



**COMMITTEE OF THE WHOLE MEETING
AGENDA**

November 5, 2019

**5:30 P.M. – 1201 S. Washington Ave.
Lansing, MI - REO Town Depot
Board of Water & Light Headquarters**

Call to Order

Roll Call

Public Comments on Agenda Items

1. Committee of the Whole Meeting Minutes of September 10, 2019**TAB 1**
2. Corporate Planning:**INFO ONLY**
 - Update on Approved 2016 Strategic Plan
 - BWL's Clean Energy Journey
3. Regular Board Meeting Schedule 2020-Resolution**TAB 2**

Other

Adjourn

COMMITTEE OF THE WHOLE

Meeting Minutes

September 10, 2019

The Committee of the Whole of the Lansing Board of Water and Light (BWL) met at the BWL Headquarters-REO Town Depot located at 1201 S. Washington Ave., Lansing, MI, on Tuesday, September 10, 2019.

Committee of the Whole Chair Tony Mullen called the meeting to order at 5:50 p.m. and asked the Corporate Secretary to call the roll.

Present: Commissioners Tony Mullen, Beth Graham, Joseph Graves Jr., David Price, Ken Ross, Tracy Thomas, and Sandra Zerkle and Non-Voting Members: Michael Froh (Meridian Township) and Larry Merrill (Delta Township)

Absent: Commissioners David Lenz and Douglas Jester (East Lansing)

The Corporate Secretary declared a quorum.

Public Comments

None.

Approval of Minutes

Motion by Commissioner Price, **Seconded** by Commissioner Thomas, to approve the Committee of the Whole meeting minutes of July 16, 2019.

Action: Motion Carried.

Update on BWL's Energy Waste Reduction (EWR) Program

General Manager Dick Peffley introduced Environmental Services and Reliability Compliance Manager, Ms. Lori Myott, and Energy Analyst, Ms. Aileen Gow, who oversees BWL's Residential and Non-Profit Energy Waste Reduction Programs.

2018 Energy Waste Reduction and Renewable Energy Annual Update

Committee of the Whole
September 10, 2019



Million Kilowatt Hour Club

New Members for 2018	
Liquid Web	Meijer, Inc
East Lansing Public Schools	Lansing Mall
Previous Members	
General Motors	Quality Dairy
Ashley/Pyder	Demmer Properties LLC
State of Michigan DMB	Lansing School District
Peckham Vocational Ind.	General Motors
Sparrow Hospital	WMU Cooley Law School
Board of Water & Light	Ashley Capital
Jackson National Life	GM Delta Lighting & Pumps

2018 Annual Update of PA 295 & PA 342

- Public Act 295 of 2008 requires each municipal utility to provide an annual update of its Energy Optimization and Renewable Energy programs to its governing board
- Public Act 342, passed in December 2016, also known as the Clean and Renewable Energy and Energy Waste Reduction Act, amends PA 295
- Each utility must file annual reports with the Michigan Public Service Commission by May 31st
- Each utility must supply an annual report to its customers; the BWL will supply its report in the August Connections

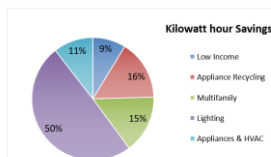
Energy Waste Reduction Summary

Program Portfolio	2018 Goals		2018 Actual	
	Gross First Year kWh Savings	Program Budget	Gross First Year kWh Savings	Program Budget
Low Income Services	392,565	\$239,247	580,074	\$239,247
Residential Programs	6,656,215	\$1,017,889	4,445,113	\$988,174
Business Services	15,239,793	\$2,379,295	16,879,280	\$2,356,379
Total Program Portfolio	19,488,483	\$3,632,431	21,884,468	\$3,584,800
Program Administration		\$498,710		\$214,538
Evaluation (EM&V)		\$980,904		\$204,819
ANNUAL TOTALS	19,488,483	\$4,412,105	21,884,468	\$3,804,157

2018 Energy Waste Reduction Programs

- Services for Low Income Customers
- Residential Programs
 - High Efficiency Lighting
 - Appliance Turn-in & Recycling
 - Multi-Family Services
 - Energy Star Products/Equipment
- Business Prescriptive & Custom Incentives
- Energy Education Services
- Pilot programs

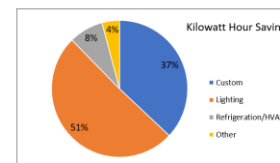
Residential Summary 2009-2018



Program Highlights

- Education in the Community
 - Attended 63 local events
 - Did 34 presentations to community groups
 - Think! Energy (school program with Consumers Energy)
- Pilot Programs
 - Non Profit Grants
 - Affordable Housing Grants
 - Michigan Saves Low Interest Financing
 - Partnership with Consumers Energy and Michigan Saves
 - Residential- 0% for \$1,000-\$30,000 loans for up to 4 years
 - Business- 0% for \$2000-\$250,000 for 2 years

Business Summary 2009-2018



Challenges and Opportunities

- Challenges
 - LED lighting saturation in market place
- New Opportunities
 - Specialty LED bulbs market
 - Smart Meter Pilot
 - Partner with Consumers Energy on Low Income and Houses for Worship Programs

Low Income 2018

- 250 Hometown Help energy assessments
- 4 Multifamily properties
- 13,731 items installed or distributed
 - 9,436 LED Bulbs
 - 2,266 Energy Kits
 - 123 Refrigerators
 - 18 Room Air Conditioners

Low Income 2018 Cont.

- Two Multifamily Landlords co-paid \$13,295 to replace 94 refrigerators w/Energy Star units
- Community Partners
 - Habitat for Humanity Capital Region
 - Capital Area Housing Partnership
 - Cristo Rey Community Center
 - City of Lansing – Baker Neighborhood Initiative
 - Local nonprofit organizations that serve vulnerable populations

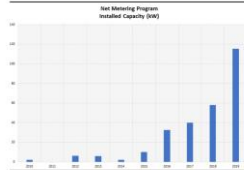
Renewable Energy 2018 Results

- PA 342 requires all electric utilities have 10% in 2018; 12.5% in 2019 and 15% renewables in 2021
- The BWL is in compliance with both the renewable energy generation and its inventory of RECs
- With planned developments and the ability to carry-forward renewable energy credits, the BWL will not need any additional renewable energy to meet compliance with PA 342

2018 Updates

- Delta Solar Park online with 24 MW of solar capacity
- East Lansing Solar Park (12/28/2018)
 - Installed capacity is 345 kW
 - Project is fully subscribed
 - Website: <https://mcommunitysolar.org/>
- The Net Metering Solar program update
 - Added 10 new Residential customers
 - Total number of customers: 23 Residential and 4 Commercial
 - Total New Metering Capacity is 160.65 kW as of 12/31/2018

Net Metering Program



Current Renewable Energy Portfolio

- Purchase Energy and RECs
 - Granger landfill gas – 11.2 MW
 - Tower Kleber Hydro – 2.2 MW
 - Exelon Wind in Gratiot County—19.2 MW
- BWL Owned
 - Solar (Cedar street and REO office building)

Planned Projects

- Solar
 - Currently reviewing proposals for utility scale solar project
- Pursuing and Evaluating Wind Options
- Goals
 - Achieve 20% renewable goal by 2020

Renewable Energy Challenges

- Community Acceptance
- Generation Dispatchability
- Storage Limitations

Ms. Myott reported that BWL implements its energy waste reduction and renewable energy programs under Public Act 295. Public Act 295 requires that municipal utilities update their governing board every year on their accomplishments for the previous year. Ms. Myott gave an update on BWL's Energy Waste Reduction (EWR) Program. Ms. Myott stated that the BWL offers a variety of programs and highlighted the different programs and information given to the community. Ms. Myott noted that the LED program is the most popular with customers.

Commissioner Zerkle inquired whether BWL was still providing seminars in neighborhoods for low income customers and Ms. Myott responded that Ms. Aileen Gow will provide information.

Commissioner Ross noted the success in large business in energy reduction and inquired about the opportunities for communities with a lot of rentals and low income, and the challenges of getting landlords to invest in energy saving technology. Commissioner Ross also asked if there is a network of utilities communicating about what programs are working. Ms. Gow responded that the Michigan Public Service Commission, who legislates the energy programs, has a state-wide group just for low income that meets monthly and shares a large amount of information. Ms. Gow also stated that a recent program was started in a high rental area with a copay for landlords and it has been very successful. Refrigerators are replaced for rentals for 25% and homeowners for free. GM Peffley responded that the MMEA also reviews these type of programs.

Commissioner Graves commented that it was good that these programs were being implemented in the community especially for low income and stated that it was important to determine whether there was a return on investment. GM Peffley responded that 50% of Lansing's population is rental and landlords observe the investment with the refrigerators and a smaller electric bill.

Commissioner Graham commented that she was part of the rental property association and landlords discuss the program positively at the monthly meetings.

Commissioner Mullen asked what percentage of renewable energy was in retail sales and Ms. Myott responded that the BWL is currently at 15% and was required to meet 10% by the end of 2018.

Commissioner Zerkle inquired whether the BWL could work with the city to get a higher percentage of multi dwellings to participate in the programs as a large amount of low income units could use the energy savings with a new refrigerator. Ms. Gow responded that BWL contractors have worked with almost every property manager they can find and have also worked with the Lansing Housing Commission.

Commissioner Ross inquired about the effect of projects in townships currently compared to the past. GM Peffley responded that if wind projects become difficult to license in Michigan more solar projects will be considered.

Wholesale Water Service Agreement with Charter Township of Lansing – West Side Water

GM Peffley introduced Strategic Planning and Development Executive Director, Ms. Brandie Ekren, who reviewed the updates to the West Side Water Wholesale Water Service Agreement with Charter Township of Lansing. Ms. Ekren reported the following conditions in the agreement:

- Most of the general conditions remain the same.
- Allows for the full cost of service recovery based on an industry standard methodology.
- No requirement that there be a mutual agreement to terminate.
- Lansing Township provides the BWL with annual 10-year forecasts of demand.
- Provisions for how to handle requests for water in excess of planned demands.
- Establishes an operating committee and a contract administration committee.
- Language is included that is related to water efficiency and conservation.

Commissioner Zerkle asked that when there isn't a requirement for a mutual agreement to terminate is there a time frame of notice that needs to be given. Ms. Ekren responded that a standard notice requirement is required. Ms. Zerkle also asked what percentage Delta customers pay in comparison with what Lansing customers pay for water services. Ms. Ekren replied that she didn't have that information but any adjustments are factored into the cost of service.

Commissioner Ross asked whether BWL passed rates which govern the water contracts or do the contracts include a rate schedule. Ms. Brandie responded that there is a difference between a wholesale and retail agreement. In a wholesale agreement BWL negotiates a contract with the township and the Commissioners approve the rates yearly. In retail agreements BWL contracts with individual customers and is handled during the normal rate making process.

Commissioner Froh inquired whether, outside of a long-term agreement where the savings would be realized with conservation, there has been any discussion of incentivizing savings for customers for going above and beyond attempts to reduce consumption. Mr. Peffley responded that on a wholesale

agreement it is difficult to realize an incentive as the customer could bring on a new subdivision that would increase their water flow.

Commissioner Ross commented that this is a water service agreement and not a franchise agreement and therefore the dynamic of adding on fees doesn't apply.

Commissioner Mullen asked whether the water service will be billed along with the electric bill and whether water would be provided to communities further west than Lansing Township. Ms. Ekren responded that the township with whom the water service agreement is made will do the metering, invoicing, and billing. GM Peffley responded that Grand Ledge has made an initial contact with BWL but nothing further.

Corporate Planning; Industry Updates and Considerations

GM Peffley reported that corporate planning will be a reoccurring agenda item to educate the Commissioners on the IRP, sustainability, and strategic planning so that they are able to answer questions out in the public. A flyer will be sent out every couple of weeks to the Commissioners also with updated information. Ms. Ekren presented industry considerations and introduced Planning & Development Manager, Steve Brennan, and Senior Rate Analyst, Paul Eory, to present updates on IRP and modeling.

INDUSTRY TRENDS & CONSIDERATIONS

- Investment in "clean" and "renewable" energy that supports Mid-Michigan health and promotes environmental sustainability
- Power supply
- Infrastructure needs for electricity and water
- Customer expectations and preferences
- Business competitiveness and economic development
- Technology and communication advancements
- Shifting regulatory compliance standards
- Industry business model evolution

CURRENT ACTIVITIES UNDERWAY

- Clean energy planning & goals
- Integrated resource planning
- Asset management principles and certification
- Enterprise risk management efforts
- District master plan review of steam and chilled water
- Public power branding
- Investment in technologies
- Inclusion, equity, & diversity efforts
- Rate design strategies & efforts
- Business Development & Marketing efforts
- Implementation of 2016 Strategic Plan

INTEGRATED RESOURCE PLAN: INDUSTRY INSIGHT & MODELING

GOAL
Review industry data, reports and practices on current state of utility resources as well as industry trends. Most areas of focus will be modeling energy and capacity markets as well as supply side resources and demand side resources.
This research will be used to help provide direction on how P&M can provide clean, affordable and reliable electric service over the next 20 years.

OBJECTIVE
Integrated demand side management & Distributed Energy Resources (DER)
Solar Penetration, Renewable Electrofuels, Storage, etc.
Transmission and Operations

DELIVERABLE
Description of methods, assumptions and risks
Building of Storage of the following characteristics: environmental attributes, cost (affordability), reliability (diversity of supply or load serving)

Industry Insight

Stakeholder Commissioned

- Energy Efficiency
- Demand Management
- Electric Vehicle Adoption Forecast
- Distributed Energy Forecast
- Solar
- Wind

Technology Reports

- Solar
- Energy Storage
- Electric Vehicle Infrastructure

Other IRP processes

Industry Insight & Modeling Value

- What options and decisions are desirable or unacceptable, taking into consideration operational needs, impacts, sustainability and shareholder interests
- Value Examples
 - Real-time
 - Renewables
 - Energy Efficiency
 - Resource targets
- Choosing one option does not rule out the evaluation of other options
 - Investment in one option because other choices are financially viable (change economics/benefits)
 - Several options could have similar economic but different risk profiles
 - Environmental Risk
 - Financial Risk
 - Reliability Risk

BASE MODEL & QUESTIONS TO CONSIDER

Base Model

- Minimum clean energy targets
 - 50% 2025
 - 40% 2030
- Belle River retires 2030
- Full computer-based optimization of resources gives the above assumptions

Candidate Resources

- Energy efficiency (EE)
- Demand response (DR)
- Customer-sited solar (CS)
- Utility-scale solar
- Li-Ion Batteries
- Wind Energy
- Market Energy
- Direct Vehicle encouragement program (EV)
- Combined heat & power (CHP)
- Internal Combustion Engines (ICE)
- Combustion Turbines (CT)

Modeling Objectives

Software Modeling Purpose

- Create a baseline understanding of technology capabilities, especially related to reliability, affordability and environmental impacts
- Drives the discussion to goals and trade-offs
- Modeling gives each resource type an equal chance of being in the lowest cost, least risk portfolio

New Software Model: Ascend Analytics' PowerSimm Planner

Computing

- ABB's Strategist model built using typical week averages
- One modeling result would take 24+ hours of computing time
- New model can run hundreds of simulations in less time
- More detail in modeling

Simulations

- Simulations based on chronological hourly dispatch
- Simulate weather and its impact on load, renewables and market prices of gas and power
- Market price variation in load prices is correlated to identify probability of outcomes
- Identify value of flexibility

Risk Valuation

- With hundreds of simulations the software can calculate the risk premium of each study
- Levels the playing field between portfolios of different risk characteristics
- Considers probability of the riskier outcomes

Demand-Side

- New software better integrates demand-side technologies including energy efficiency, demand response, and customer-sited renewables
- Flexibility of resources important to modeling

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Questions

- What if no new combustion?
- What if we change optimal EE, DR, & CS?
- What if we increase clean-energy minimums?
- What if carbon tax limits imposed?
- What if gas prices change?
- What if load forecast change?
- What if Belle River retires earlier?

Now through July 2020

- Future C.O.W. discussions
- Informational material to supplement discussions
- Study & Modeling results and conclusions that will dovetail into Strategic Planning considerations
- Commissioner stakeholder meeting opportunities

Commissioner Zerkle inquired whether BWL is working with other APPA public power utilities in Michigan. GM Peffley responded that utilities contribute information through MPPA and MMEA.

Commissioner Thomas commented on being able to watch TV with Water & Steam Distribution Manager, Mr. Alando Chappell with the Boys and Girls Club and Electric Transmission & Distribution Director, Mr. Wayne Lynn on Turning Point and how they are helping inform the community.

Commissioner Zerkle inquired whether BWL would need to produce more electricity with the Belle River closing in 2030 or if BWL would have the capacity of selling more. GM Peffley responded that BWL has 11% ownership with Belle River which is in the amount of 150 megawatts and BWL's intent by 2030 is to have renewables in place.

Commissioner Ross asked what the minimum clean energy targets is defined as. Mr. Eory responded that minimum clean energy targets are defined as renewables and energy efficiency which is respectively 20% and 10% in 2020. Commissioner Ross asked if 30% of the generation portfolio would be renewables and 10% would be energy efficiency in 2030. GM Peffley affirmed. Commissioner Ross also asked about obtaining additional 1% efficiency every year and if it compounded. GM Peffley responded that 1% efficiency has been achieved every year and he doesn't have any concerns about meeting the goals for 2030 and 2040.

Commissioner Price asked if one of the outputs would be carbon footprint or made to do that. Mr. Eory affirmed.

Commissioner Ross inquired about the IRP, modeling and assumptions not being available or transparent, and if the software is standard. Mr. Eory responded that the software is starting to be deployed in Michigan and is mostly used by a few larger companies. Commissioner asked about the availability of the information. Mr. Eory responded that assumptions have been bundled and documented and the new model has templates that can be used and turned into white papers. Ms. Ekren responded that this model software allows more granular data and the information is readily visible.

Ms. Zerkle also asked about the providing of parking meters and charging stations for an increase in electrical vehicles in the future. GM Peffley responded that BWL is working with local developers to place charging stations around town.

Commissioner Price recommended that Commissioners attend the Strategic Planning meetings that would be held with customers and members of the public. Corporate Secretary Griffin will send an email to Commissioners of the meeting times when they are scheduled. Commissioner Zerkle recommended that these meetings be held separate from Committee of the Whole meetings to encourage longer discussions and also asked if the Internal Auditor would be contributing input to these meetings as he may audit some of the processes that are approved. Internal Auditor Mr. Wesley Lewis responded that he and Ms. Ekren discussed the regulatory changes that are taking place and will be attending the meetings.

Other

Motion by Commissioner Graham, Seconded by Commissioner Ross, to excuse Commissioners David Lenz and Douglas Jester from tonight's meeting.

Action: Motion Carried

Adjourn

Commissioner Mullen adjourned the meeting at 6:47 p.m.

Respectfully Submitted
Tony Mullen, Chair
Committee of the Whole

Proposed Resolution
2020 Regular Board Meeting Schedule

In accordance with the Lansing Board of Water & Light's Rules of Administrative Procedure, a schedule of dates, places, and times for each regular meeting of the Board of Commissioners for the calendar year shall be adopted in November.

RESOLVED, that regular meetings of the Lansing Board of Water & Light's Board of Commissioners are hereby set for calendar year 2020 as follows, unless otherwise notified or as a result of date conflicts with rescheduled City Council meetings:

2020

Lansing Board of Water & Light Board of Commissioners
Regular Board Meeting Schedule

Tuesday	January 28
Tuesday	March 24
Tuesday	May 26
Tuesday	July 28
Tuesday	September 22
Tuesday	November 17

Meetings will be held in the Lansing Board of Water & Light REO Town Depot located at 1201 S. Washington Ave., Lansing, MI at 5:30 p.m.

RESOLVED FURTHER, that a notice of the meeting schedule shall be published in a newspaper of general circulation in Ingham County the week of January 1, 2020.