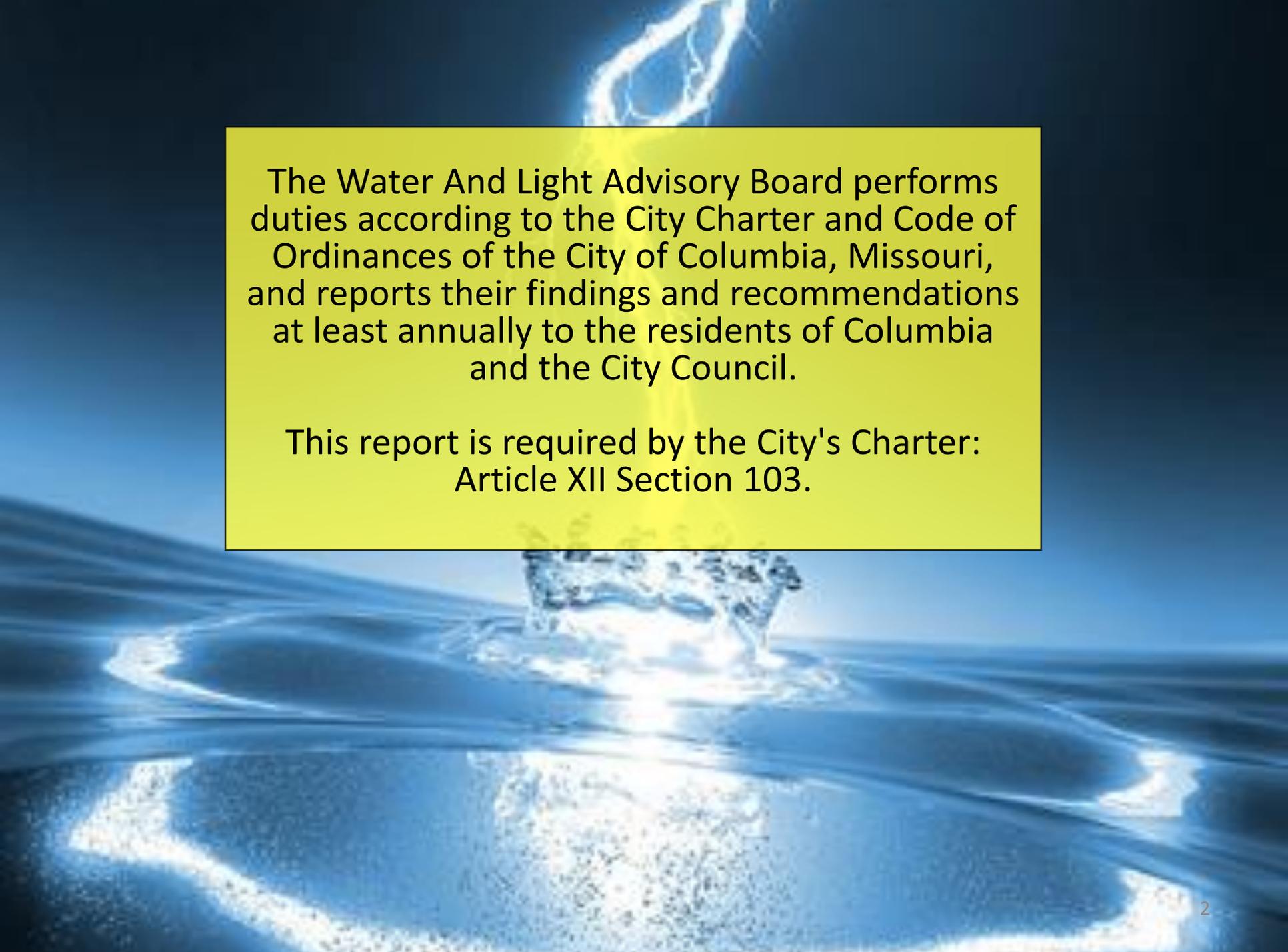
A dramatic blue-toned image of a lightning bolt striking a body of water. The lightning bolt is bright white and jagged, descending from the top center towards a group of people silhouetted on the shore. The water is dark blue with white ripples and a bright reflection of the lightning. The sky is a deep blue gradient.

# Water & Light Advisory Board

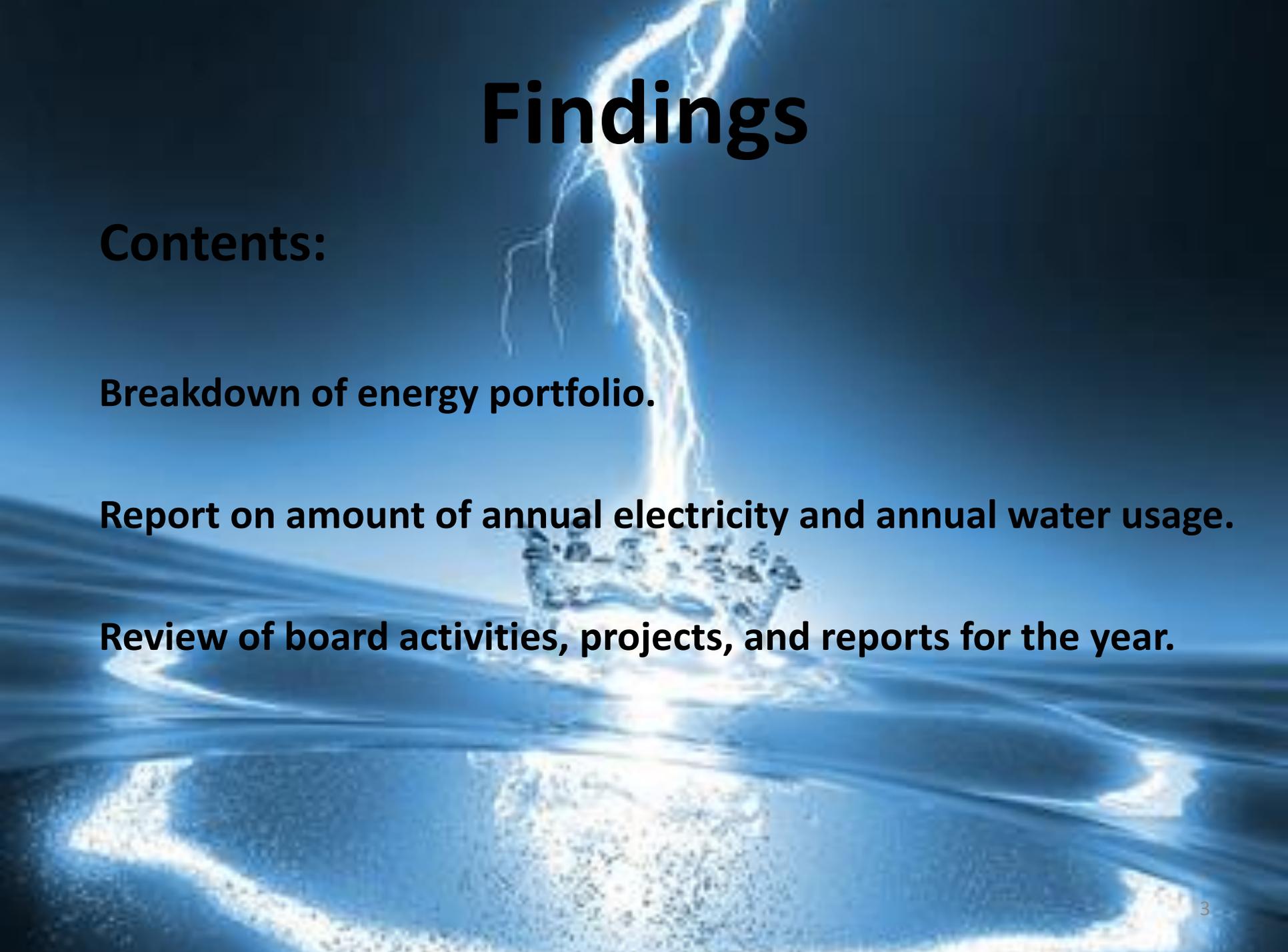
2016 Report to People and Council

(October 1, 2015 – September 30, 2016)



The Water And Light Advisory Board performs duties according to the City Charter and Code of Ordinances of the City of Columbia, Missouri, and reports their findings and recommendations at least annually to the residents of Columbia and the City Council.

This report is required by the City's Charter:  
Article XII Section 103.



# Findings

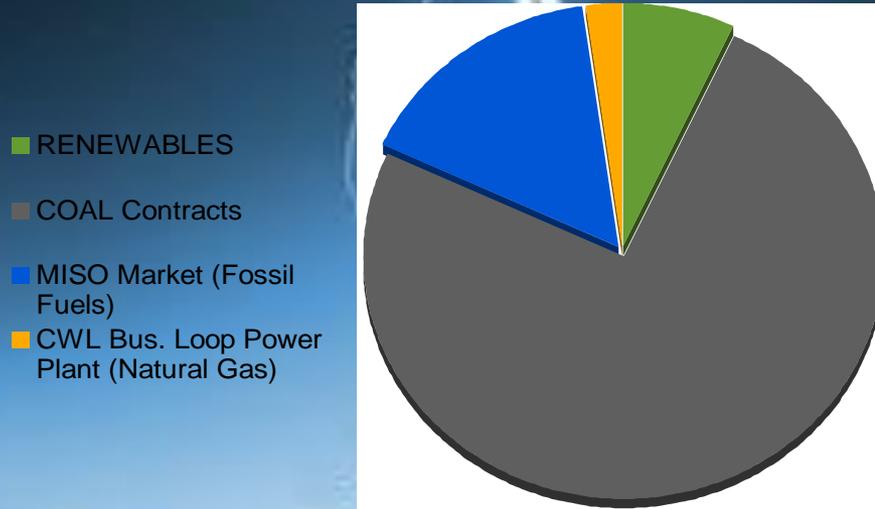
## **Contents:**

**Breakdown of energy portfolio.**

**Report on amount of annual electricity and annual water usage.**

**Review of board activities, projects, and reports for the year.**

# 2016 Energy Portfolio

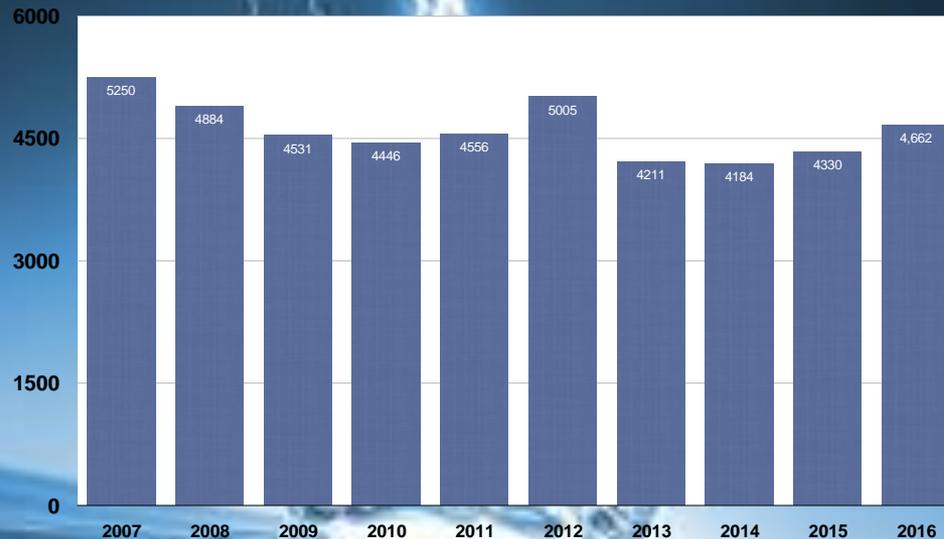


- RENEWABLES
- COAL Contracts
- MISO Market (Fossil Fuels)
- CWL Bus. Loop Power Plant (Natural Gas)

	TOTAL OVERALL PORTFOLIO	RENEWABLES	COAL Contracts	MISO Market	CWL Bus. Loop Power Plant	CWL Columbia Energy Center
<b>MWh</b>	1,185,017	80,794	891,347	187,418	25,458	0
<b>% of Total</b>		6.8%	75.2%	15.8%	2.2%	0%

# Total Annual Water Usage

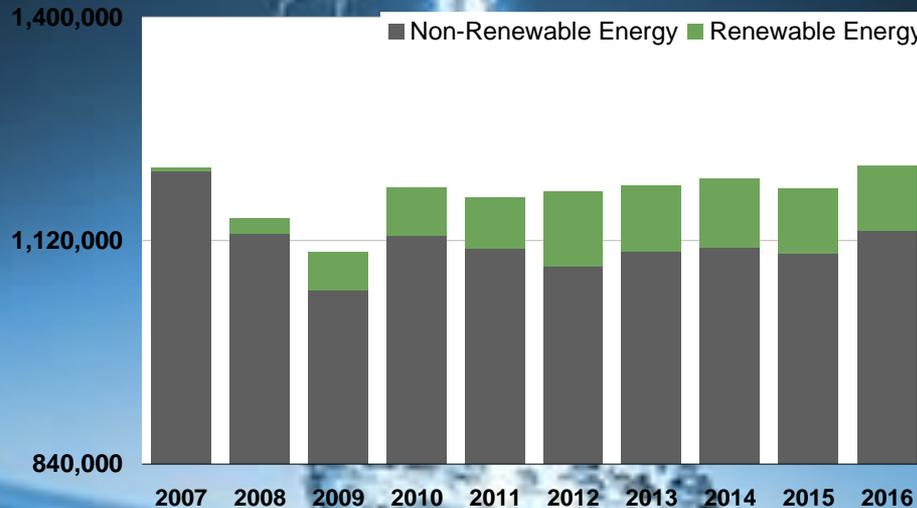
Million Gallons/Year



In 2016, our Water Treatment Plant supplied the City with 4,662,870,000 gallons meeting EPA/DNR drinking water standards.

# Total Annual Electrical System Usage

Megawatt-hours



Note: Y axis doesn't start at zero

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Peak MW	265	257	250	265	277	272	263	264	262	265

In 2016, we used about 1,213 Gigawatt-hours of electricity, of which 6.68% was renewable energy.

# CAFR

An archive of Water and Light financial information is provided in the City of Columbia's Comprehensive Annual Financial Report (CAFR):

<https://www.como.gov/finance/wp-content/uploads/sites/21/2017/02/FY-2016-Comprehensive-Annual-Financial-Report.pdf>

These tables show the largest users of our water and electric systems.

**Table 22**

**City of Columbia, Missouri**  
**LARGEST ELECTRIC UTILITY CUSTOMERS**  
**SEPTEMBER 30, 2016**

Customer	Billed kWh	Billed Revenue
Columbia Foods	31,153,511	\$ 2,503,163
Boone Hospital Center	30,238,695	2,471,714
3-M Company	26,345,207	1,982,194
VA Hospital	19,829,789	1,685,933
Gates Rubber	13,650,690	1,128,800
Quaker Oats	13,339,757	1,256,734
University of Missouri Regional Hospital	10,920,921	901,413
PW Eagle	9,036,213	739,939
City of Columbia Sewer	8,917,010	702,661
GGP Ltd-Columbia Mall	7,562,970	730,289
	170,994,763	\$ 14,102,840

**Table 23**

**City of Columbia, Missouri**  
**LARGEST WATER UTILITY CUSTOMERS**  
**SEPTEMBER 30, 2016**

Customer	Billed CCF	Billed Revenue
Columbia Foods	359,918	\$ 920,458
Boone Hospital Center	51,903	151,799
3M Company	49,208	125,956
JM Eagle	41,147	118,018
VA Hospital	32,759	96,261
Linen King	24,615	65,028
Best Men LLC	24,318	78,931
University of MO	23,383	63,320
State Farm Insurance	21,364	73,685
Executive Center	15,700	49,550
	644,315	\$ 1,743,005

# CAFR

## Water and Light Revenue Bond Coverage

Table 19

City of Columbia, Missouri

WATER AND ELECTRIC UTILITY REVENUE BOND COVERAGE (a)  
LAST TEN FISCAL YEARS

Fiscal Year Ended	WATER AND ELECTRIC UTILITY REVENUE / REFUNDING BONDS (c)						Revenue Bond Coverage
	Operating Revenue (d)	Operating Expenses	Net Revenue	Principal	Interest (b)	Total	
2007	\$ 116,758,098	\$ 84,055,177	\$ 32,702,921	\$ 3,595,000	\$ 4,332,137	\$ 7,927,137	4.13
2008	121,609,839	90,723,595	30,886,244	3,755,000	5,079,238	8,834,238	3.50
2009	132,415,953	99,094,026	33,321,927	3,875,000	6,125,758	10,000,758	3.33
2010	142,829,724	104,960,352	37,869,372	4,020,000	6,206,577	10,226,577	3.70
2011	151,526,817	107,813,998	43,712,819	4,175,000	6,354,157	10,529,157	4.15
2012	147,075,417	100,038,432	47,036,985	5,360,000	8,714,110	14,074,110	3.34
2013	146,188,407	111,187,318	35,001,089	6,545,000	8,501,203	15,046,203	2.33
2014	152,473,820	116,235,925	36,237,895	6,665,000	7,798,291	14,463,291	2.51
2015	152,500,629	110,335,849	42,164,780	6,745,000	7,174,035	13,919,035	3.03
2016	159,378,641	112,365,801	47,012,840	7,668,750	7,415,763	15,084,513	3.12

Bond coverage is the ratio of net revenue to bond payments.

The 10-year revenue bond coverage trend is a major factor in the City's current favorable AA- bond rating.

(a) Revenue bonds and their related interest are payable solely from the revenues derived from the operation of the enterprise owned by the City. The taxing power of the City is not pledged to secure payment of the bonds and interest.

(b) Interest payments made in the fiscal year.

(c) This includes Special Obligation Bonds, Series 2012D and 2012E, which are to be treated as a water and electric utility revenue bond issue.

(d) Includes investment and miscellaneous revenue in fiscal year 2009 and thereafter.

# Review of Board Activities, Projects, and Reports



- Administrative and Board Governance/Training
- Reports
- Major Financial Activities
- Electrical Division Activities
- Water Division Activities

# Administrative and Board Governance/Training

1) The Water and Light Advisory Board had 13 regularly scheduled meetings. All meetings with a quorum receive public notice with minutes recorded and posted to the Water and Light Department website. The meetings are held in the Water & Light Administration offices, Water Production Building, Water Distribution Building, Electric Production Building, and Electric Distribution Building.

2) Election of officers was conducted during the January meeting with John T. Conway, PE elected Chairman and Dr. Dick Parker, PhD, elected Vice-Chairman.

# Administrative and Board Governance/Training

3) Update the “Annual Calendar” of repeating business activities to help direct our monthly meetings (2017 copy is attached).

4) Four board members, Jack Clark, Tom O’Connor, Dick Parker, and Hank Ottinger attended the Advancing Renewables Conference held in Columbia in April 2016.

5) Four Board members, John Conway, Jack Clark, Jay Hasheider and Dick Parker, attended the annual conference of the Missouri Public Utility Alliance (MPUA) in 2016.

# Administrative and Board Governance/Training

- 6) The Utilities Division provided a booth at the Sustainability Living Fair and at the Earth Day festival.
- 7) Water and Light Staff updated a Google site developed as an orientation for new Board members.
- 8) John Conway and Dick Parker attended the APPA Academy Governance Workshop: “Sustaining Public Power’s Value Through Effective Governance.”

# Reports

## 1) Reports sent by the Board to the City Council:

a) Annual Renewable Energy Report

<http://www.como.gov/WaterandLight/Electric/renewableenergyportfolio.php>

The Board is following the potential development of the MJMEUC negotiations with the Grain Belt Project.

b) Letter report to City Council regarding Option A for the transmission Line Project.

c) Black and Veatch's Condition Assessment of Well Field, Water Treatment Plant and West Ash Booster Pump Station.

<https://sites.google.com/a/como.gov/iwrp-committee/home/historical-data>

# Reports

## 2) Current Reports in Development to be finalized FY17:

- a) Electric downtown recommendations from the Mayor's Task Force on Infrastructure.

<https://sites.google.com/a/gocolumbiamo.com/mayor-s-task-force-on-infrastructure/task-force-recommendations-draft-final>

- b) Integrated Water Resource Plan.

<https://sites.google.com/a/gocolumbiamo.com/water-and-light-advisory-board-orientation/integrated-water-resource-planning-committee>

# Reports

3) Tad Johnsen, Columbia Utilities Director, provided his Annual Director's Report to the Board. The report highlighted the department bringing forward the Community Solar project, budgeting for an advanced metering pilot program, full year of Customer Outreach for energy efficiency programs, support of the City Strategic Plan and our community broadband planning efforts.

4) Connie Kacprowicz, Communications and Marketing Supervisor, presented an overview of the results of the 2016 Customer Satisfaction Survey report for Water and Electric.

The report can be found at:

<http://www.como.gov/WaterandLight/Documents/SDSCustomersatisfactionreport2016.pdf>

# Reports

- 5) Presentations made to the Board other than Water and Light Staff:
- a) Steve Hollis from Public Health and Human Services gave a PowerPoint presentation on the C.A.S.H. and H.E.L.P. programs.
  - b) The Enhance Your Attic Program was formed and launched in 2016 and the Board looks forward on how the program partnership progresses with Community Development in 2017. The presentation was made by Randy Cole from Community Development.
  - c) Ms. Michelle Nix, new Finance Director, gave a presentation to the board about the ongoing implementation of the new accounting software. The board expressed the need for timely monthly financial reports.

# Major Financial Activities

- 1) The Board worked with the Department Staff in the development of the FY17 Budget for Operations/Maintenance and Capital Improvement Plan (CIP).
- 2) The Board continues to gain working knowledge of the two new software applications effecting Water and Electric Utility operations – Advanced Utility Systems and Tyler Munis applications.
- 3) The Board reviewed the Cash Reserve Policy for the Water Operations and Electric Operations at the November meeting. Cash and marketable securities for Water as of 9/30/16 was \$5,951,134 and for Electric was \$23,101,507.

# Major Financial Activities

- 4) An Electric Rate increase of 2.0% was effective October 1<sup>st</sup>, 2016.
- 5) The Payment in Lieu of Taxes (PILOT) contribution from the Water and Light Department to the City's General Fund was \$15,746,363 in FY16. A contribution of \$15,750,595 is estimated for FY2017.
- 6) The Electrical Enterprise expensed \$11,967,385 for Depreciation in FY16 and estimates \$11,910,078 for the FY17 Budget. The Water Enterprise expensed \$3,101,598 for Depreciation in FY16 and estimates \$3,063,432 for the FY17 Budget.

# Electrical Division Activities

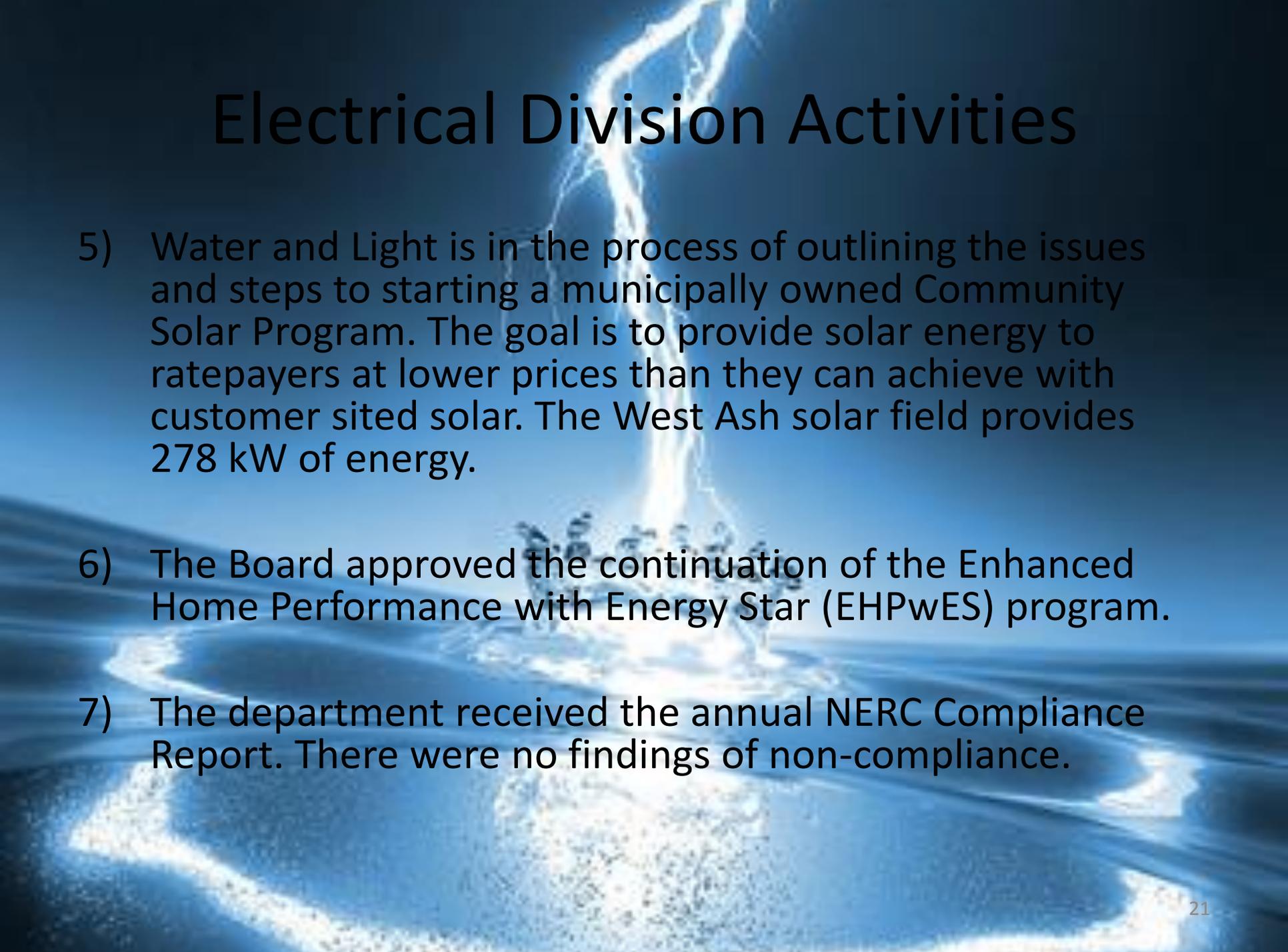
- 1) The Board accepted the staff's continuation of the "Window Air Conditioner Exchange Program" which is administered through the Voluntary Action Center.
- 2) The "Home Energy Score" was developed and has been implemented. Water and Light Staff completed 1596 Home Energy Scores during the time period of October 1<sup>st</sup>, 2015 to September 30<sup>th</sup>, 2016.
- 3) Electric Bond Issue Projects were completed and carried forward in the FY17 CIP. The Capital Improvement Plan (CIP) Budget was introduced. For FY17, Electric, total funding from Enterprise Revenue is \$7,050,000.
- 4) The Electrical peak demand was 265 MW for 49,311 customers.

# Electrical Division Activities

4) The Electrical peak demand was 265 MW for 49,311 customers.

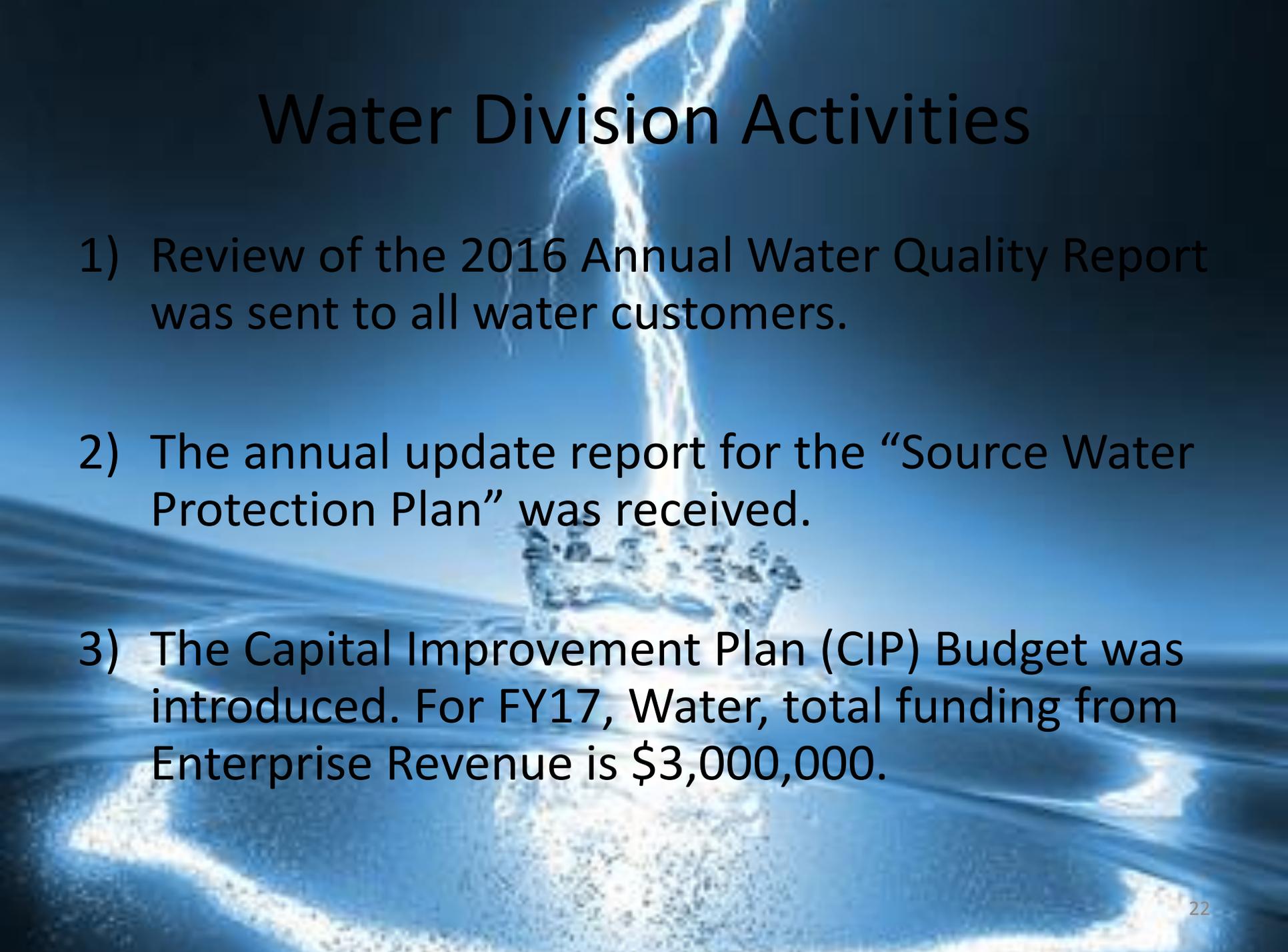
FY	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Customer Count	43,995	44,792	44,992	45,332	45,949	46,345	47,479	47,989	48,478	49,311

# Electrical Division Activities



- 5) Water and Light is in the process of outlining the issues and steps to starting a municipally owned Community Solar Program. The goal is to provide solar energy to ratepayers at lower prices than they can achieve with customer sited solar. The West Ash solar field provides 278 kW of energy.
- 6) The Board approved the continuation of the Enhanced Home Performance with Energy Star (EHPwES) program.
- 7) The department received the annual NERC Compliance Report. There were no findings of non-compliance.

# Water Division Activities



- 1) Review of the 2016 Annual Water Quality Report was sent to all water customers.
- 2) The annual update report for the “Source Water Protection Plan” was received.
- 3) The Capital Improvement Plan (CIP) Budget was introduced. For FY17, Water, total funding from Enterprise Revenue is \$3,000,000.

# Water Division Activities

4) The Water Peak Demand was 21.8 Million Gallons Per Day for 47,781 customers.

FY	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Customer Count	42,928	43,504	43,833	44,255	44,704	45,169	46,160	46,484	46,925	47,781

# Recommendations

## No. 1 - Safety

Staff turnover appears to be increasing which means less on-the-job experience in many critical positions. Less tenured staff increases the risk that younger workers will be performing tasks without the normal safety oversight.

Recommendation: Board and Staff can create a regular quarterly safety reporting system that insures attention is being paid to this vital aspect of the enterprise. Suggested inclusions in monthly Board reports could be listing of safety related incidents, topics of safety meetings, attendance statistics for safety meetings, and other matters of related concerns.

# Recommendations

## No. 2 – Communication

Communication improvements are needed if the Board is to function at a higher level. This includes the receiving of information from the public and disseminating of information to the public. Utility communications with the public is a separate function but one that falls into the Board's oversight duties. CWL's communications office was recently merged into the citywide Community Relations Office. That, coupled with the recent resignation of the manager responsible for all utility communications, leaves a potential weakness that the Board must be vigilant of.

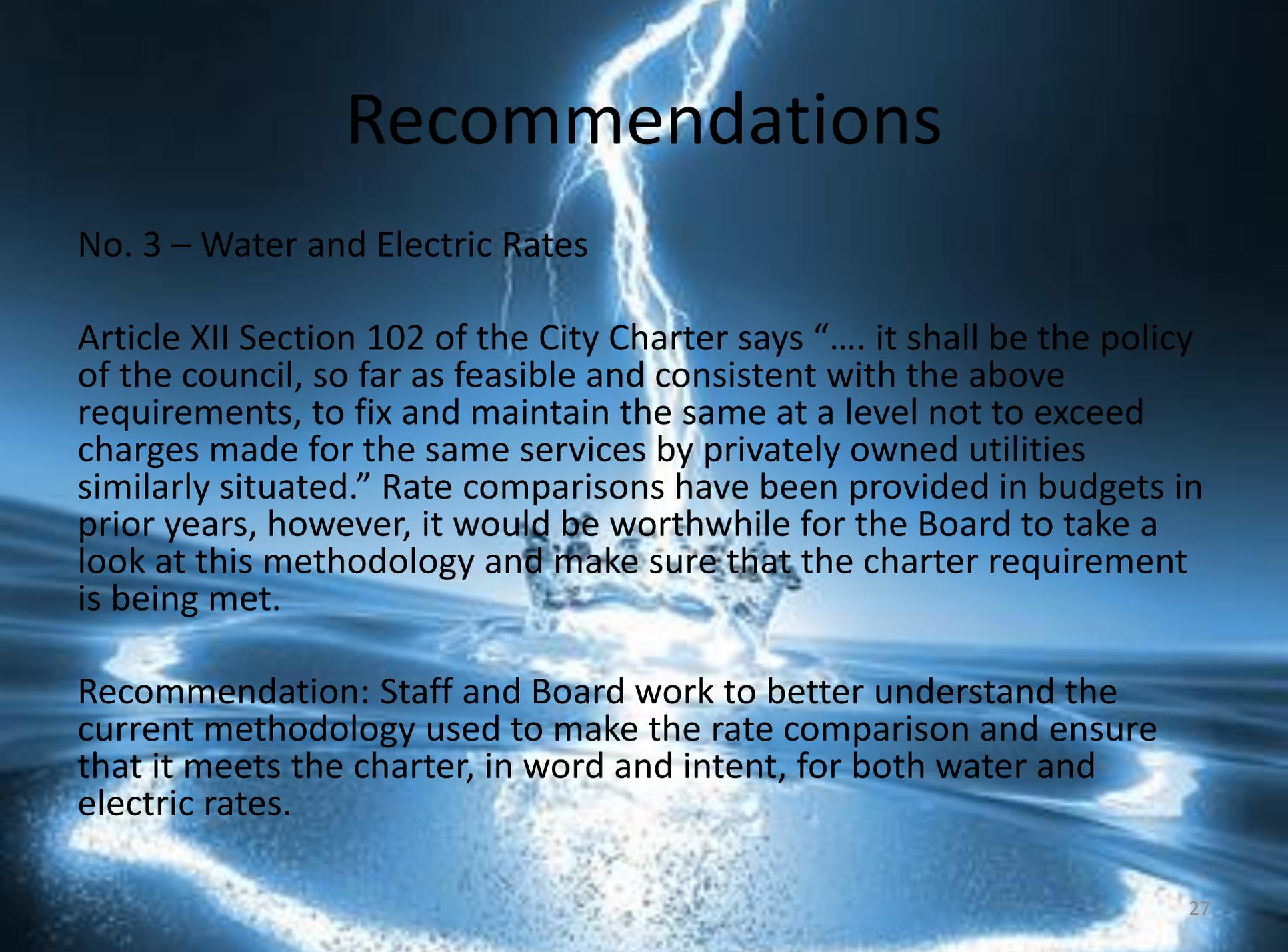
# Recommendations

## No. 2 – Communication (Continued)

### Recommendation:

- A) Explore the possibility of the WLB creating electronic channels of communication with the public. Possibilities include direct email account, Facebook page, or other social media account(s)
- B) Conduct a 'For-the-Public' meeting in which public input is the central part of the agenda. Such a meeting would be scheduled at night, possibly as part of Public Power Week in October. Advertisement would be needed to alert the public to this special event
- C) Perform the needed oversight function to insure utility communications are being performed by the new office as expected. This could be through monthly reports and requested presentations from the community relations director (or designee) insure that the utilities communications functions are being properly supported.

# Recommendations



## No. 3 – Water and Electric Rates

Article XII Section 102 of the City Charter says “... it shall be the policy of the council, so far as feasible and consistent with the above requirements, to fix and maintain the same at a level not to exceed charges made for the same services by privately owned utilities similarly situated.” Rate comparisons have been provided in budgets in prior years, however, it would be worthwhile for the Board to take a look at this methodology and make sure that the charter requirement is being met.

Recommendation: Staff and Board work to better understand the current methodology used to make the rate comparison and ensure that it meets the charter, in word and intent, for both water and electric rates.

# Recommendations

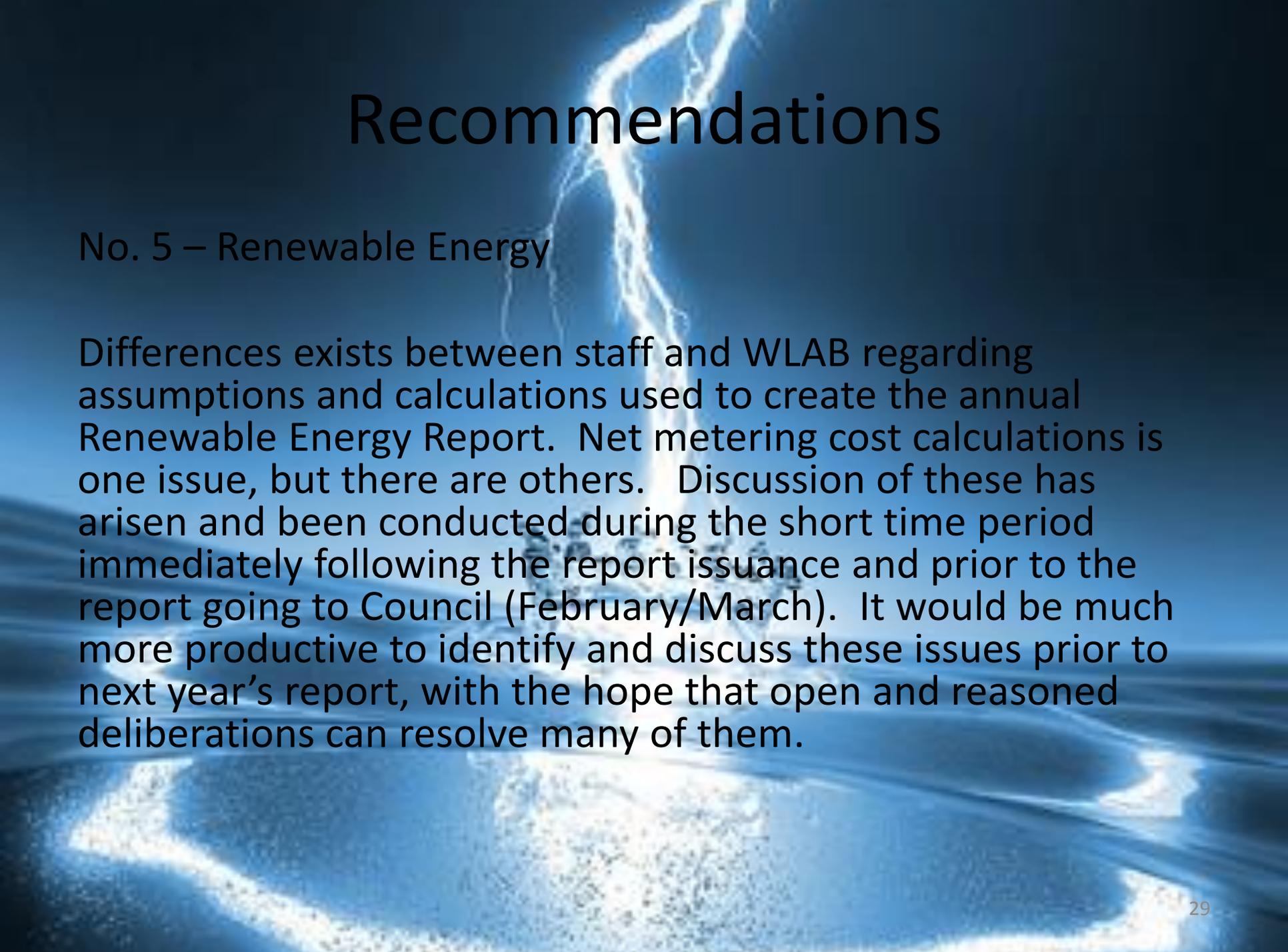


## No. 4 - Operational Efficiency

The Board does not have any metrics for determining the operational efficiency of utility functions throughout the spectrum of services that the utility performs.

Recommendation: Staff and Board begin exploration toward development of a system of accounting & reporting that allows assessment of the utilities' operational efficiency.

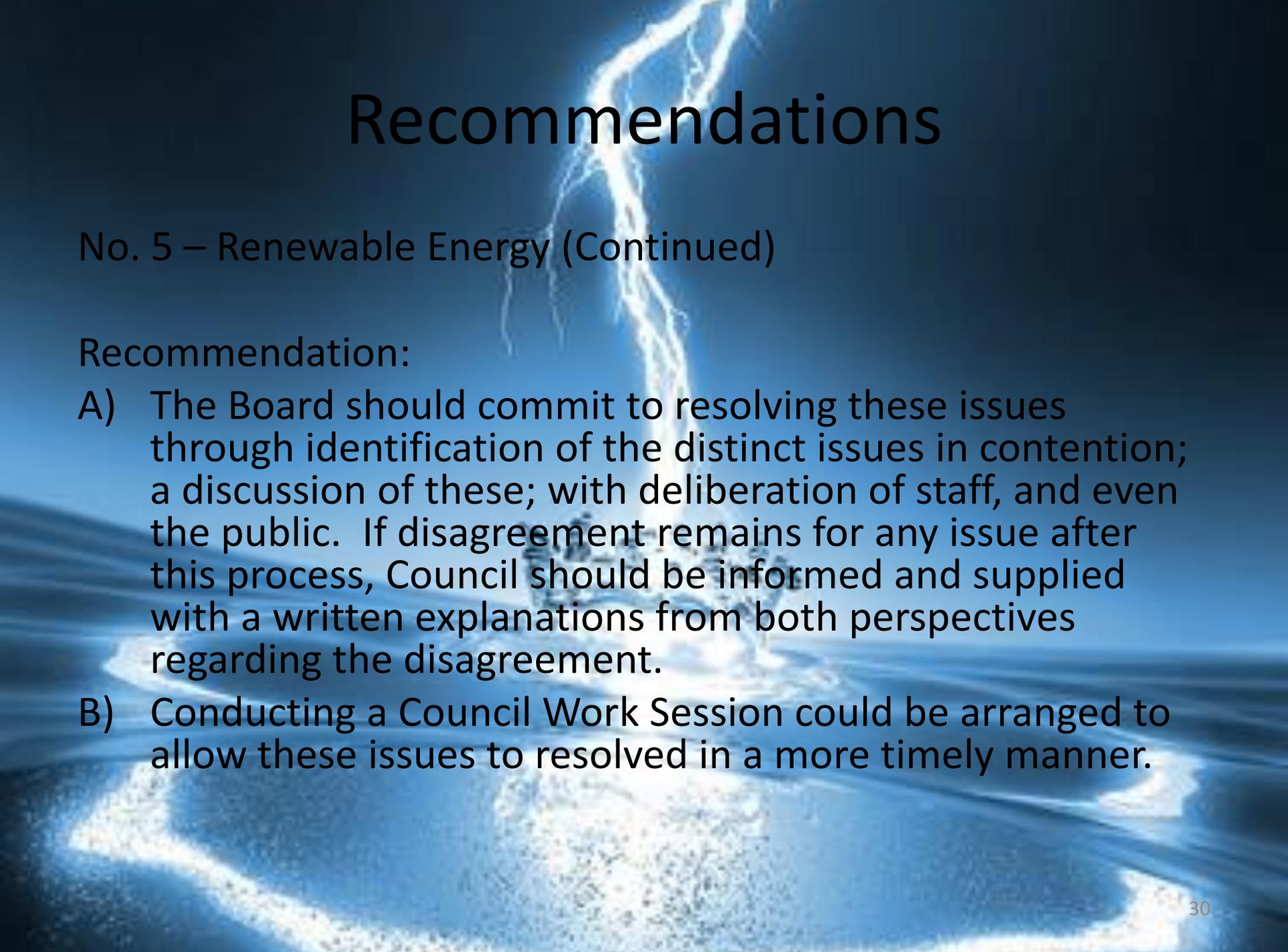
# Recommendations



## No. 5 – Renewable Energy

Differences exist between staff and WLAB regarding assumptions and calculations used to create the annual Renewable Energy Report. Net metering cost calculations is one issue, but there are others. Discussion of these has arisen and been conducted during the short time period immediately following the report issuance and prior to the report going to Council (February/March). It would be much more productive to identify and discuss these issues prior to next year's report, with the hope that open and reasoned deliberations can resolve many of them.

# Recommendations



## No. 5 – Renewable Energy (Continued)

### Recommendation:

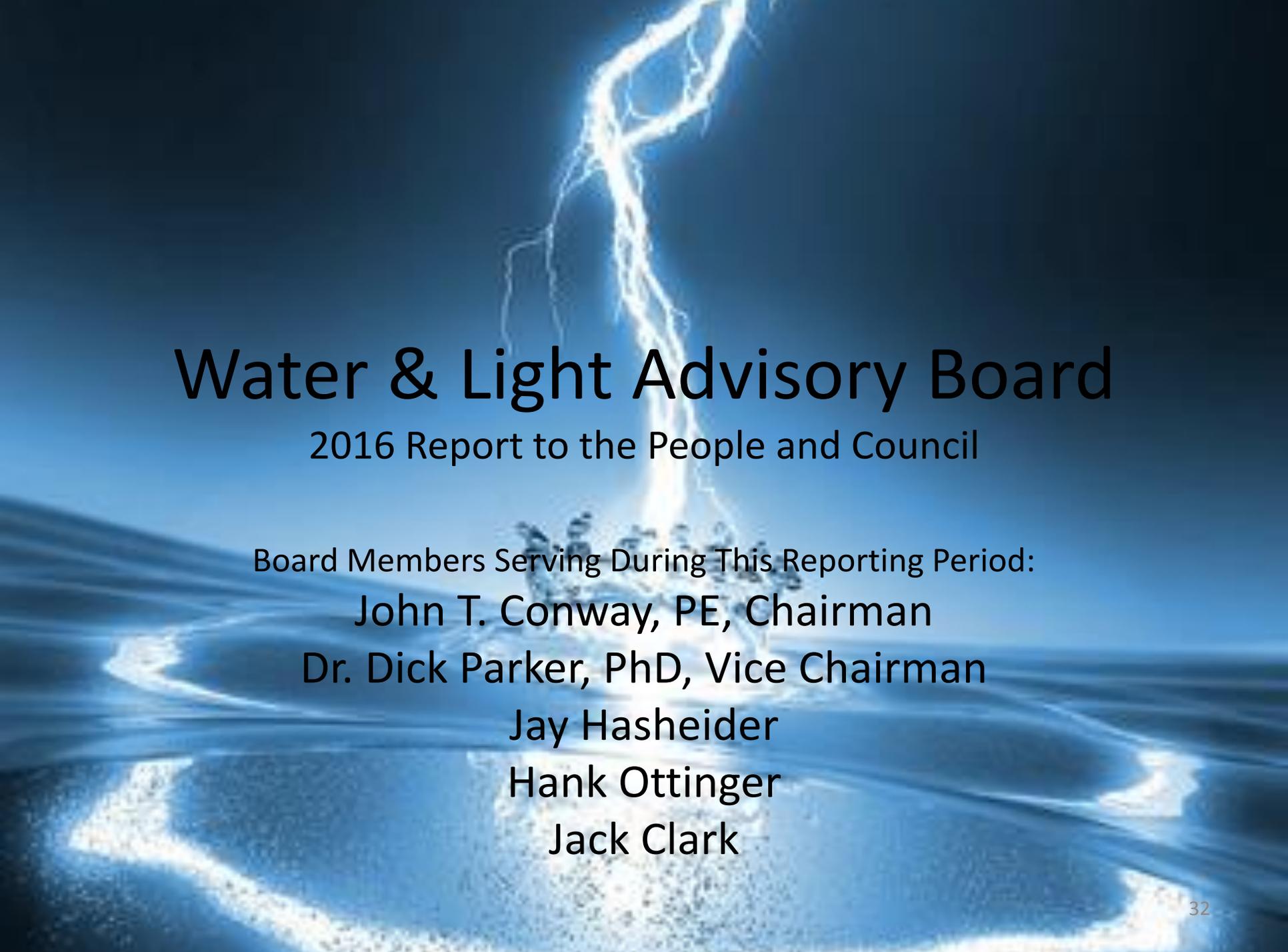
- A) The Board should commit to resolving these issues through identification of the distinct issues in contention; a discussion of these; with deliberation of staff, and even the public. If disagreement remains for any issue after this process, Council should be informed and supplied with a written explanations from both perspectives regarding the disagreement.
- B) Conducting a Council Work Session could be arranged to allow these issues to resolved in a more timely manner.

# Recommendations

## No. 6 – Capital Improvement Projects (CIP)

Both the electric and water utilities large capital projects pending for this upcoming fiscal year. The electric transmission project will likely resurface once knowledge of “Option E” (details and cost) becomes available. Additionally, the anticipated upgrade to the water treatment plant will be identified and brought to the public in the form of a bond issue. The Board will play a critical role in providing Council with reasoned advice on both issues.

Recommendation: The Board will stand ‘at the ready’ to perform its advisory board duties should the need arise pertaining to the energy or water projects



# Water & Light Advisory Board

2016 Report to the People and Council

Board Members Serving During This Reporting Period:

John T. Conway, PE, Chairman

Dr. Dick Parker, PhD, Vice Chairman

Jay Hasheider

Hank Ottinger

Jack Clark