



ANNUAL REPORT

2014

Braintree Electric Light Department



The Braintree Electric Light Department spent 2014 refocusing our efforts to increase our investment in renewable energy with the development and construction of a new solar array

4,140

Approximate solar panels

1.26

Megawatts of electricity

1,645,000

Kilowatt hours of electricity



# Braintree Electric Light Department

The staff at Braintree Electric Light Department spent 2014 refocusing our efforts to increase our investment in renewable energy. Our biggest and most visible project was the development and construction of a new solar array on the site of the capped landfill off Ivory Street. Comprised of approximately 4,140 solar panels, the solar array produces up to 1.26 megawatts of electricity when it's running at maximum capacity. Over the course of a year it's expected to produce 1,645,000 kilowatt-hours of electricity, which will fully power 200 homes. We worked with Town government—who licensed the site to BELD—and renewable energy developer Ameresco to bring the solar array to commercial operation at the end of 2014.

Additionally, we've worked with a number of businesses around Town who have installed individual solar arrays on their property. Buybuy Baby, Konditor Meister, GeoLabs, and TD Bank are among our commercial customers who are now reaping the benefits of solar power.

Along with our solar array project, BELD has invested in two windfarms in Maine, a landfill gas plant in Western Massachusetts, and a hydroelectric generating station. Together with our ownership in

nuclear power at Seabrook Station, our non-greenhouse gas emitting energy portfolio is now up to 28% of our total power supply.

When we weren't focused on renewable energy, BELD employees began the process of dealing with the fact that our largest power plant, Potter II, will soon be 40 years old. At that point the reliability of an electrical generating station becomes

regulators have created over the last few years and as a result the ratepayers in Braintree have benefited. If this project goes forward BELD would start construction on the new power plant in early 2018 on space available at the Potter Road property. The new unit would start commercial operation in the summer of 2019 and, in conjunction with that, Potter II would be retired from service earlier that year.

***This newer technology fits much better into the markets that the regulators have created over the last few years and as a result the ratepayers in Braintree have benefited from it.***

a concern and new technology brings its future benefit into question. Therefore, we started to do development work and permitting to replace Potter II with a new simple-cycle gas turbine similar to the Watson 1 and 2 units we installed on the property in 2009. This newer technology fits much better into the markets that the

As usual, there is always a lot happening at BELD. We thank you for your support as we continue to try to improve our facilities and processes to serve our town.



# Municipal Light Board

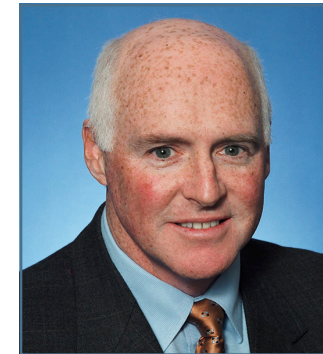
The Braintree municipal lighting plant was established in 1893. The plant operated under the jurisdiction of the Selectmen until 1909 when the growing importance of electricity made a separate Municipal Lighting Board necessary. The following year, the Electric Light Department boasted 908 customers, and was more than self-sustaining financially.

At the close of the year 1916 the service included 725 street lights, for which the town paid \$6,282, and 1,600 private customers. According to the report of the town treasurer, the total income of the plant was \$41,890.94. During the year nearly fifteen thousand dollars were expended in the purchase of new machinery, making the estimated value of the equipment at the close of the year over one hundred thousand dollars. Few towns in the state have a better lighting system than Braintree, and the cost of light to the consumer was much lower than in many of the large cities. F. B. Lawrence, manager of the municipal lighting department, closes his report for 1916 by saying: "Prices on pole-line, hardware, poles, wire and fuel have increased considerably over 1915, yet our manufacturing cost has been well within our income. With increased business and greater generating efficiency, we expect to make an even better showing for the coming year."



*The plant operated under the jurisdiction of the Selectmen until 1909 when the growing importance of electricity made a separate Municipal Lighting Board necessary.*

*For 119 years BELD has been a nonprofit public power utility owned & operated by the citizens of Braintree*



**William G. Bottiggi**  
General Manager



**Thomas J. Reynolds**  
Chairman



**Anthony L. Agnitti**  
Vice Chairman



**James P. Regan**  
Secretary

## BELD GENERAL MANAGERS

1892–1895	Thomas A. Watson (3 years)
1895–1902	Ansel O. Clark (7 years)
1903–1911	Daniel Potter (8 years)
1911–1939	Fred B. Lawrence (28 years)
1939–1954	Ernest T. Fulton (15 years)
1954–1977	Alban G. Spurrell (23 years)
1977–1985	Donald H. Newton (8 years)
1985–2002	Walter R. McGrath (17 years)
2003–present	William G. Bottiggi



## BRAINTREE MUNICIPAL LIGHT BOARD (Members listed by seat)

1909–1956	Norton P. Potter	1909–1938	Alexander Carson	1909–1925	Charles T. Crane
1956–1960	James H. Dignan	1938–1957	Shelley A. Neal	1925–1936	Charles G. Jordan
1960–1961	Raymond A. Nagle	1957–1983	Walter J. Hansen	1936–1954	Frank P. Lloyd
1961–1967	Ernest S. Reynolds	1983–1989	Michael J. Joyce	1954–1955	Ernest T. Fulton
1967–1968	Gordon E. Trask	1989–1995	James E. Wentworth	1955–1980	Carl W.R. Johnson
1968–1974	William J. Dignan	1995–1995	Paul E. Caruso	1980–1981	Guy F. Luke
1974–1977	Anthony J. Mollica	1995–2004	Darrin M. McAuliffe	1981–1982	Joseph W. Aiello
1977–1983	Dennis M. Corvi	2004–present	Anthony L. Agnitti	1982–2006	Guy F. Luke
1984–1993	Joseph W. Aiello			2006–present	James P. Regan
1993–1999	James M. Casey				
1999–present	Thomas J. Reynolds				





# The history of BELD

In 1891, the moderator of Braintree's Town Meeting appointed a five-member committee to study the feasibility of bringing electric lighting to the town. As chairman of that group, Thomas A. Watson began compiling information on the subject. The committee reported back that Braintree was the only town along the Old Colony Railroad route from Boston to Scituate that did not have streetlights. Lack of electric lighting, the committee found, was the only negative to Braintree's continued expansion and development. It said the cost of a lighting system was a good investment, "sure to return dividends in increase of population and value of real estate."

## 1890s: The beginnings of BELD—and public power

The committee considered the town owning its own generating plant. "There are many reasons why in our opinion it is better for a town to own and operate an electric plant," Watson summarized, "but the chief reason is that a town can supply itself with light from its own plant cheaper than it can buy light from any company." Watson was the founder of a group of Nationalists, who sought to promote public ownership and operation of all industries. It was largely through lobbying efforts by the Nationalists that the state Legislature in 1891 approved a bill allowing municipalities to establish their own electric light systems—the birth of public power in America.

For \$750 the town bought a large lot on Allen Street in East Braintree, located on the Fore River where it could be reached

by coal schooners. The first estimate for constructing a generating plant was \$25,000, which included a building with a brick chimney, dynamos and equipment to furnish 100 arc lights, a steam plant, poles, wires and 90 lamps installed and ready to operate.

## Residents of Braintree quickly realized the advantages of electricity

With Watson as chairman of a committee constructing the electric light system, by Oct. 14, 1892, operations began with two arc light machines capable of powering 50 street lamps each. Residents of Braintree quickly realized the advantages of electricity once the streetlights were in operation.

The town's total investment was gradually paid back from Electric Light Company earnings. Watson agreed to serve as first manager of the Electric Light Company, but refused to accept money for his services.

## 1900s: More customers, better technology

In the next few years electric demand increased as consumers

learned to enjoy the convenience of such innovations as electric water heaters and stoves. At the same time, sound financial management allowed BELD to proudly become the only plant in the state without debt. And when shortages and high costs made coal impractical to burn, the plant added two new oil-fired boilers in 1921.

After much discussion and debate, the town voted in March of 1924 to appropriate \$50,000 to extend and enlarge the plant. By December of that year, a new generating unit had been installed. In 1939 it was estimated that the plant was worth well over \$1 million—a substantial amount in the Depression era. When Ernest Fulton was appointed manager that same year, the commissioners restated their objectives: "It is the aim of the Commission to furnish current and service at the lowest possible rate and to continue the policy of giving Braintree uninterrupted and economical service."

The 1950s and 1960s saw an unprecedented demand for electricity as the post-war era brought business expansion, a "baby boom," and an explosion of new housing developments. In response to community needs, BELD constructed an annex in 1953 to house another new boiler. At the same time, plans to supply power to the South Shore Plaza required an underground duct system 3½ miles long.

## 1950s: Potter Generating Station is born

And the town was still growing. In 1957 the increasing tempo of business prompted the town to approve a \$5 million bond issue to build a new generating plant. Completed in December 1959, the new plant was named after Norton P. Potter, an outstanding citizen

who served as an Electric Light Commissioner from 1909 to 1955.

**1970s: Expansions and improvements**  
The electric light department had added some \$13 million to the town's assets at no cost to the taxpayer. In addition, it had been a source of income. Instead

## In 1957 the increasing tempo of business prompted the town to approve a \$5 million bond issue to build a new generating plant.

of selling the Department, townspeople supported the installation of the largest, most efficient unit possible in order to meet the community's power needs for the next decade.

Potter II station, the largest project ever undertaken by the town, went on-line on April 1, 1977. Two high-capacity interties with the New England network provided the town with the ability to transmit all of its own generation over these lines, and to receive, if necessary, all of its power requirements from outside facilities.

## 1990s: New space, new services

A conversion project at the Potter II generating station was completed in 1990, allowing it to use either oil or natural gas as its fuel source depending on availability and price. This improvement to the unit was aimed at saving customers money while reducing the amount of plant emissions. Later, in 1997, BELD helped form Energy New England, which helps regional municipal utilities manage power supply costs for all its customers.

The mid '90s brought some significant changes for BELD. The original Allen Street generating plant was demolished in 1993, and construction of a new \$1 million operations center was completed just

½ mile to the north off Quincy Avenue in 1994.

As electric utility restructuring loomed later in the decade, BELD officials turned their attention to new services. In 1998, BELD completed its Hybrid Fiber Coaxial (HFC) network for use in automated system

monitoring and meter reading. While those projects remained in the testing phase, the utility launched BELD.net—the town's first high-speed broadband Internet service—in 1999.

With about 1,500 Internet customers solely from word-of-mouth advertising, BELD staff looked to expand the offerings from its HFC network.

## 2000s: Time for broadband

State-of-the-art digital cable service was launched before the end of 1999, and by the end of 2001, BELD was serving 4,000 cable and nearly 3,000 Internet customers. In 2005 BELD added home phone service to its offerings. Now the people of Braintree love the option of being able to bundle all three broadband services with one reliable, locally owned company.

BELD broke ground in 2007 to start construction on the Thomas A. Watson Generating Station.

The plant powered by the first two Rolls-Royce Trent 60 gas turbines built for the U.S. power generation market. The new plant is one of the most modern and efficient in the country. It will benefit the Town of Braintree for years to come by helping to stabilize electric rates and protect residents from fluctuating market forces.

BELD began an advanced metering project in 2011. The system now automatically reads meters and provides more value-added features—including outage notification, voltage quality, tamper alarms, and remote disconnect ability.







*Last year we doubled our upstream throughput to all of our customers—relieving any potential congestion on the network*

# BELD Broadband

The work in our headend here at BELD Broadband seems never ending, but that's good news for you as we continue striving to keep your cable, Internet and phone service up to date with the newest technology.

Last year we doubled our upstream throughput to all of our customers—relieving any potential congestion on the network—and created redundancy in our core routing system. Modernizing

***Modernizing our network means we're now able to offer Internet speeds of 100 Mbps***

our network means we're now able to offer Internet speeds of 100 Mbps download, with plans to increase in the future. So our customers can enjoy lag free gaming, clear voice communications, and fast downloads. It's a great complement to our popular Watch TV Everywhere free online video service, the content of which we boosted in 2014 with more on the horizon.

Speaking of video, we also bumped up the number of channels we offer Braintree residents by launching more than a dozen new cable offerings—most in high definition. And we now offer a smaller-sized cable box with more than three times the storage space of our standard cable equipment.



ASSETS	Light Division	Broadband Division	Consolidated
CURRENT ASSETS:			
Funds on Deposit with Town Treasurer			
Operating Fund	\$3,188,917	\$763,819	\$3,952,736
Customer Accounts Receivable, Net	3,948,954	69,086	4,018,040
Accounts Receivable - Related Party	319,864	0	319,864
Other Receivables	554,349	0	554,349
Materials and Supplies	5,061,298	11,166	5,072,464
Unbilled Revenue	2,813,698	0	2,813,698
Purchased Power Working Capital	2,148,080	0	2,148,080
Prepaid Expenses	382,889	64,912	447,801
<b>TOTAL CURRENT ASSETS</b>	<b>\$18,418,049</b>	<b>\$908,983</b>	<b>\$19,327,032</b>
NONCURRENT ASSETS:			
Funds on Deposit with Town Treasurer			
Depreciation Fund	\$5,347,274	\$6,347	\$5,353,621
Rate Stabilization Fund	6,597,490	0	6,597,490
Construction Fund	0	0	0
Customer Deposits	652,975	0	652,975
Investment in Energy New England	899,349	0	899,349
Investment in Hydro-Quebec Phase II	155,780	0	155,780
Other Investments	1,259,214	0	1,259,214
Investment in Affiliate Company	922,833	(922,833)	0
Plant Assets, Net	141,055,955	298,226	141,354,181
<b>TOTAL NONCURRENT ASSETS</b>	<b>\$156,890,870</b>	<b>\$(618,260)</b>	<b>\$156,272,610</b>
<b>TOTAL ASSETS</b>	<b>\$175,308,919</b>	<b>\$290,723</b>	<b>\$175,599,642</b>





LIABILITIES	Light Division	Broadband Division	Consolidated
<b>CURRENT LIABILITIES:</b>			
Accounts Payable	\$3,377,259	\$194,096	\$3,571,355
Accounts Payable - Related Party	265,661	33,000	298,661
Accrued Compensated Absences	175,635	20,644	196,279
Other Accrued Expenses	544,040	124,668	668,708
Bonds Payable	5,549,002	0	5,549,002
Participant Advances & Reserve	1,256,207	0	1,256,207
Capital Leases	15,109	176,330	191,439
Deferred Revenue	38,166	0	38,166
<b>TOTAL CURRENT LIABILITIES</b>	<b>\$11,221,079</b>	<b>\$548,738</b>	<b>\$11,769,817</b>
<b>NONCURRENT LIABILITIES:</b>			
Bonds Payable, Net of Current Portion	\$87,790,159	\$0	\$87,790,159
New Lease, Net of Current Portion	0	105,519	105,519
Net OPEB Obligation	4,951,916	965,937	5,917,853
Customer Deposits	649,492	0	649,492
Deferred Revenue	763,741	0	763,741
<b>TOTAL NONCURRENT LIABILITIES</b>	<b>\$94,155,308</b>	<b>\$1,071,456</b>	<b>\$95,226,764</b>
<b>TOTAL LIABILITIES</b>	<b>\$105,376,387</b>	<b>\$1,620,194</b>	<b>\$106,996,581</b>

DEFERRED INFLOWS OF RESOURCES	Light Division	Broadband Division	Consolidated
Contribution in Aid of Construction	\$6,866	\$0	\$6,866
Rate Stabilization Reserve	8,557,208	0	8,557,208
<b>TOTAL DEFERRED INFLOWS OF RESOURCES</b>	<b>\$8,564,074</b>	<b>\$0</b>	<b>\$8,564,074</b>

NET ASSETS	Light Division	Broadband Division	Consolidated
Invested in Capital Assets, Net of Related Debt	\$47,716,794	\$298,226	\$48,015,020
Net Position Restricted for Depreciation	5,347,274	6,347	5,353,621
Unrestricted	8,304,390	(1,634,044)	6,670,346
<b>TOTAL NET POSITION</b>	<b>\$61,368,458</b>	<b>\$(1,329,471)</b>	<b>\$60,038,987</b>
<b>TOTAL LIABILITIES AND NET ASSETS</b>	<b>\$175,308,919</b>	<b>\$290,723</b>	<b>\$175,599,642</b>



OPERATING REVENUES	Light Division	Broadband Division	Consolidated
Sales to ultimate customers	\$49,747,140	\$5,386,628	\$55,133,768
Sales for Resale	14,984,724	0	14,984,724
Other Operating Revenues	3,155,247	0	3,155,247
<b>TOTAL OPERATING REVENUES</b>	<b>\$67,887,111</b>	<b>\$5,386,628</b>	<b>\$73,273,739</b>
<b>OPERATING EXPENSES:</b>			
Purchased Power	\$27,535,277	\$0	\$27,535,277
Fuel for Generators	8,843,903	0	8,843,903
Signal Fees	0	2,146,673	2,146,673
Maintenance	8,142,885	577,264	8,720,149
Distribution	1,529,048	717,864	2,246,912
General & Administration	10,462,068	1,541,424	12,003,492
Depreciation Expense	7,206,684	824,427	8,031,111
<b>TOTAL OPERATING EXPENSES</b>	<b>\$63,719,865</b>	<b>\$5,807,652</b>	<b>\$69,527,517</b>
<b>OPERATING INCOME</b>	<b>\$4,167,246</b>	<b>\$(421,024)</b>	<b>\$3,746,222</b>
<b>NONOPERATING REVENUES (EXPENSES):</b>			
Investment Loss - ENE & SSEC	\$67,083	\$0	\$67,083
Interest and Dividend Income	11,010	6	11,016
Loss on Broadband Equipment		(463)	(463)
Interest Expense	(3,747,044)	(27,397)	(3,774,441)
<b>TOTAL NONOPERATING REVENUES (EXPENSES)</b>	<b>\$(3,668,951)</b>	<b>\$(27,854)</b>	<b>\$(3,696,805)</b>
Income Before Contributions and Transfers	498,295	(448,878)	49,417
<b>NET ASSETS - JANUARY 1</b>	<b>65,529,203</b>	<b>(880,593)</b>	<b>61,648,610</b>
Transfers In - Payment in Lieu of Taxes	-	0	0
Transfers Out - Payment in Lieu of Taxes	(1,659,040)	0	(1,659,040)
<b>NET ASSETS - DECEMBER 31</b>	<b>\$61,368,458</b>	<b>\$(1,329,471)</b>	<b>\$60,038,987</b>

**STATEMENT OF KILOWATT HOUR SALES  
LIGHT DIVISION  
DECEMBER 31, 2014 & 2013**

KILOWATTS	2014	2013
Residential Service	118,086,306	119,880,315
Commercial Service	203,518,161	205,920,815
Industrial Service	24,967,694	25,179,150
Municipal Service	14,194,439	14,098,488
Area Lighting	886,677	886,677
Sales to Other Utilities	52,870,426	39,051,424
<b>Total Kilowatt hour sales</b>	<b>414,523,703</b>	<b>405,016,869</b>

REVENUE	2014	2013
Residential Service	\$15,402,459	\$15,796,254
Commercial Service	29,055,405	29,653,578
Industrial Service	3,223,735	3,321,368
Municipal Service	2,057,604	2,042,070
Area Lighting	106,687	103,342
Sales to Other Utilities	14,984,724	13,785,612
<b>Total Kilowatt Dollar Sales</b>	<b>\$64,830,614</b>	<b>\$64,702,224</b>





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