


DATE: May 8<sup>th</sup>, 2018

FROM: John T. Conway, PE   
Chairman, Water and Light Advisory Board

TO: Mayor and Council

RE: Annual Water and Light Board Report to The People and City Council

Please find attached the Water and Light Advisory Board's Annual Report to the Council and Community as required in the City's Charter.

It is requested that any questions you may have, be directed to the Board. The Board plans to have a representative at the council meeting when the report is considered.

CC: Water and Light Advisory Board Members  
City Utilities Director  
City Manager  
City Clerk

# **2017 In Review**

Annual Report to City Council and the People  
Water and Light Advisory Board

John Conway, PE, Chair

Scott Fines, Vice Chair

Dr. Dick Parker, PhD

Jay Hasheider

Kim Fallis

# Water and Light Advisory Board

- Two new members:
  - Kim Fallis
  - Scott Fines
- Two members left:
  - Jack Clark
  - Hank Ottinger



# Finances

## FY17 In Review

1

**\$151,130,589**

Combined Water and Light Operating Revenue

2

**\$112,365,807**

Combined Operating Expenses

3

**\$15,859,317**

Combined Water and Light PILOT payments

4

**\$4,023,062**

Combined Net Loss

5

**\$3,171,253**

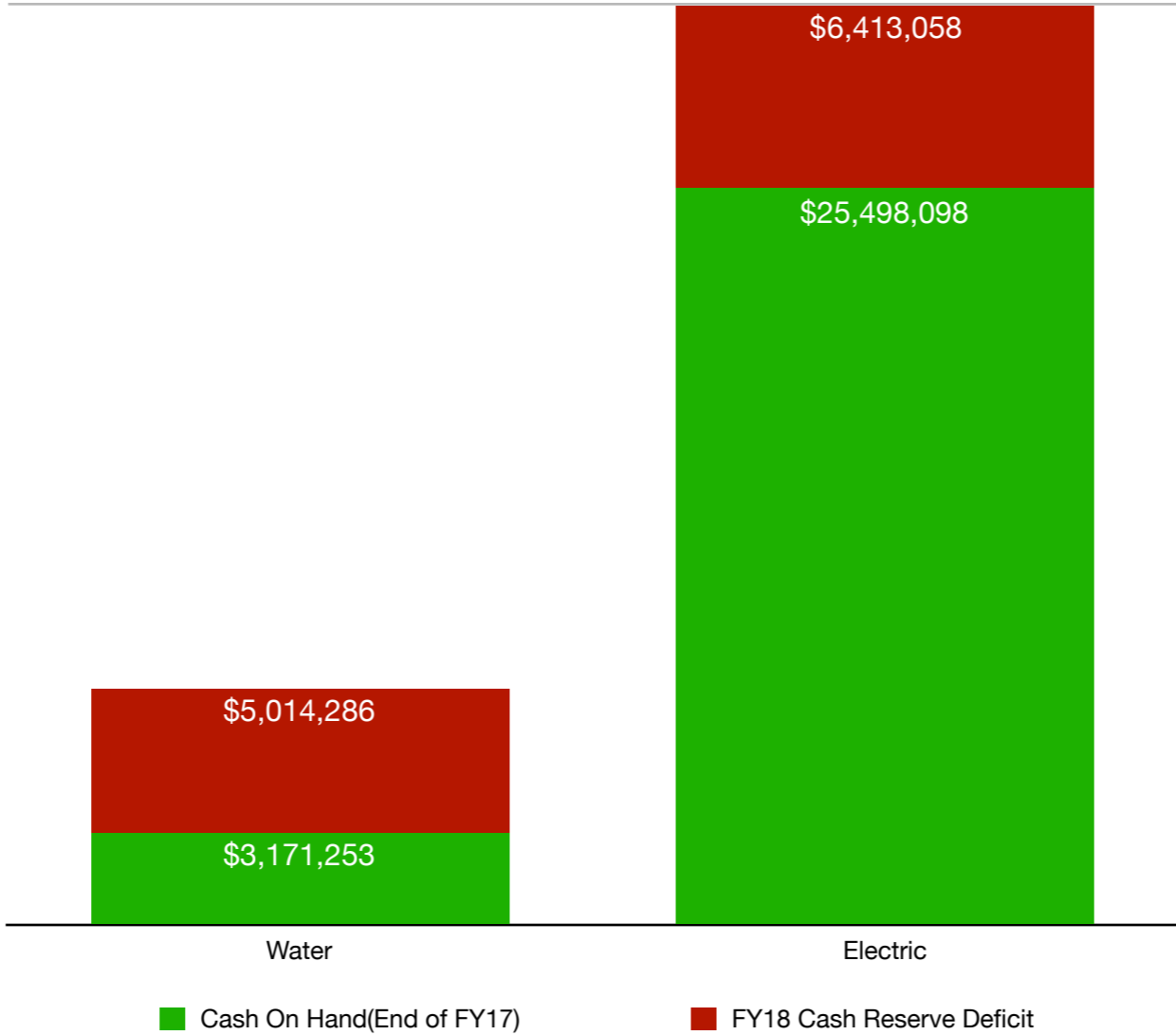
Water Cash Reserves at end of FY2017

6

**\$25,498,098**

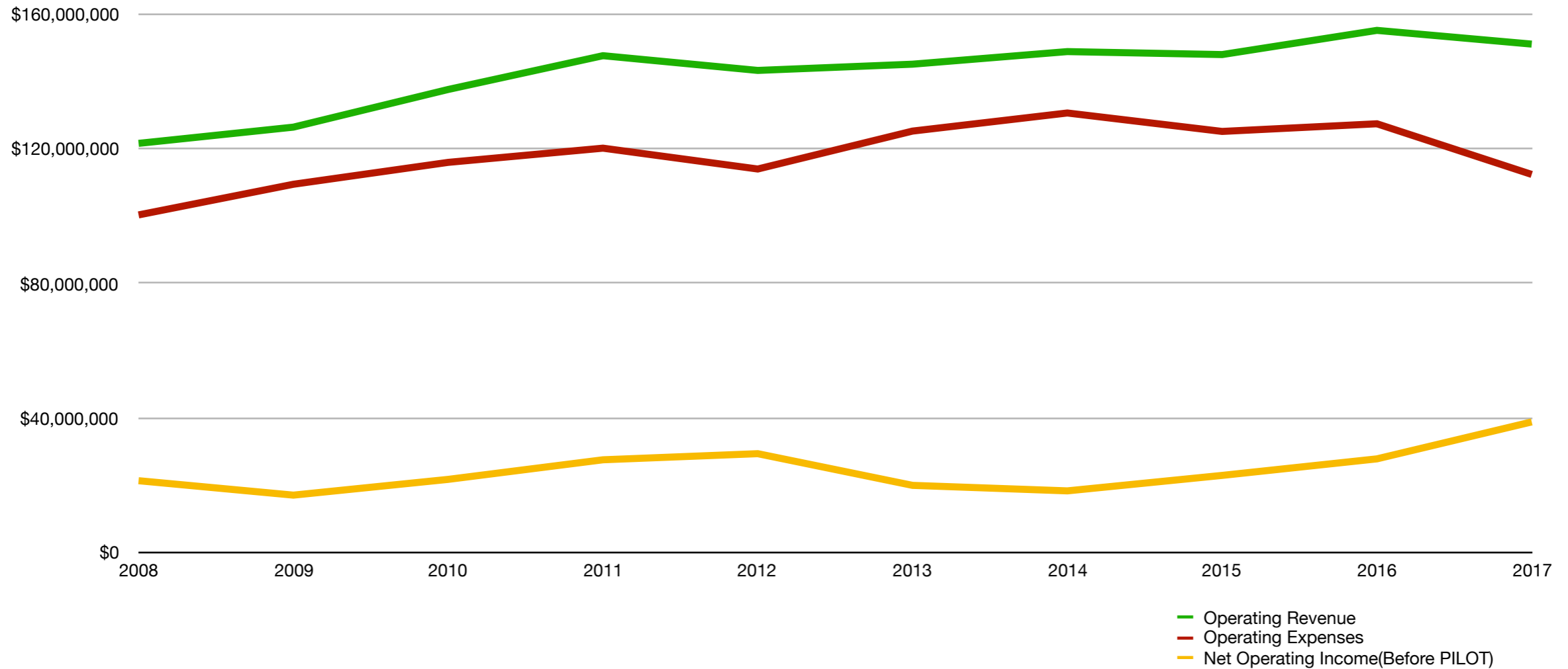
Electric Cash Reserves at end of FY2017

# Water and Electric Cash Reserve Status, End of FY2017



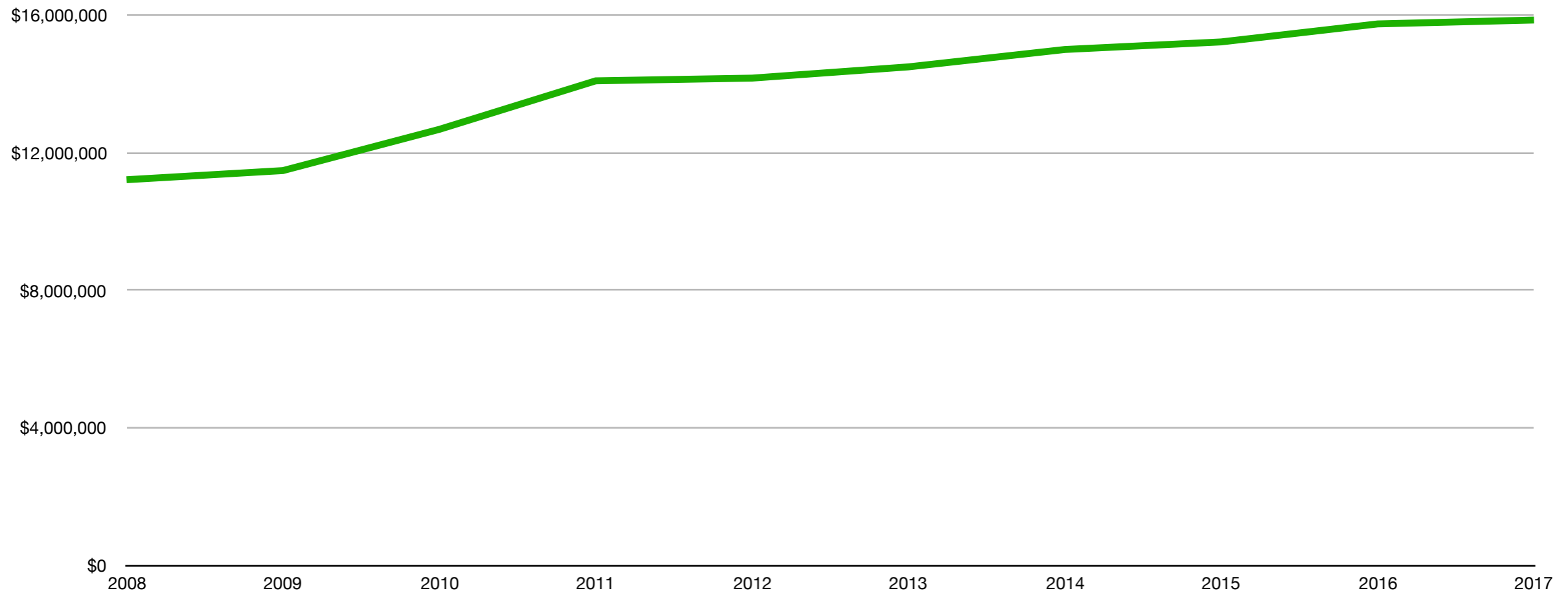
	CASH ON HAND (END OF FY17)	FY18 TARGET CASH RESERVE	FY18 CASH RESERVE DEFICIT
Water	\$3,171,253	\$8,185,539	\$5,014,286
Electric	\$25,498,098	\$31,911,156	\$6,413,058

# Combined Operating Revenues and Expenses



YEAR	OPERATING REVENUE	OPERATING EXPENSES	NET OPERATING INCOME (BEFORE PILOT)	PILOT
2008	\$121,609,839	\$100,330,122	\$21,279,717	\$11,215,634
2009	\$126,435,095	\$109,444,670	\$16,990,425	\$11,481,441
2010	\$137,633,839	\$115,957,434	\$21,676,405	\$12,680,470
2011	\$147,684,732	\$120,181,553	\$27,503,179	\$14,091,375
2012	\$143,300,497	\$113,980,451	\$29,320,046	\$14,170,229
2013	\$145,158,216	\$125,262,175	\$19,896,041	\$14,497,510
2014	\$148,900,970	\$130,642,752	\$18,258,218	\$15,002,555
2015	\$148,017,154	\$125,157,870	\$22,859,284	\$15,223,336
2016	\$155,212,893	\$127,435,234	\$27,777,659	\$15,746,363
2017	<b>\$151,130,589</b>	<b>\$112,365,807</b>	<b>\$38,764,782</b>	<b>\$15,859,317</b>

# Annual P.I.L.O.T. Payments



YEAR	PILOT
2008	\$11,215,634
2009	\$11,481,441
2010	\$12,680,470
2011	\$14,091,375
2012	\$14,170,229
2013	\$14,497,510
2014	\$15,002,555
2015	\$15,223,336
2016	\$15,746,363
<b>2017</b>	<b>\$15,859,317</b>





# Water 2017 In Review

1

**49,114**

Customers

2

**4.55 Billion**

Gallons of water  
pumped

3

**102**

Water main breaks

4

**1001**

Customers affected by  
water main breaks

5

**\$61,000**

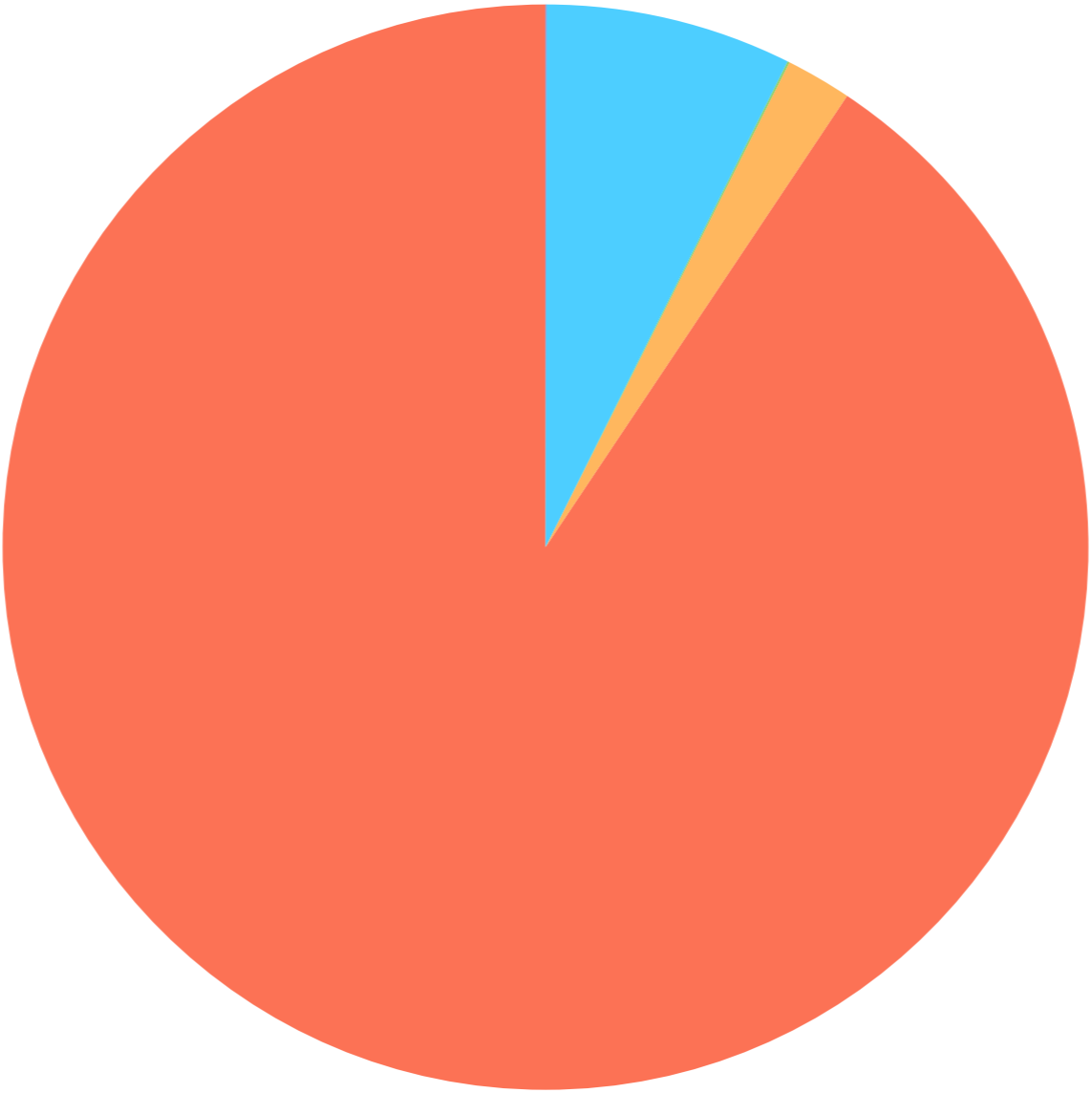
Overtime costs

6

**98%**

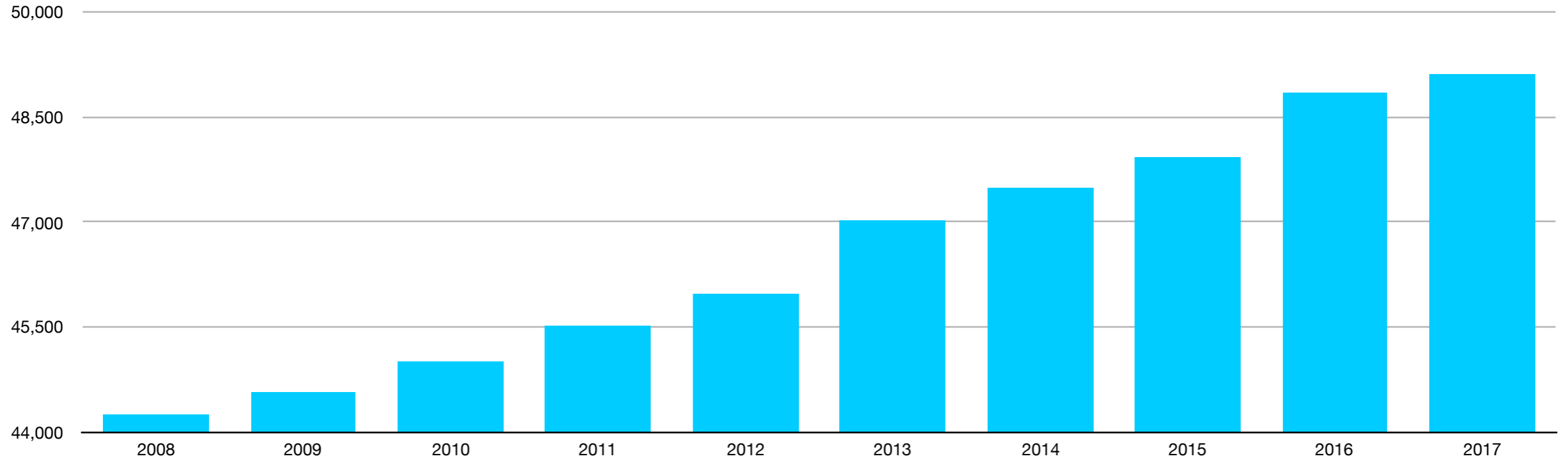
Reliability

# 2017 Water Customers by Class



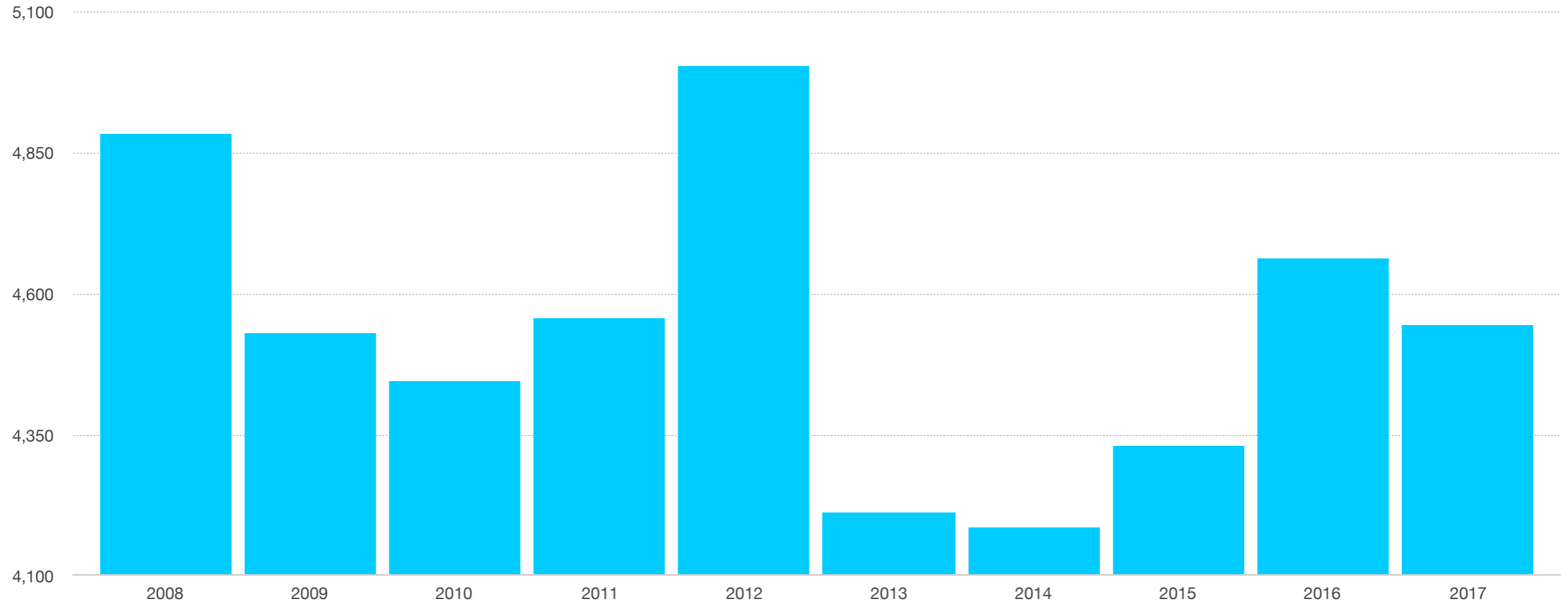
CUSTOMER CLASS	TOTAL CUSTOMERS	PERCENTAGE
Airport	13	0
Small Commercial	3,531	7
Large Commercial	28	0
Master Meter	943	2
Residential	43,657	91

# Total Water Customers, 2017



YEAR	TOTAL CUSTOMERS
2008	44,265
2009	44,567
2010	45,007
2011	45,505
2012	45,973
2013	47,033
2014	47,496
2015	47,920
2016	48,854
2017	49,114

# Total Annual Water Usage(Millions of Gallons)



YEAR	USAGE(MILLIONS OF GALLONS)	PRECIP(INCHES)
2008	4,884	56.76
2009	4,531	50.47
2010	4,446	45.98
2011	4,556	40.74
2012	5,005	30.91
2013	4,211	41.33
2014	4,184	44.12
2015	4,330	48.40
2016	4,662	39.98
<b>2017</b>	<b>4,546</b>	<b>36.88</b>

# Noteworthy Events, Water

- The Drinking Water Planning Work Group met frequently throughout the latter half of 2017, with a finalized proposal approved in February 2018, for the future of the Water Treatment Plant.
- Communication with the irrigation community and homeowners successfully prevented an irrigation-driven boil advisory in several southwestern neighborhoods.
- A 4% rate increase was approved for FY2018.



# Electricity 2017 In Review

1

**50,279**

Customers

2

**1.20 Million**

Megawatt-Hours  
generated

3

**183,000**

Megawatt-hours generated  
from Renewable resources

4

**\$2,817,670**

invested by the utility in  
energy efficient rebates  
and loans

5

**\$8,065,608**

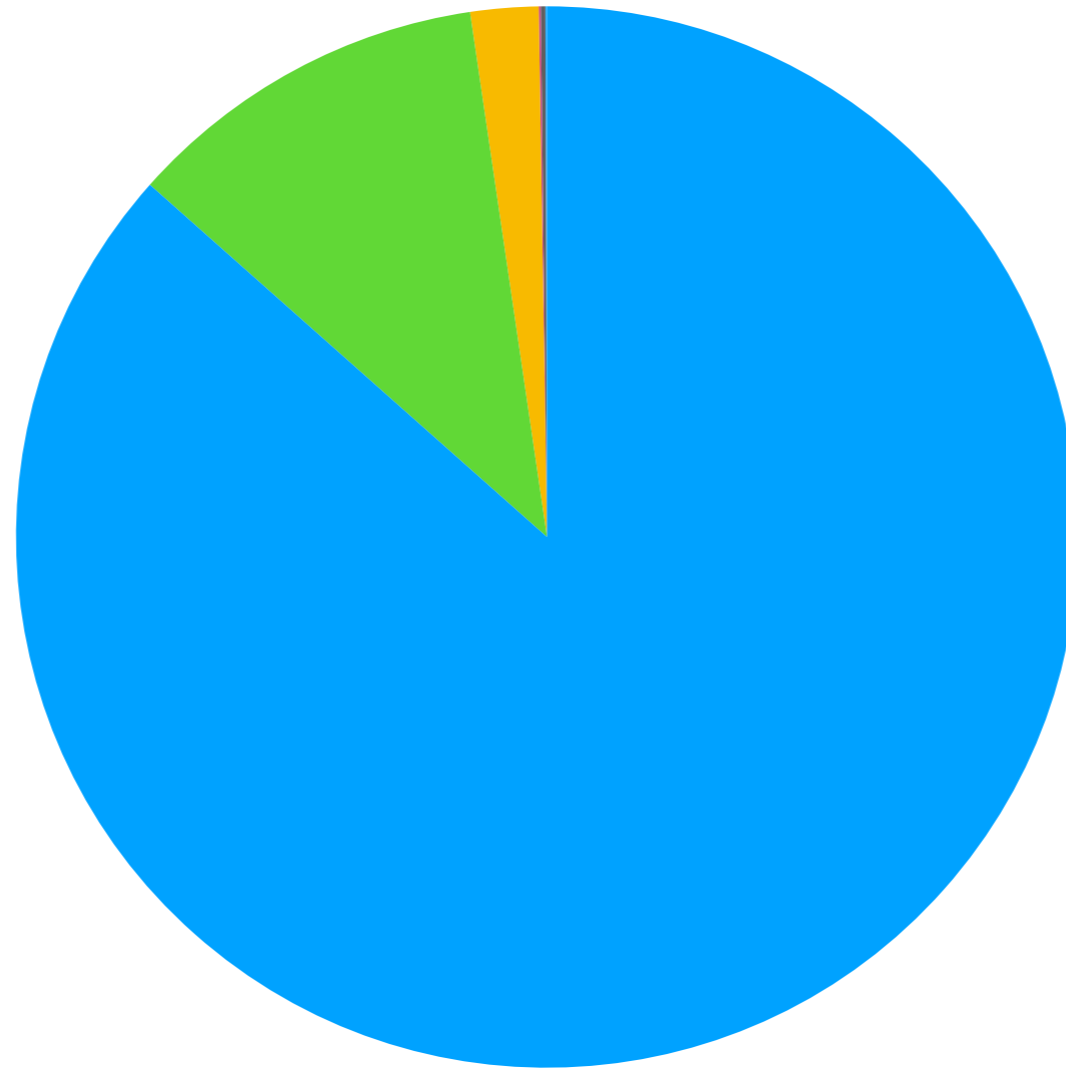
Customer investment in  
energy efficiency and  
generation

6

**1700**

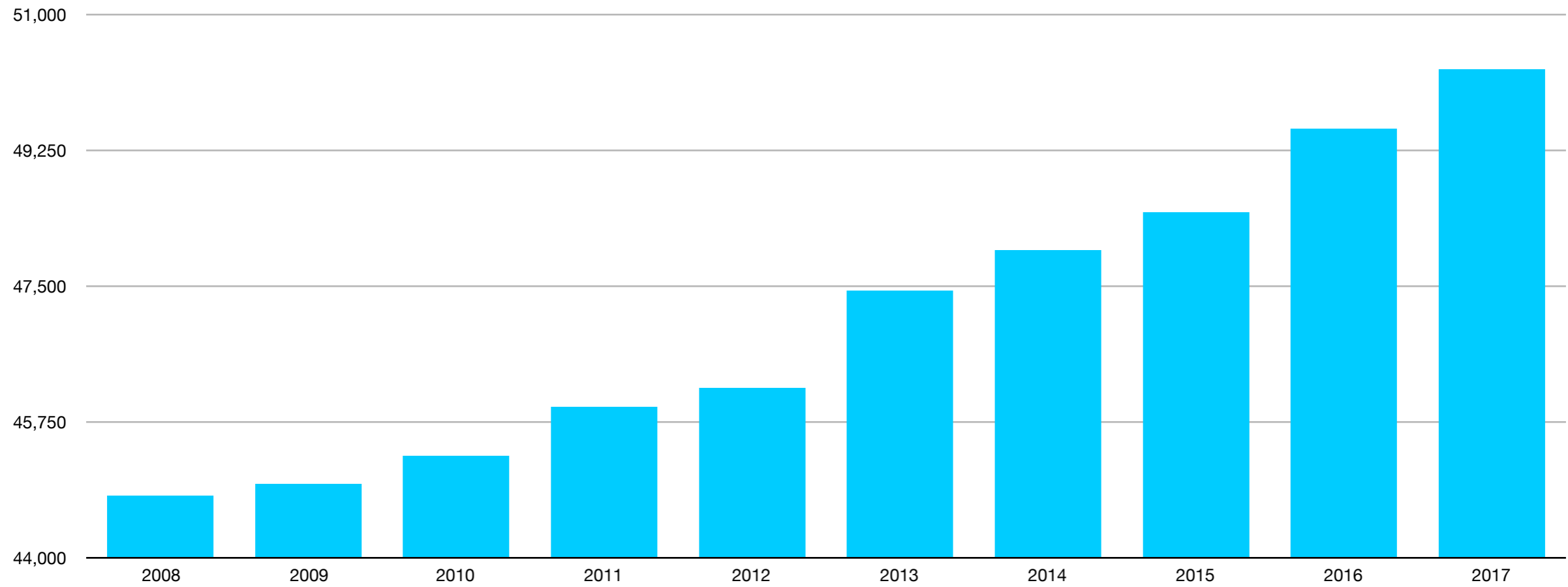
Average number of outages  
each month

# 2017 Electric Customers By Class



	CUSTOMER CLASS	TOTAL CUSTOMERS	PERCENTAGE
	Residential	43,518	87%
	Small Commercial	5,596	11%
	Large Commercial	1,039	2%
	Interruptible	2	0.004%
	Industrial	30	0.06%
	Temporary Electric	69	0.14%
	Outdoor Lighting	25	0.05%

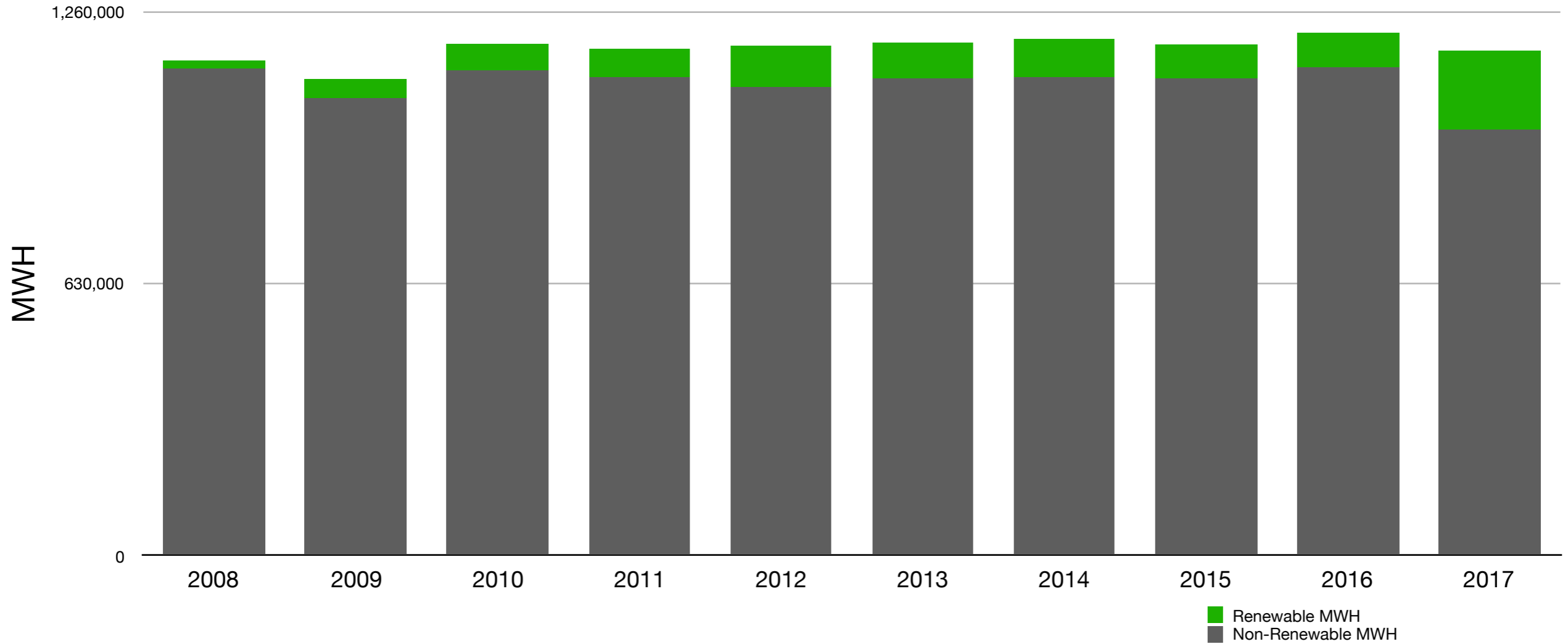
# Total Electric Customers 2017



YEAR	TOTAL CUSTOMERS
2008	44,798
2009	44,941
2010	45,319
2011	45,944
2012	46,188
2013	47,436
2014	47,944
2015	48,440
2016	49,518
<b>2017</b>	<b>50,279</b>

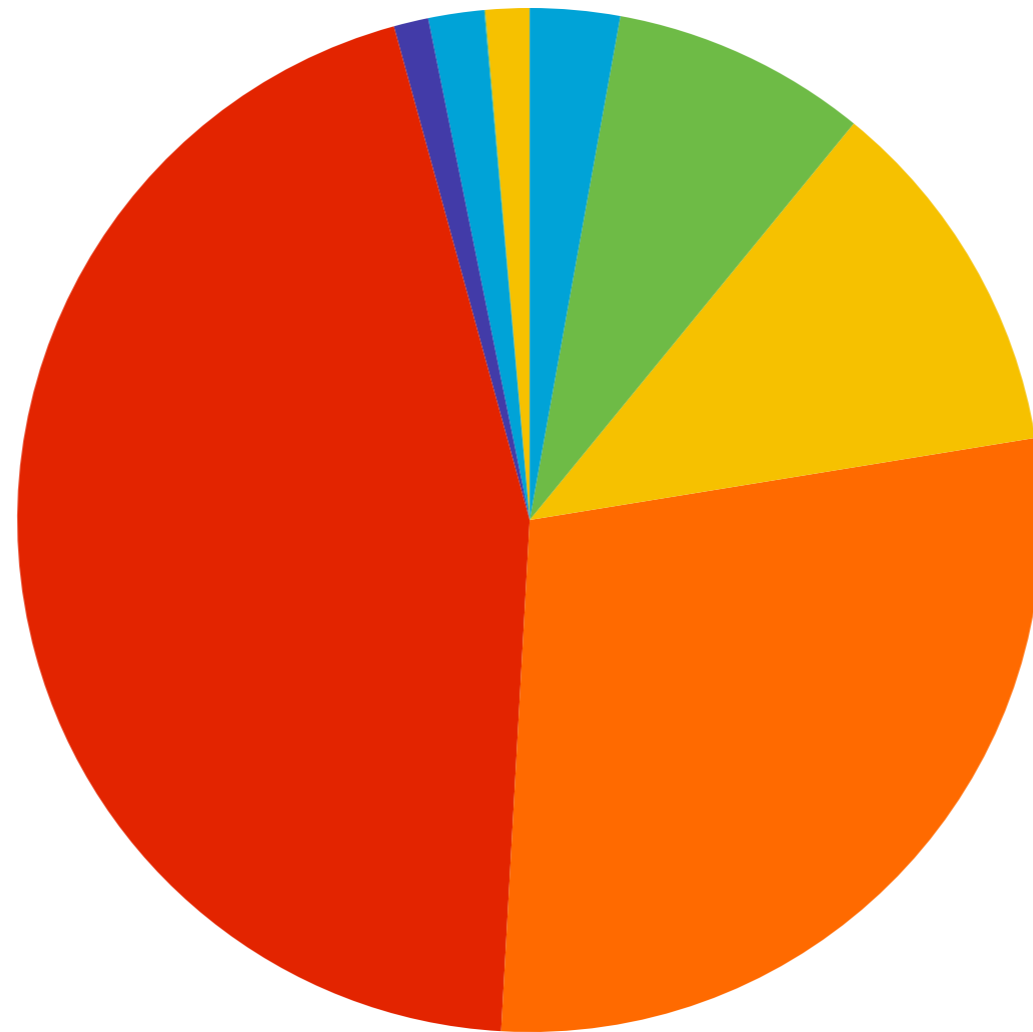


# Total Annual Electrical Usage 2017



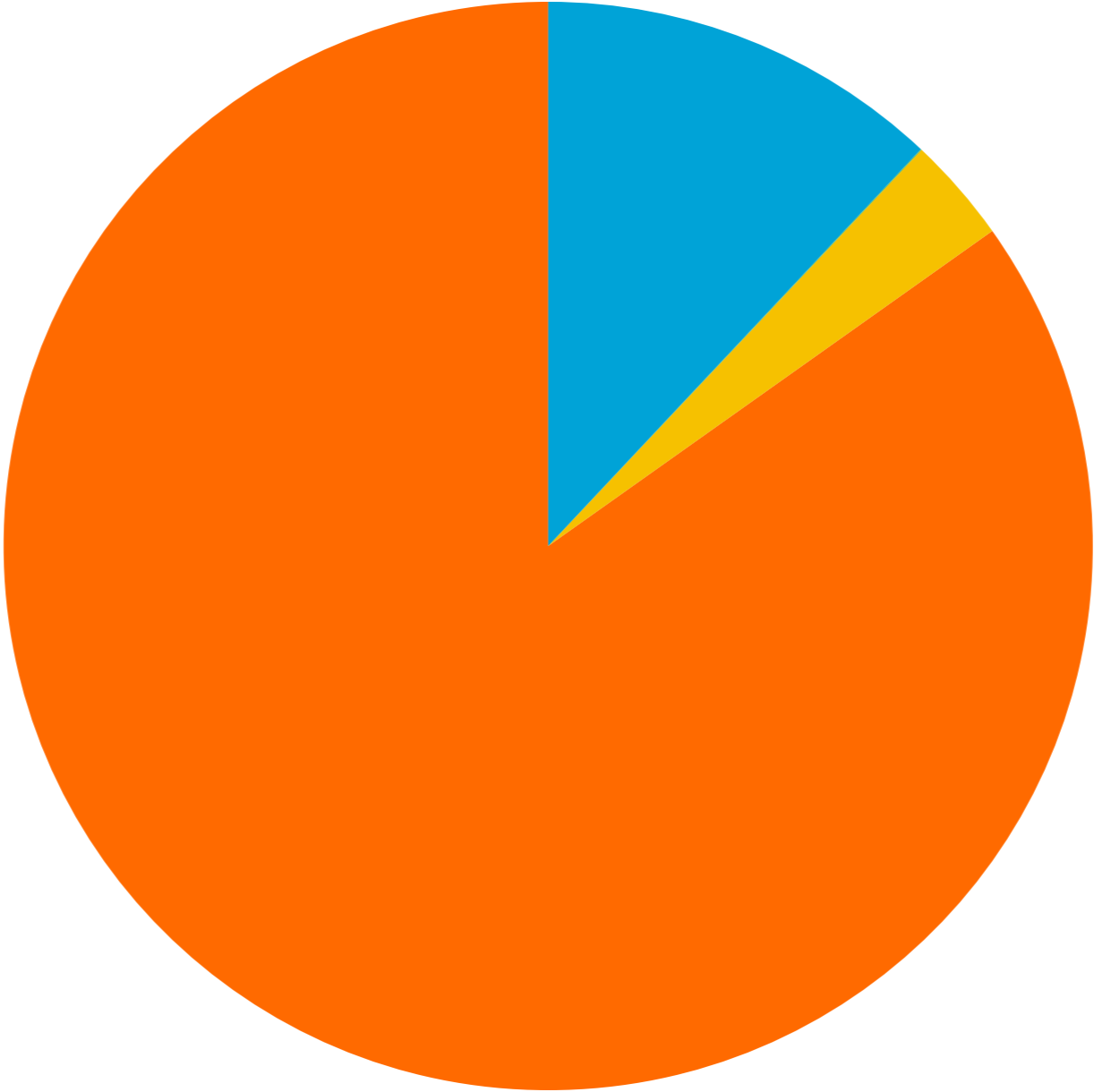
YEAR	MWH	RENEWABLE MWH	AVERAGE SUMMER TEMP (F)
2008	1,146,543	19,313	73.3
2009	1,105,255	47,079	72.34
2010	1,185,352	59,541	76.31
2011	1,173,851	63,148	76.13
2012	1,180,154	93,746	77.29
2013	1,188,483	82,855	74.49
2014	1,196,752	86,405	73.43
2015	1,184,878	80,796	74.94
2016	1,213,138	80,998	76.59
<b>2017</b>	<b>1,170,456</b>	<b>183,785</b>	<b>75.01</b>

# Purchased Power Agreements 2017(MWH)



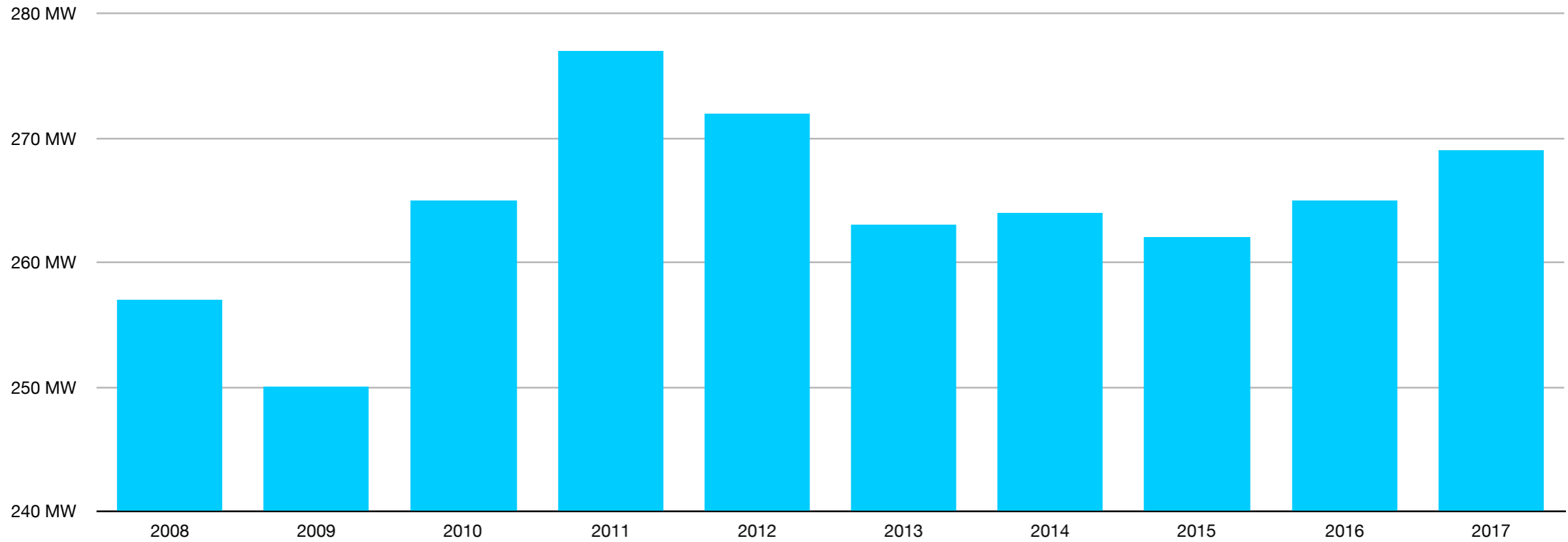
FACILITY	TYPE	MWH	PERCENTAGE
Crystal Lake III (Contract 1)	Wind	34,120	2.83%
Crystal Lake III (Contract 2)	Wind	97,148	8.07%
Iatan 2	Coal	138,870	11.53%
Prairie State	Coal	342,535	28.45%
Sikeston	Coal	539,864	44.84%
Bluegrass Wind	Wind	13,167	1.09%
Ameresco (Jeff. City Landfill)	Landfill Gas	21,245	1.76%
Free Power	Solar	328	0.03%
Columbia Landfill	Landfill Gas	16,677	1.39%

# Purchased Power Agreements By Type(MWH)



	TYPE	NUM CONTRACTS	MWH	PERCENTAGE
	Wind	3	144,435	12%
	Solar	1	328	0%
	Landfill Gas	2	37,922	3%
	Coal	3	1,021,269	85%

# 2017 Peak Electrical Demand (MW)



YEAR	PEAK DEMAND(MW)	MAX TEMPERATURE (F)
2008	257	95
2009	250	95
2010	265	97
2011	277	108
2012	272	107
2013	263	100
2014	264	98
2015	262	94
2016	265	99
<b>2017</b>	<b>269</b>	<b>103</b>

# Noteworthy Events, Electricity

- 2 line crews were dispatched to Florida to assist in recovery from Hurricane Irma.
- A 10MW solar panel project was approved by City Council, to become active in early 2019.
- Negotiations began with Ameren Inc. regarding the Option E transmission line project.

# 2017 Challenges

- A software upgrade error resulted in some customers missing their bill. The upgrade error and process have been corrected.
- Another software issue resulted in delayed financial statements. This issue has also been resolved and regular reports are being received by the board.
- The Electricity division found 10 regulatory violations. 8 violations were resolved, including \$42,000 in sanctions paid. 2 violations remain outstanding.

**Looking Forward**

# Employee Retention

- Pay rates for front-line utility workers are not keeping pace with the market, causing those workers to leave after being educated here.
- Ultimately, this is both a safety and a cost problem. Too few experienced workers will force the utility to hire contracting companies at increased rates, while making internal line crews less safe.



# Water Treatment Plant

- The Water treatment plant is in desperate need of upgrades and renovations in order to remain in service.
- The Drinking Water Planning Work Group met in 2017 to consider options, and proposed an option in early 2018.
- This, as well as other water projects are intended for inclusion in an August bond issue.

# Electric Master Planning

- The electric utility requires an update to its strategic plan, in order to better match customer changes and city strategy.
- An Integrated Electric Resource Plan and Master Planning Task Force was established in early 2018.

# References

- FY2017 Year-end preliminary Financial Report
- FY2007-FY2016 Ten Year Trend Manual
- 2017 Renewable Energy Report
- 2017 Annual Director's Report to WLAB
- Weather Underground historical data
- Numerous internal Staff requests