,718,319</u>	<u>-</u>	<u>3,935,736</u>	<u>96,782,583</u>	<u>4,132,573</u>
Other long-term liabilities					
Net pension liability	-	27,426,467	-	27,426,467	-
Compensated absences	2,905,308	225,503	76,449	3,054,362	205,230
Other postemployment benefits	283,188	-	232,466	50,722	-
Environmental costs	523,360	-	74,360	449,000	144,000
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>\$ 104,874,912</u>	<u>\$ 27,651,970</u>	<u>\$ 4,319,011</u>	<u>\$ 128,207,871</u>	<u>\$ 4,481,803</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 \$69,008,900. Principal and interest paid in 2016 and 2015 were \$4,314,150 and \$3,307,350, respectively. Total customer net revenues in 2016 and 2015 were \$4,310,279 and \$4,280,750, respectively. Customer revenues began in 2015 to coincide with the first bond principal payment due.

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, 2016 and 2015

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, 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	\$ 9,800,828	\$ 1,942,933	\$ 583,910	\$ -	\$ 12,327,671
Restricted Assets					
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	<u>1,835,618</u>	<u>21,148</u>	<u>-</u>	<u>(416,872)</u>	<u>1,439,894</u>
Total Current Assets	<u>23,455,967</u>	<u>3,842,189</u>	<u>50,137,574</u>	<u>(47,367,460)</u>	<u>30,068,270</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	726,216	-	-	-	726,216
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	<u>996,666</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>996,666</u>
Capital Assets					
Plant, property and equipment in service	238,843,878	-	-	-	238,843,878
Construction in progress	<u>1,632,351</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>1,632,351</u>
	240,476,229	-	-	-	240,476,229
Less: Accumulated depreciation	<u>(88,903,443)</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>(88,903,443)</u>
Total Capital Assets	<u>151,572,786</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>151,572,786</u>
Total Noncurrent Assets	<u>202,418,493</u>	<u>13,475,478</u>	<u>4,439,085</u>	<u>(431,000)</u>	<u>219,902,056</u>
Total Assets	<u>225,874,460</u>	<u>17,317,667</u>	<u>54,576,659</u>	<u>(47,798,460)</u>	<u>249,970,326</u>
DEFERRED OUTFLOWS OF RESOURCES					
Pension related amounts	<u>10,409,130</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>10,409,130</u>

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, 2016 and 2015

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					
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	<u>10,403,313</u>	<u>470,986</u>	<u>3,601,947</u>	<u>(416,872)</u>	<u>14,059,374</u>
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
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	<u>110,367,683</u>	<u>8,895,607</u>	<u>51,925,874</u>	<u>(47,381,588)</u>	<u>123,807,576</u>
Total Liabilities	<u>120,770,996</u>	<u>9,366,593</u>	<u>55,527,821</u>	<u>(47,798,460)</u>	<u>137,866,950</u>
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	<u>42,509,501</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>42,509,501</u>
NET POSITION					
Net investment in plant, property and equipment	122,431,700	-	-	(53,549,874)	68,881,826
Restricted for debt service	257,097	4,214,721	3,857,086	-	8,328,904
Unrestricted (deficit)	(49,685,704)	3,736,353	(4,808,248)	53,549,874	2,792,275
TOTAL NET POSITION (DEFICIT)	<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
City of Holyoke, Massachusetts)

NOTES TO FINANCIAL STATEMENTS
As of and for the Years Ended December 31, 2016 and 2015

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, 2016 and 2015

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)	<u>HGE</u>	<u>Holyoke Solar</u>	<u>Mass Clean Energy</u>	<u>Eliminations</u>	<u>Total</u>
Operating activities	\$ 10,869,597	\$ 17,714	\$ 4,286,311	\$ -	\$ 15,173,622
Investing activities	5,476,984	562,573	555,945	-	6,595,502
Noncapital financing activities	(1,080,628)	-	-	-	(1,080,628)
Capital and related financing activities	<u>(14,642,754)</u>	<u>(789,012)</u>	<u>(4,315,215)</u>	<u>-</u>	<u>(19,746,981)</u>
Net Increase (Decrease) in Cash and Cash Equivalents	623,199	(208,725)	527,041	-	941,515
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>\$ 50,454,921</u>	<u>\$ 2,315,330</u>	<u>\$ 2,087,247</u>	<u>\$ -</u>	<u>\$ 54,857,498</u>

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, 2016 and 2015**NOTE 9 – BLENDED COMPONENT UNITS (cont.)**

COMBINING SCHEDULE OF NET POSITION

As of December 31, 2015

ASSETS	HGE	Holyoke Solar	Mass Clean Energy	Eliminations	Total
Current Assets					
Cash and investments	\$ 13,897,872	\$ 2,088,095	\$ 161,968	\$ -	\$ 16,147,935
Restricted Assets					
Redemption account	-	-	2,574,798	-	2,574,798
Customer accounts receivable - net	5,302,942	18,776	-	-	5,321,718
Accounts receivable - City of Holyoke	15,000	-	-	-	15,000
Note receivable - current portion	-	394,093	-	-	394,093
Materials and supplies	2,829,766	-	-	-	2,829,766
Fuel for electric generation and gas in storage	645,995	-	-	-	645,995
Prepaid expense	2,651,878	-	49,468,128	(49,468,128)	2,651,878
Other receivables	1,321,843	26,021	-	-	1,347,864
Total Current Assets	<u>26,665,296</u>	<u>2,526,985</u>	<u>52,204,894</u>	<u>(49,468,128)</u>	<u>31,929,047</u>
Noncurrent Assets					
Restricted Assets					
Accounts required under bond					
indenture/note payable	256,329	5,603,568	4,851,605	-	10,711,502
Customers' deposits	654,203	-	-	-	654,203
Other receivables - after one year	-	9,220,663	-	-	9,220,663
Hi-Lite assistant loans	2,619,700	-	-	-	2,619,700
Advances to other funds	431,000	-	-	(431,000)	-
Other Assets					
Purchased power accounts	356,629	-	-	-	356,629
Rate stabilization accounts	43,043,396	-	-	-	43,043,396
Costs recoverable in future - pollution	463,946	-	-	-	463,946
Other investments	188,390	-	-	-	188,390
Intangible assets	1,063,333	-	-	-	1,063,333
Capital Assets					
Plant, property and equipment in service	209,313,717	-	-	-	209,313,717
Construction in progress	32,248,093	-	-	-	32,248,093
	241,561,810	-	-	-	241,561,810
Less: Accumulated depreciation	(89,291,458)	-	-	-	(89,291,458)
Total Capital Assets	<u>152,270,352</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>152,270,352</u>
Total Noncurrent Assets	<u>201,347,278</u>	<u>14,824,231</u>	<u>4,851,605</u>	<u>(431,000)</u>	<u>220,592,114</u>
Total Assets	<u>228,012,574</u>	<u>17,351,216</u>	<u>57,056,499</u>	<u>(49,899,128)</u>	<u>252,521,161</u>
DEFERRED OUTFLOWS OF RESOURCES					
Pension related amounts	5,065,152	-	-	-	5,065,152

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, 2016 and 2015**NOTE 9 – BLENDED COMPONENT UNITS (cont.)**COMBINING SCHEDULE OF NET POSITION (cont.)
As of December 31, 2015

LIABILITIES	HGE	Holyoke Solar	Mass Clean Energy	Eliminations	Total
Current Liabilities					
Accounts payable	\$ 6,888,603	\$ 9,953	\$ 411	\$ -	\$ 6,898,967
Customers' deposits	831,592	-	-	-	831,592
Accrued liabilities	790,084	-	-	-	790,084
Current portion - accrued compensated absences	205,230	-	-	-	205,230
Current portion - accrued environmental costs	144,000	-	-	-	144,000
Accrued charges - current	45,762	-	-	-	45,762
Liabilities Payable from Restricted Assets					
Current portion - bonds and notes payable	1,720,141	437,432	1,975,000	-	4,132,573
Accrued interest	390,089	-	1,169,575	-	1,559,664
Total Current Liabilities	<u>11,015,501</u>	<u>447,385</u>	<u>3,144,986</u>	<u>-</u>	<u>14,607,872</u>
Long-Term Liabilities					
Bonds payable - long-term	26,628,333	-	46,970,000	-	73,598,333
Plus: Unamortized premium on bonds payable	2,483,852	-	7,225,622	-	9,709,474
	<u>29,112,185</u>	<u>-</u>	<u>54,195,622</u>	<u>-</u>	<u>83,307,807</u>
Notes payable - long-term	430,629	8,906,253	-	-	9,336,882
Leases payable - long term	5,321	-	-	-	5,321
Accrued compensated absences	2,849,132	-	-	-	2,849,132
Accrued environmental liability	305,000	-	-	-	305,000
Accrued other post employment benefits	50,722	-	-	-	50,722
Unearned revenue	51,037,738	-	-	(49,468,128)	1,569,610
Reserve account advance	-	444,737	431,000	(431,000)	444,737
Net pension liability	27,426,467	-	-	-	27,426,467
Total Long-Term Liabilities	<u>111,217,194</u>	<u>9,350,990</u>	<u>54,626,622</u>	<u>(49,899,128)</u>	<u>125,295,678</u>
Total Liabilities	<u>122,232,695</u>	<u>9,798,375</u>	<u>57,771,608</u>	<u>(49,899,128)</u>	<u>139,903,550</u>
DEFERRED INFLOWS OF RESOURCES					
Rate stabilization reserve	41,269,849	-	-	-	41,269,849
NET POSITION					
Net investment in plant, property and equipment	121,438,026	-	-	(55,727,020)	65,711,006
Restricted for debt service	256,329	5,166,136	3,838,226	-	9,260,691
Restricted for purchase of future power capacity	-	-	443,602	(443,602)	-

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, 2016 and 2015**NOTE 9 – BLENDED COMPONENT UNITS (cont.)**COMBINING SCHEDULE OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
For the Year Ended December 31, 2015

	HGE	Holyoke Solar	Mass Clean Energy	Eliminations	
OPERATING REVENUES	<u>\$ 70,214,791</u>	<u>\$ 266,426</u>	<u>\$ 4,280,750</u>	<u>\$ (4,547,176)</u>	<u>\$</u>
OPERATING EXPENSES					
Operation and maintenance	59,944,634	151,193	-	(4,547,176)	
Depreciation - plant and equipment	<u>5,781,185</u>	<u>-</u>	<u>-</u>	<u>-</u>	
Total Operating Expenses	<u>65,725,819</u>	<u>151,193</u>	<u>-</u>	<u>(4,547,176)</u>	
Operating Income	<u>4,488,972</u>	<u>115,233</u>	<u>4,280,750</u>	<u>-</u>	
NONOPERATING OTHER REVENUES (EXPENSES)					
Investment income - net of fees	2,617,560	636,163	103,669	-	
Net gain (loss) on investments	(3,719,588)	(91,139)	(18,934)	-	
Interest expense	(1,059,611)	(365,551)	(1,702,555)	-	
Miscellaneous income (expense)	879,545	6,518	(13,234)	-	
Amortization of intangible assets	(66,667)	-	-	-	
Net gain (loss) - disposal of assets	1,016,794	-	-	-	
Net gain - merchandise jobbing	164,240	-	-	-	
Mt. Tom property assessment expense	(32,140)	-	-	-	
Taxes - other	<u>(79,768)</u>	<u>-</u>	<u>-</u>	<u>-</u>	
Total Other Revenues (Expenses)	<u>(279,635)</u>	<u>185,991</u>	<u>(1,631,054)</u>	<u>-</u>	
Change in Net Position Before Transfers	4,209,337	301,224	2,649,696	-	
TRANSFERS					
Payment in lieu of taxes - City of Holyoke	<u>(1,075,249)</u>	<u>-</u>	<u>-</u>	<u>-</u>	
Change in Net Position	3,134,088	301,224	2,649,696	-	
NET POSITION (Deficit) - Beginning of Year	<u>89,360,652</u>	<u>7,251,617</u>	<u>(3,364,805)</u>	<u>-</u>	
Cumulative effect of a change in accounting principle	<u>(22,919,558)</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>(</u>
NET POSITION (Deficit) - END OF YEAR	<u>\$ 69,575,182</u>	<u>\$ 7,552,841</u>	<u>\$ (715,109)</u>	<u>\$ -</u>	<u>\$</u>

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, 2016 and 2015

NOTE 9 – BLENDED COMPONENT UNITS (cont.)

CONDENSED COMBINING SCHEDULE OF CASH FLOWS For the Year Ended December 31, 2015

NET CASH FLOWS FROM (USED IN)	HGE	Holyoke Solar	Mass Clean Energy	Eliminations	Total
Operating activities	\$ 13,299,939	\$ 127,662	\$ 4,280,339	\$ -	\$ 17,707,940
Investing activities	898,969	973,910	(1,591,350)	-	281,529
Noncapital financing activities	(1,075,249)	-	-	-	(1,075,249)
Capital and related financing activities	(8,733,311)	(787,630)	(25,519,831)	-	(35,040,772)
Net Increase (Decrease) in Cash and Cash Equivalents	4,390,348	313,942	(22,830,842)	-	(18,126,552)
CASH AND CASH EQUIVALENTS - Beginning of Year	45,441,374	2,210,113	24,391,048	-	72,042,535
CASH AND CASH EQUIVALENTS - END OF YEAR	\$ 49,831,722	\$ 2,524,055	\$ 1,560,206	\$ -	\$ 53,915,983

NOTE 10 – RETIREMENT PLANS

The Department implemented GASB No. 68, *Accounting and Financial Reporting for Pensions – an amendment of GASB Statement No. 27*, and GASB No. 71, *Pension Transition for Contributions Made Subsequent to the Measurement Date – an amendment of GASB Statement No. 68*, effective January 1, 2015. The cumulative effect of the change in net position due to the change in accounting standard is shown as a change in beginning net position for 2015. The prior year balances for deferred outflows of resources and the net pension liability were not restated due to the measurement date used for the calculation of the balances and the timing of information received by the plan.

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.

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, 2016 and 2015

NOTE 10 – RETIREMENT PLANS (cont.)

GENERAL INFORMATION ABOUT THE PENSION PLAN (cont.)

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.

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

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, 2016 and 2015, the Department recognized pension expense of \$2,765,632 and \$2,828,232, respectively.

At December 31, 2016 and 2015, the utility reported deferred outflows of resources from the following sources:

	<u>2016</u>	<u>2015</u>
	Deferred Outflows of Resources	Deferred Outflows of Resources
Net differences between project and actual earnings on pension plan	\$ 3,350,939	\$ 843,029
Changes of actuarial assumptions	2,055,301	-
Changes in proportion and differences between employer contributions and proportionate share of contributions	1,406,799	695,204
Employer contributions subsequent to the measurement date	<u>3,596,091</u>	<u>3,526,919</u>
Total	<u>\$ 10,409,130</u>	<u>\$ 5,065,152</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, 2016 and 2015

NOTE 10 – RETIREMENT PLANS (cont.)

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

At December 31, 2016 and 2015, the utility reported deferred inflows of resources from the following sources:

	<u>2016</u>	<u>2015</u>
	Deferred Inflows of Resources	Deferred Inflows of Resources
Differences between projected and actual experiences	\$ 1,235,626	\$ -
Differences in proportion and differences between employer contributions and proportionate share of contributions	<u>4,026</u>	<u>-</u>
Total	<u>\$ 1,239,652</u>	<u>\$ -</u>

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. \$3,596,091 is reported for the Department. Other amounts reported as deferred outflows of resources related to pension will be recognized in pension expense as follows:

<u>Year Ended December 31</u>	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>
2017	\$ 1,655,745	\$ 267,167
2018	1,655,745	267,167
2019	1,655,745	267,167
2020	1,444,987	267,167
2021	<u>400,817</u>	<u>170,984</u>
Total	<u>\$ 6,813,039</u>	<u>\$ 1,239,652</u>

Actuarial assumptions: The total pension liability was determined by an actuarial valuation as of January 1, 2015, using the following actual assumptions, applied to all periods included in the measurement:

Inflation	3.50% (formerly 4.00%)
Salary Increases	4.25% - 4.75%
Investment Rate of Return	7.625% (formerly 7.75%)
Cost of Living Adjustments	3%

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS
As of and for the Years Ended December 31, 2016 and 2015

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 (formerly RP-2000 Employee Mortality Table projected generationally using Scale AA from 2010)
Healthy Retiree:	RP-2000 Healthy Annuitant Mortality Table projected using Scale BB2D from 2009 (formerly RP-2000 Healthy Annuitant Mortality Table projected generationally using Scale AA from 2010)
Disabled Retiree:	RP-2000 Healthy Annuitant Mortality Table projected generationally using Scale BB2D from 2015 (formerly RP-2000 Healthy Annuitant Mortality Table projected generationally using Scale AA from 2010, set forward 3 years for males)

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, 2016 are summarized in the following table:

<u>Asset Class</u>	<u>2016 Long-Term Expected Real Rate of Return</u>
Cash	1.11%
Domestic equity	6.49%
International developed markets equity	7.16%
International emerging markets equity	9.46%
Core fixed income	1.68%
High-yield fixed income	4.76%
Real estate	4.37%
Commodities	4.13%
Hedge fund, GTAA, Risk parity	3.6%
Private equity	11.04%

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS As of and for the Years Ended December 31, 2016 and 2015

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 was 7.625%. Formerly, the discount rate used to measure the total pension liability was 7.75%. 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, 2016 follows:

	1% Decrease to Discount Rate (6.625%)	Current Discount Rate (7.625%)	1% Increase to Discount Rate (8.625%)
The Department's proportionate share of the net position liability	\$ 39,876,380	\$ 30,700,334	\$ 22,951,497

The sensitivity as of December 31, 2015 follows:

	1% Decrease to Discount Rate (6.75%)	Current Discount Rate (7.75%)	1% Increase to Discount Rate (8.75%)
The Department's proportionate share of the net position liability	\$ 35,856,968	\$ 27,426,467	\$ 20,275,596

NOTE 11 – OTHER POSTEMPLOYMENT BENEFITS

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, 2016 and 2015

NOTE 11 – OTHER POSTEMPLOYMENT BENEFITS (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 \$740,778 and \$659,839 for 182 and 162 retirees in 2016 and 2015, respectively. In 2016 and 2015, 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 2016 and \$1,207,106 in 2015.

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, 2016, which is the basis for the 2016 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, 2016 and 2015:

	<u>2016</u>	<u>2015</u>
Annual required contribution	\$ 1,891,532	\$ 1,666,929
Interest on net OPEB obligation	3,170	21,239
Adjustment to annual required contribution	<u>(8,069)</u>	<u>(53,689)</u>
Annual OPEB cost	1,886,633	1,634,479
Contributions made	<u>(1,940,778)</u>	<u>(1,866,945)</u>
Change in Net OPEB Obligation	(54,145)	(232,466)
Net OPEB Obligation – Beginning	<u>50,722</u>	<u>283,188</u>
Net OPEB Obligation (Asset) – Ending	<u>\$ (3,423)</u>	<u>\$ 50,722</u>

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS
As of and for the Years Ended December 31, 2016 and 2015

NOTE 11 – OTHER POSTEMPLOYMENT BENEFITS (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, 2016 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, 2016	\$1,886,633	102.9%	\$ (3,423)
December 31, 2015	1,634,479	114.2%	50,722
December 31, 2014	1,129,217	444.8%	283,188

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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NOTES TO FINANCIAL STATEMENTS As of and for the Years Ended December 31, 2016 and 2015

NOTE 11 – OTHER POSTEMPLOYMENT BENEFITS (cont.)

ACTUARIAL METHODS AND ASSUMPTIONS

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, 2016 and 2015 were 7 and 19 years, respectively.

NOTE 12 – RELATED PARTY TRANSACTIONS

The Massachusetts Clean Energy Cooperative (Clean Energy Coop) signed a power sales contract in April 2013 with its member Massachusetts Wholesale Electric Company (MMWEC). Through this contract, MMWEC will purchase the net electrical capacity of the Hadley Falls Facility from the Clean Energy Coop at a monthly charge as defined in the contract. There were no sales to MMWEC during 2016 and 2015.

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 \$110,824 in 2016 and \$60,337 in 2015. One of the Department's commissioners has a financial interest in this company, requiring disclosure.

NOTE 13 – COMMITMENTS AND CONTINGENCES

PURCHASED POWER CONTRACTS

Short-term power - On a continuing basis, the Department enters into several short-term power supply contracts for either the purchase or sale of capacity, energy, renewable certificates, or ancillary services with various suppliers. This includes bilateral purchases to meet Department's shortfall position during the summer months of 2017 through 2022, where commitments were made by end of 2016 in the amount of \$874,726 for 2017 and \$1,443,114 for the four year period from 2018-2021.

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS
As of and for the Years Ended December 31, 2016 and 2015

NOTE 13 – 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 and Massachusetts Class II RECs from its hydro units. These commitments were made by end of 2016 with Exelon Generation Company, LLC and Massachusetts Electric Company resulting in revenues to the Department in the amount of \$325,769 for 2017 based on 12,315 certificates.

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. It is unknown which other project(s), if any, will ultimately be constructed; however terms and conditions, and pricing were developed to mitigate market risk and help diversify the Department's energy portfolio.

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 five (5) years remaining to the contract, the total future commitment is \$12,034,448.

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, 2016 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 summer of 2017.

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NOTES TO FINANCIAL STATEMENTS
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NOTE 13 – COMMITMENTS AND CONTINGENCES (cont.)

PURCHASED POWER CONTRACTS (cont.)

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.

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 2.9 years remaining to the contract, the total future commitment is \$2,736,271. 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 October 2015, the Department contracted with MMWEC to participate up to 10 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 2020/21 Forward Capacity Auction (FCA) that was held of February 6, 2017. The Department will contract with MMWEC in 2017 prior to the FCA to participate in this project for up to 4.8 MW for life of unit with expected COD beginning June 2020. If project clears the FCA, HG&E's estimated portion of construction costs is approximately \$5.9 million. Project debt will not be carried on HG&E's books. The annual total costs will vary between \$542,579 and 647,951 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 4.375 MW natural gas generator. Uncertain if this project will move forward; however 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).

The Department contracted with PSEG through MMWEC in January of 2016 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 HG&E is located. The annual capacity payment will be \$1,395,000 per year.

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, 2016 and 2015

NOTE 13 – 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 costs 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.

HOLYOKE GAS AND ELECTRIC

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NOTES TO FINANCIAL STATEMENTS
As of and for the Years Ended December 31, 2016 and 2015

NOTE 13 – COMMITMENTS AND CONTINGENCES (cont.)

MASSACHUSETTS MUNICIPAL WHOLESALE ELECTRIC COMPANY (cont.)

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.

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, 2016, total capital expenditures for MMWEC's Projects amounted to \$1,636,374,000 of which \$47,147,000 represents the amount associated with the Department's Project Capability. MMWEC's debt outstanding for the Projects includes Power Supply Project Revenue Bonds totaling \$55,795,000, of which \$1,021,000 is associated with the Department's share of Project Capability. As of December 31, 2016, MMWEC's total future debt service requirement on outstanding bonds issued for the Projects is \$59,281,000 of which \$1,075,000 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, 2016 and estimated for future years is shown below.

For the Years Ended December 31,

2017	\$	856,000
2018		219,000
2019		<u>-</u>
Total	\$	<u>1,075,000</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 \$4,167,000 and \$4,774,000 for the years ended December 31, 2016 and 2015, respectively.

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, 2016 and 2015

NOTE 13 – COMMITMENTS AND CONTINGENCES (cont.)

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 addition the Department has entered into five-year contracts for data fiber 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.

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 2016, the Department has spent approximately \$32 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 \$305,000. 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 expires March 31, 2017.

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, 2016 and 2015

NOTE 13 – 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 14 – 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

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NOTES TO FINANCIAL STATEMENTS
As of and for the Years Ended December 31, 2016 and 2015

NOTE 15 – CUMULATIVE EFFECT OF A CHANGE IN ACCOUNTING PRINCIPLE

The Department adopted GASB Statement No. 68 effective January 1, 2015. The cumulative effect of implementation is reflected as a change in net position as follows:

Net pension liability January 1, 2015	\$ (26,306,033)
Deferred outflow January 1, 2015	<u>3,386,475</u>
Cumulative Effect of a Change in Accounting Principle	<u>\$ 22,919,558</u>

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.

	2016	2015
Holyoke Gas and Electric's proportion of the net pension liability	20.7392990%	20.4671670%
Holyoke Gas and Electric's proportionate share of the net pension liability	\$ 30,700,334	\$ 27,426,467
Holyoke Gas and Electric's covered employee payroll	\$ 10,862,753	\$ 10,776,026
Plan fiduciary net position as a percentage of the total pension liability	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*

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

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued 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

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION For the Year Ended December 31, 2016

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: The following changes were effective January 1, 2016:

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

S U P P L E M E N T A L 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, 2016 and 2015

	2016	2015
OPERATING REVENUES		
Residential	\$ 7,864,188	\$ 9,491,557
Commercial	7,955,508	9,771,741
Industrial	1,686,142	2,103,711
Municipal	590,110	711,199
Departmental sales	69,793	98,732
Sales for resale	1,196,459	829,359
Uncollectible accounts	(36,501)	(115,926)
Total Operating Revenues	\$ 19,325,699	\$ 22,890,373
COST OF GAS SOLD		
Purchases - natural gas	\$ 7,549,836	\$ 9,525,894
Liquid natural gas processed	720,169	1,615,632
Environmental response	144,000	74,360
Supplies and expenses	194,340	216,018
Total Cost of Gas Sold	\$ 8,608,345	\$ 11,431,904
DISTRIBUTION		
Salaries and Wages		
System control and load dispatch	\$ 350,566	\$ 341,593
Supervision and engineering	243,107	258,886
Customer installation	486,942	535,185
Operation	496,989	489,040
Maintenance	961,422	870,473
Supplies and expenses	1,207,893	1,044,302
Total Distribution	\$ 3,746,919	\$ 3,539,479
CUSTOMER ACCOUNTS		
Salaries and Wages		
Meter reading	\$ 67,022	\$ 57,489
Accounting and collection	151,140	143,064
Supplies and expenses	73,266	57,067
Total Customer Accounts	\$ 291,428	\$ 257,620
GENERAL AND ADMINISTRATIVE		
Salaries	\$ 815,247	\$ 880,697
Pensions and benefits	1,742,419	1,581,401
Insurance	145,522	118,357
General supplies and expenses	616,776	610,336
Total General and Administrative	\$ 3,319,964	\$ 3,190,791

HOLYOKE GAS AND ELECTRIC

SCHEDULES OF OPERATING REVENUES AND EXPENSES -
ELECTRIC AND TELECOMMUNICATIONS DIVISIONS
For the Years Ended December 31, 2016 and 2015

	2016	2015
OPERATING REVENUES		
Electric Sales		
Residential	\$ 12,562,062	\$ 12,664,641
Commercial	21,281,406	21,392,313
Industrial	5,678,877	5,673,229
Municipal	2,625,507	2,608,948
Interdepartmental	295,062	301,699
Water	6,300	6,300
Renewable energy revenue	2,773,448	2,095,889
Cobble Mountain operation - net	610,503	567,452
Telecommunication sales	2,245,051	2,436,564
Uncollectible accounts - electric/hydro	(111,003)	(417,001)
Uncollectible accounts - telecommunications	<u>(1,444)</u>	<u>(5,616)</u>
Total Operating Revenues	<u>\$ 47,965,769</u>	<u>\$ 47,324,418</u>
COST OF ELECTRICITY/STEAM/WATER SOLD		
Purchases - electricity	\$ 13,842,914	\$ 18,184,420
Salaries and Wages		
Production	1,300,502	1,254,272
Maintenance	1,440,040	1,559,260
Supplies and expenses	1,928,167	2,397,823
Cost of water sold	<u>387,705</u>	<u>388,435</u>
Total Cost of Electricity/Steam/Water Sold	<u>\$ 18,899,328</u>	<u>\$ 23,784,210</u>
ELECTRIC TRANSMISSION		
Salaries and wages	\$ 742,080	\$ 627,793
Supplies and expenses	106,214	122,880
Transmission by others	<u>3,189,401</u>	<u>2,874,845</u>
Total Electric Transmission	<u>\$ 4,037,695</u>	<u>\$ 3,625,518</u>
DISTRIBUTION		
Electric		
Salaries and Wages		
Lines, equipment and street lights	\$ 2,130,214	\$ 2,128,262
Customer installations	210,653	218,329
Supplies and expenses	2,372,330	2,475,820
Telecommunications distribution	<u>1,201,718</u>	<u>1,224,500</u>
Total Distribution	<u>\$ 5,914,915</u>	<u>\$ 6,046,911</u>
CUSTOMER ACCOUNTS		
Electric		
Salaries and Wages		
Meter reading	\$ 123,506	\$ 107,285
Accounting and collection	280,689	265,709
Supplies and expenses	<u>126,748</u>	<u>98,598</u>
Total Customer Accounts	<u>\$ 530,943</u>	<u>\$ 471,592</u>
GENERAL AND ADMINISTRATIVE		
Electric		
Salaries	\$ 1,563,156	\$ 1,474,626
Pensions and benefits	3,975,417	3,482,389
Insurance	517,793	447,963
General supplies and expenses	1,695,949	1,594,909
Telecommunications general and administrative	<u>594,185</u>	<u>596,722</u>
Total General and Administrative	<u>\$ 8,346,500</u>	<u>\$ 7,596,609</u>

