



**COMMITTEE OF THE WHOLE MEETING via WEBEX
AGENDA**

September 8, 2020

5:30 P.M. – 1201 S. Washington Ave., Lansing, MI 48910

The BWL full meeting packet and public notice/agenda is located on the official web site at <https://www.lbwl.com/about-bwl/governance>.

Due to public safety concerns resulting from the COVID-19 Pandemic, this meeting will be conducted via WebEx Conferencing. Instructional options to be in attendance are as follows:

1. Event address:

<https://lbwlevents.webex.com/lbwlevents/onstage/g.php?MTID=eadd464116dfea782027d3caff56f5453>

Event number: 132 586 9067 Event Password: h2rTdShJA26


2. Audio conference: United States Toll +1-408-418-9388 Access code: 132 586 9067

Call to Order

Roll Call

Public Comment

Public Comment (PC) can be made by choice of:

- Raising your hand by clicking on the hand icon button  in the **Participants** panel
- Submitting written comments to mdenise.griffin@lbwl.com (By the End of Public Comment)
- Submitting written comments to 1201 S. Washington Ave., Lansing, 48910

1. Committee of the Whole Meeting Minutes of June 30, 2020**TAB 1**

2. Annual Energy Waste Reduction Program Update.....**TAB 2**

3. BSmart Program Update**TAB 3**

Other

Adjourn

Persons with disabilities who need an accommodation to fully participate in this meeting should contact the Office of the BWL Corporate Secretary at (517) 702-6033 or mdenise.griffin@lbwl.com, or utilize TTY by dialing 7-1-1 (7-1-1 is the statewide **telephone** relay number that connects deaf, deaf-blind, hard of hearing, and/or speech impaired people who use text telephones (**TTYs**) with standard (voice) **telephone** users). A 24-hour notice may be needed for certain accommodations. An attempt will be made to grant all reasonable accommodation requests.

EXECUTIVE ORDER No. 2020-48: "Temporary authorization of remote participation in public meetings and hearings and temporary relief from monthly meeting requirements for school boards." Section 1.a "A meeting of a public body may be held electronically, including by telephonic conferencing or video conferencing, in a manner in which, both the general public and the members of the public body may participate by electronic means."

COMMITTEE OF THE WHOLE
Meeting Minutes
June 30, 2020

Due to public safety concerns resulting from the COVID-19 Pandemic, the Committee of the Whole meeting for the Lansing Board of Water and Light (BWL) was conducted via WebEx Conferencing in Lansing, MI, at 5:30 p.m. on Tuesday, June 30, 2020.

Committee of the Whole Chair Tony Mullen called the meeting to order at 5:30 p.m.

Present via WebEx: Commissioners Tony Mullen, Beth Graham (arrived @ 6:12 p.m.), Deshon Leek, David Lenz, David Price, Ken Ross, Tracy Thomas, Sandra Zerkle, and Non-Voting Members: Michael Froh (arrived @ 5:51 p.m.), Doug Jester (East Lansing), and Larry Merrill (Delta Township).

Absent: None.

The Corporate Secretary declared a quorum.

Public Comments

None.

Approval of Minutes

Motion by Commissioner Price, Seconded by Commissioner Zerkle, to approve the Committee of the Whole Meeting minutes of April 28, 2020.

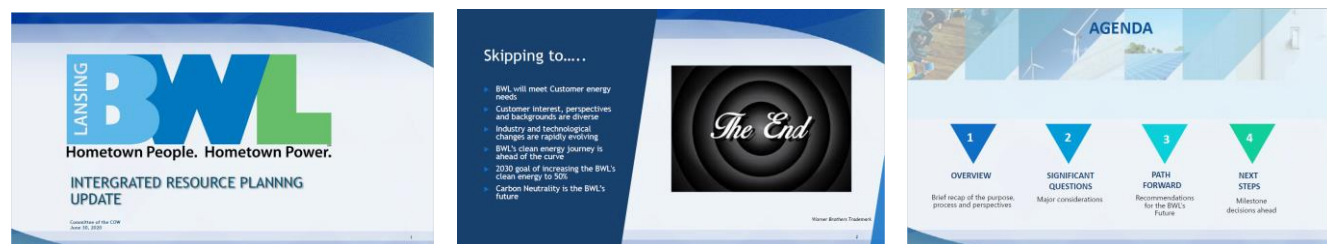
Motion Carried by the following Roll Call Vote:

Yeas: Commissioners Mullen, Graham, Leek, Lenz, Price, Ross, Thomas and Zerkle

Nays: None

Integrated Resource Plan (IRP) Update

Executive Director of Strategic Planning and Development, Ms. Brandie Ekren, presented the Integrated Resource Planning (IRP) Update. Ms. Ekren introduced Mr. Steve Brennan, Planning and Development Manager, who would be available to answer questions. Ms. Ekren stated a formal report has been made, in addition to the presentation, which includes all the studies, all the modeling results, and all the stakeholder feedback comments.



OVERVIEW

Purpose, Process & Perspectives

Purpose of an Integrated Resource Plan (IRP)
Meeting the energy needs of customers in a manner that is affordable, reliable and environmentally responsible

IRP Process
Stakeholder engagement, industry research, modeling, public open house

Make-up of BWL Customer Base
Residential and commercial customers, located within the Lansing Community, diversity of backgrounds, income, and interest

Perspectives
Forecast of future needs, technology and industry changes, increased need for climate response strategies

IRP STAKEHOLDER ENGAGEMENT

One-on-one meetings with various representatives within the Lansing Community

100,000

Five public hearings at locations throughout the service territory

A third-party survey firm randomly-pooled 600 residential customers and 300 commercial customers from a variety of sources related to the IRP planning goals. Customers provided responses related to their energy reliability and affordability.

We continue to receive feedback and information via online conversations from members of the public on various website and training opportunities

Social media, email and web tools informing community of opportunities to participate and provide input

SIGNIFICANT QUESTIONS

Major Considerations

- CUSTOMER INTEREST**
How can the IRP address increased customer interest in renewable & climate?
- BENEFICIAL ELECTRIFICATION**
What is the impact of Electric Transportation and space conditioning?
- ENERGY WASTE REDUCTION**
What are the BWL's energy waste reduction opportunities?
- CLIMATE**
How should the BWL address environmental impacts?
- AFFORDABILITY**
How should the BWL take advantage of the increased affordability of cleaner power?
- TECHNOLOGY**
What will be the impact of technology, especially on the utility business model?

BALANCING PERSPECTIVES

Financial
 > Net Present Value
 > Rate Impact
 > Financial Risk

Operational Flexibility
 > Percentage of Dispatchable Generation to Total Generation
 > Generation Diversity

Environmental
 > CO₂ Emissions Reduction
 > NO_x Emissions Reduction
 > SO₂ Emissions Reduction

CLEAN ENERGY & CARBON

How the BWL compares to its competitors - Before recommendations

2022 Goal: 25% Renewable

2025 Goal: 40% Carbon Reduction & 30% Renewable

2030 Goal: Eliminate Coal 90% Carbon Reduction - 22% (i.e., 14% Storage, 50% Renewable)

2040 Goal: Net Zero Carbon

2050 Goal: Net Zero Carbon

PATH FORWARD

Recommendations for BWL

Coal-Free Lansing
A pivotal step to reduce carbon emissions involves replacing coal-based generation with cleaner and affordable solutions.

Continuing the Clean Energy Journey
To join the many pioneers that have adopted clean energy goals, increasing incrementally our clean energy goal to 50% by 2030 will allow us to make progress as we transition to an evolved climate response strategy.

Carbon Neutrality
This will eventually lead to the goal for 100% carbon reduction as technology such as battery storage become economically viable.

50% Clean Energy Strategy

Current Strategy (Base)

- Current plan 30% clean energy in 2020, 40% in 2030, Erickson retirement 2025, 1% energy waste reduction, all other options optimized
- 2030 resource mix relies on battery storage and demand response programs

Recommended Strategy (3.0)

- 30% clean energy in 2020, 50% in 2030, Erickson retirement 2025, 1% energy waste reduction, all other options optimized
- 2030 resource mix relies on projected and increased solar investment opportunities
- Solar investments with a behind the meter and customer off-take strategy
- Technology enhancements of storage and demand response programs would be upping

METRIC IMPACT

50% Clean Energy Compared to current Clean Energy Goal

Net Present Value
\$1,466,070,588 compared to \$1,468,954,993

Rate Impact
\$49.46 compared to \$49.55

Financial Risk
\$289,347,912 compared to \$285,795,481

Operational Flexibility
38% compared to 56%

Generation Diversity
0.537 compared to 0.526

CO₂ Reduction
83.0% compared to -81%

SO₂ Reduction
99.9%

NO_x Reduction
97.0%

BALANCED JOURNEY

2011
• Offer customers opportunity to invest in renewable energy options

2017
• Adopted net metering program providing incentives for customers installing renewable energy systems

2018
• Established future clean energy goal of 50% by 2030 & 80% by 2050

2018
• Assessed that it will be the 1st Major utility to enter the coal-free power plans by 2025

BALANCED JOURNEY

2007
• BWL contracted for 240 MW of solar gas energy

2008
• BWL contracted Cedar Street solar array (Michigan's largest at the time)

2014
• 2014 BWL contracted for approximately 25 MW of solar and expanded Cedar Street solar array to 150 MW

2015
• BWL led development of 200 MW community solar project allowing customers to directly invest

BALANCED JOURNEY

2016
• BWL contracted for 34 MW of solar in Delta Twp, the state's largest tracking solar array

2017
• BWL contracted for an additional 10 MW of solar in Calhoun County and 80 MW in Shiawassee County

2018 & 2019
• BWL contracted for 84 MW of wind in Tascosa County (which was subsequently renegotiated to 68 MW in 2020)

50% CLEAN ENERGY & CARBON NEUTRALITY

Strategies

- Rate Impact
- Financial
- Operational Flexibility
- Environmental
- CO₂
- NO_x
- SO₂
- Generation Diversity
- Percentage of Dispatchable Generation
- Customer Interest
- Beneficial Electrification
- Energy Waste Reduction
- Climate
- Affordability
- Technology

WHAT IS CARBON NEUTRALITY?

Accomplishing a net zero carbon footprint, either generation-related or other company-wide actions

Renewable Electric Resources

- Increasing renewable generation as a global solution
- Although technology will eventually increase reliability of renewable solution, Carbon Neutrality strategies an integrated approach

Beyond Generation

- Writings to offset the remaining emissions
- Participate in a program like cap and trade
- Undertake programs that absorb carbon from the atmosphere
- Further develop Energy Waste Reduction programs to reduce customer electrical consumption

CARBON NEUTRALITY

US States, 65 Countries, And Over 100 Cities

Investor-owned and Municipal Utilities

- Consumer's Energy
- DTE Energy
- Austin Energy
- Eversource
- Seattle City Light
- Madison Gas & Electric
- PSEG
- Xcel
- Duke Energy
- Dominion
- NRG

Corporations

- Microsoft
- Google
- General Motors
- IBM
- Facebook
- Apple
- Amazon

GROWING COMMITMENT

US States, 65 Countries, And Over 100 Cities

Investor-owned and Municipal Utilities

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NEXT STEPS

Evaluate BWL Coal Portfolio
Initiate coal plant coal-based generation closure

Carbon Reduction Targets in Strategic Plan
Climate response strategy

Develop Carbon Reduction & Offset Program
Achieve net-zero carbon footprint and carbon-negative emissions

Support Goals to be Renewed
Renewable energy, energy efficiency, and energy conservation

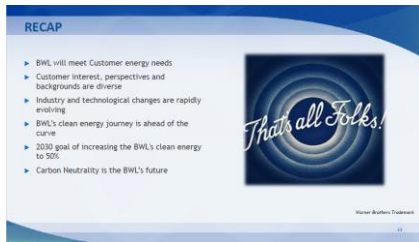
NEXT STEPS CONT...

Evaluate Business Model
Continue to research industry changes and opportunity for the BWL to evolve its business model and customer experience

Belle River
Monitor the status of DTE's Belle River and update modeling accordingly

Grid Modernization and Resilience
Integrate TOD planning to traditional generation planning

Evaluate Transmission
Review transmission configuration in the MSO market



Ms. Ekren stated that the main purpose of the IRP Plan is to meet the energy needs of its customers in a manner that is affordable, reliable and environmentally responsible. Ms. Ekren reported on the six main goals of the Board of Water and Light of meeting the energy needs of its customers, focusing on customer interest and perspectives, keeping up with rapidly evolving industry and technological changes, keeping ahead of clean energy goals, increasing clean energy goals, and carbon neutrality as soon as 2040.

Commissioner Zerkle asked if the percentage of income was the same as the 87% revenue received from electricity from residential customers and 13% revenue from industrial customers. Ms. Ekren responded that the 87% refers to the number of customers and revenue refers to the two thirds received from industrial customers. Commissioner Zerkle also asked about BWL not being the hub for electrical energy in a few years. Ms. Ekren responded that as more customers express an interest to generate their own energy those customers will be considered energy providers as they will be producing enough energy to serve others. This is called distributed generation by the BWL.

Commissioner Ross commended Ms. Ekren for setting specific clean energy and carbon goals, commented about new terms being clearly defined, and asked at what point BWL would be at 100% renewables. Ms. Ekren responded that clean energy is a combination of renewable energy and energy efficiency and gave as an example the 2020 goal of 30% clean energy which includes 20% renewable and 10% energy efficiency. The BWL's goal is to be at 100% renewables but doesn't have a set date yet.

Commissioner Price asked whether BWL was proposing using credits. Ms. Ekren responded that energy consists of the energy itself, capacity value and renewable credits, and both energy and renewable credits will be used. Ms. Ekren also responded that carbon offset credits can be used to offset carbon emissions

Commissioner Lenz inquired about forecasting that customers will be contributing to the BWL energy portfolio by their own energy production in the future and whether the BWL has a way to offset lost revenue or generate revenue through those customers. Ms. Ekren responded that there a number of different options being pursued including offering customers that want to participate in the renewable contracts with a longer contract so that they don't have to build their own infrastructure.

Commissioner Zerkle asked about the IRP Plan being a 10 to 15-year goal adjustment from the last IRP. Ms. Ekren responded that 20-year projections and re-evaluations are conducted periodically. Commissioner Zerkle asked if the financial impact on customers was a consideration in the plan

projections. Ms. Ekren responded that there is a balance between renewable energy goals, economic needs and financial impacts on customers.

Commissioner Ross inquired whether the IRP projections included current generation capacity with no additions. Ms. Ekren affirmed.

Commissioner Zerkle asked what consideration had been given to being the supplier and repairer of solar and wind equipment and if it was financially feasible. Mr. Brennan responded that there are a lot of common skill sets with current services provided and although tax incentives aren't in BWL's favor right, it is something that will be checked into.

Commissioner Thomas and Commissioner Zerkle commended Ms. Ekren and her team for the strategic plan presentation and new solar program that saved BWL a lot of money.

Commissioner Ross asked when the IRP report will be provided to the Commissioners for review. Ms. Ekren responded that additional work is being completed and the goal for publishing the report is after the holiday. Ms. Ekren is planning to provide all data that was reviewed to the stakeholders. The Corporate Secretary Ms. Griffin responded that the information will be provided on the Commissioners' portal.

Commissioner Price commented that a way to access the information that is easily accessible to the general public should be provided. Ms. Ekren responded that the information will be provided to the general public on the website by Ms. Griffin and Ms. Amy Adamy. A link can be provided through an email as with the stakeholders.

Other

There was no other business.

Adjourn

Motion by Commissioner Price, Second by Commissioner Thomas to adjourn the meeting. The meeting was adjourned at 6:43 p.m.

Respectfully Submitted
Anthony Mullen, Chair
Committee of the Whole

2019 Energy Waste Reduction and Renewable Energy Annual Update

Committee of the Whole

September 8, 2020



2019 Annual Update of PA 295 & PA 342

- Public Act 295 of 2008 required 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 October Connections

2019 Energy Waste Reduction Programs

➤ Residential Programs

- Services for Low Income Customers
- High Efficiency Lighting
- Appliance Turn-in & Recycling
- Multi-Family Services
- Energy Star Products/Equipment

➤ Business - Prescriptive, Custom and Small Business Programs

- Energy Education Services
- Pilot programs

Residential Programs

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Residential - Program Highlights

➤ Education in the Community

- 40 local events reaching 5,648 residents
- 31 presentations reaching 536 participants (mostly homebuyers)
- Think! Energy (w/CE) & Bright Energy School programs:
 - Reached 21 schools, 41 teachers, 1,323 students and distributed \$2,625 grants
 - Hosted teacher workshop at REO Depot



Residential - Program Highlights

➤ Pilot Programs

- Affordable Housing Grants
 - \$17,391 for six home projects
- Michigan Saves Financing
 - Partnership with Consumers Energy and Michigan Saves
 - Residential- 0% for \$1,000-\$30,000 loans >4 yrs.

Residential - Program Highlights

Low Income 2019

- 188 Hometown Help energy assessments
- Two Multifamily properties
- 13,760 items installed, recycled or distributed
 - 9,560 LED Bulbs/Fixtures
 - 1,875 Energy Kits (2 LED bulbs and 1 nightlight)
 - 106 Refrigerators
 - 61 Room Air Conditioners
 - 2,158 Other

What our customers are saying...

“Since we are on a fixed income the Hometown Help program is very much appreciated. Our new refrigerator came today and it’s wonderful. It’s so nice to not be hearing that awful noise our other one made and be in fear that it would quit working.”

Sincerely, David and Christy Miller

Residential - Program Highlights

➤ Key Community Partners

- Allen Neighborhood Center;
- Capital Area Housing Partnership;
- City of Lansing Neighborhood Initiatives;
- Cristo Rey Community Center;
- Habitat for Humanity Capital Region;
- Multiple other nonprofit organizations that serve our vulnerable populations

What our customers are saying...

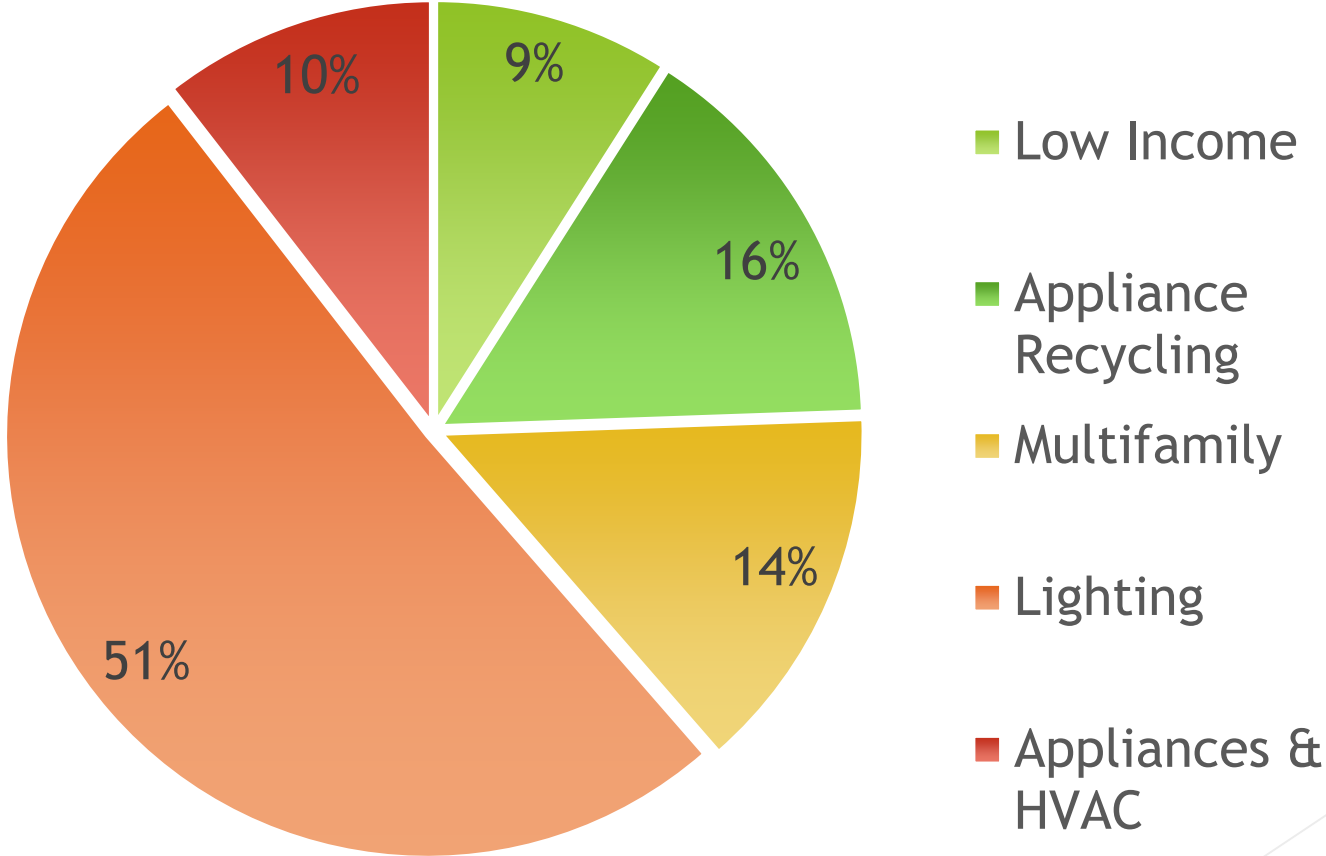
“I would highly recommend this program. The specialist that came to do the inspection was conscientious, informative, polite and professional. Thanks!”

Joni Whitaker, Lansing

“Thank you for replacing my old dehumidifier. This house is now more “comfortable”.”

Pam Foster

Residential Summary 2009-2019



Business Programs

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Business - Program Highlights

▶ Nonprofit Facility Grants

- ▶ \$107,439 in grants for eighteen organizations

Allen Neighborhood Center

Bethlehem Lutheran Church

Capital Area District Library

Central Free Methodist
Church

Community Baptist Church

Cristo Rey Community
Center

Disability Network Capital
Area

Educational Child Care
Center (EC3)

Ele's Place

Eve

Grace Lutheran Church

Haven House

Habitat for Humanity Capital
Region

Kingdom Ministries

Montessori Children's School

Reach Out Christian Church

West Side Church

Walker Bible Baptist Church

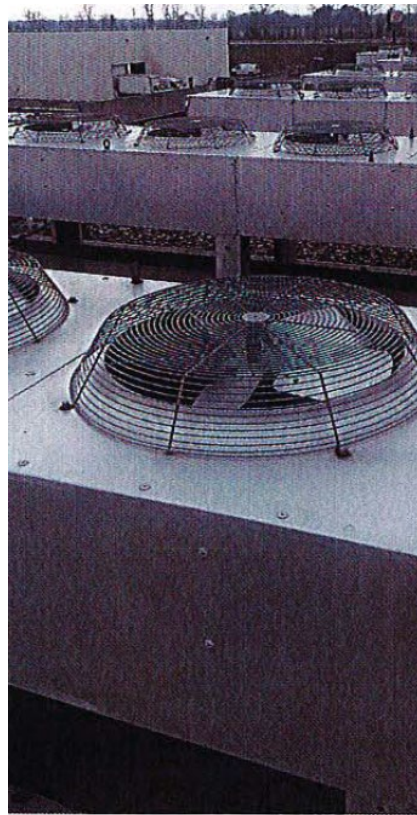


Ele's Place
A healing center
for
grieving children

**THANK YOU
LANSING BOARD OF
WATER AND LIGHT**

Business - Program Highlights

HVAC Upgrades



- ▶ Liquid Web
- ▶ 4 Computer Room AC Units (CRAC) & Optimizers replaced 6 older units
- ▶ Accounts for 15%-20% of all kWh usage at building
- ▶ \$91,168 incentive
- ▶ 1,066,024 kWh lifetime savings

Business - Program Highlights

Lighting



- ▶ LEPFA - Lansing Center
- ▶ Lighting upgrades in a couple of the main conference rooms
- ▶ 125,006 kWh saved
- ▶ \$9,000 incentive

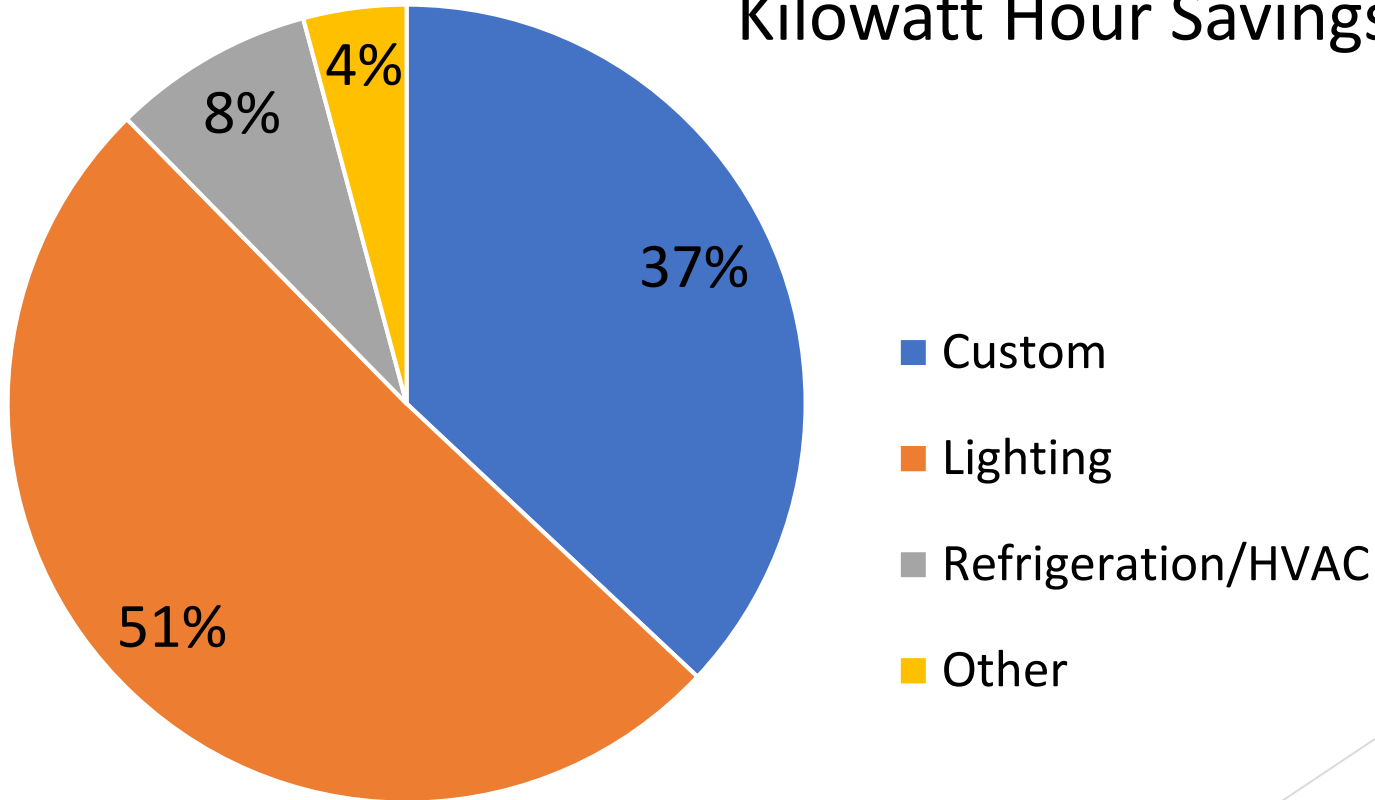
Business - Program Highlights

Million kWh Club

New Members for 2019	
Liquid Web	Farm Bureau
New Genetics	Auto Owners
State of Michigan - Multiple Buildings	
Previous Members	
General Motors (x3)	Quality Dairy
Ashley Ryder	Demmer Properties LLC
SoM, DMB	Lansing School District
Peckham Vocational Ind.	WMU Cooley Law School
Sparrow Hospital	Ashley Capital
Board of Water & Light	Jackson National Life
Meijer, Inc	Liquid Web (x2)
Lansing Mall	East Lansing Public Schools

Business Summary 2009-2019

Kilowatt Hour Savings



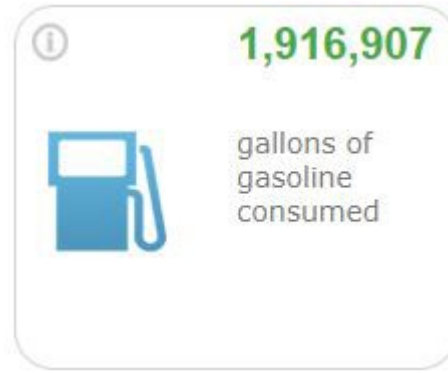
Energy Waste Reduction Summary

Program Portfolio	2019 Goals		2019 Actual	
	Gross First Year kWh Savings	Program Budget	Gross First Year kWh Savings	Program Budget
Low Income Services	561,485	\$247,059	651,726	\$247,059
Residential Programs	5,774,105	\$955,646	6,128,792	\$929,679
Business Services	15,435,560	\$2,736,661	17,313,672	\$2,200,810
Total Program Portfolio	21,771,150	\$3,939,316	24,094,190	\$3,377,549
Program Administration		\$400,000		\$294,763
Evaluation (EM&V)		\$400,000		\$182,771
ANNUAL TOTALS	21,771,150	\$4,739,316	24,094,190	\$3,855,083

Environmental Equivalency

The amount of electricity saved through EWR programs is equivalent to-

CO2 emissions from:



Greenhouse gas emissions avoided by:



Renewable Energy

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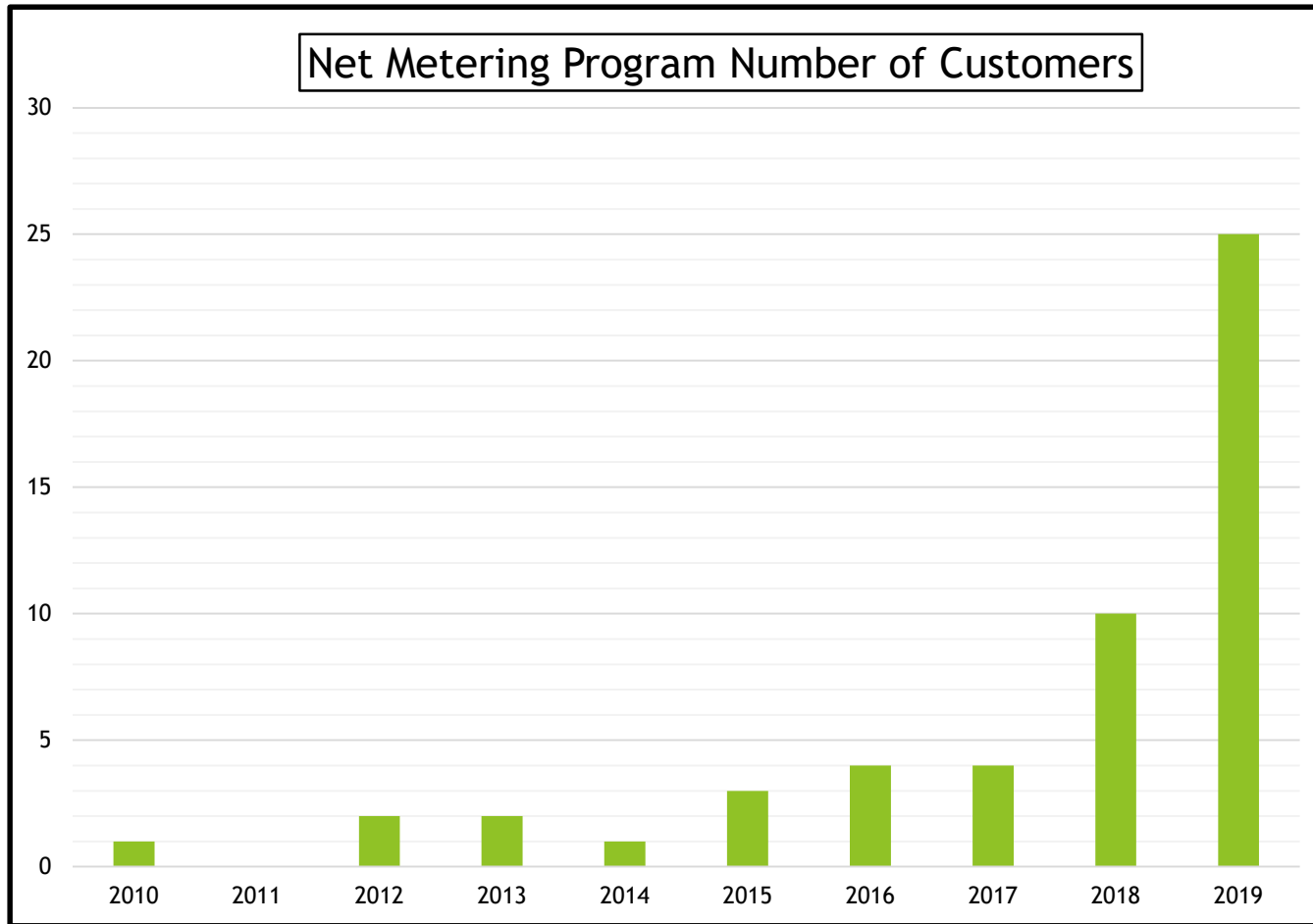
Renewable Energy 2019 Summary

- BWL was required to meet the state's 12.5% renewable energy portfolio law.
- 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.
- BWL is also slated to achieve our 30% clean energy goal by 2020.

2019 Updates

- First full calendar year of Delta Solar - 37,568 MWh
- Community Solar - named project of the year by Michigan Energy Innovation Business Council
- Net Metering Solar program update
 - Added 25 new Residential customers (250% increase over 2018)
 - Total number of customers: 47 Residential and 5 Commercial
 - Total Net Metering Capacity is 335.26 kW as of 12/31/2019

Net Metering Program



Current Renewable Energy Portfolio

- EDL landfill gas - 11.2 MW
- Exelon Wind in Gratiot County—19.2 MW
- Solar (Cedar street and REO office building) - 160 kW
- Delta Solar - 24 MW



Planned Projects

➤ Solar

- Ranger Assembly

- 10 MW 2021

- 80 MW 2022

- Invenergy

- 10 MW 2022

➤ Wind

- Pegasus

- 68 MW 2020

Thank you.

Questions?





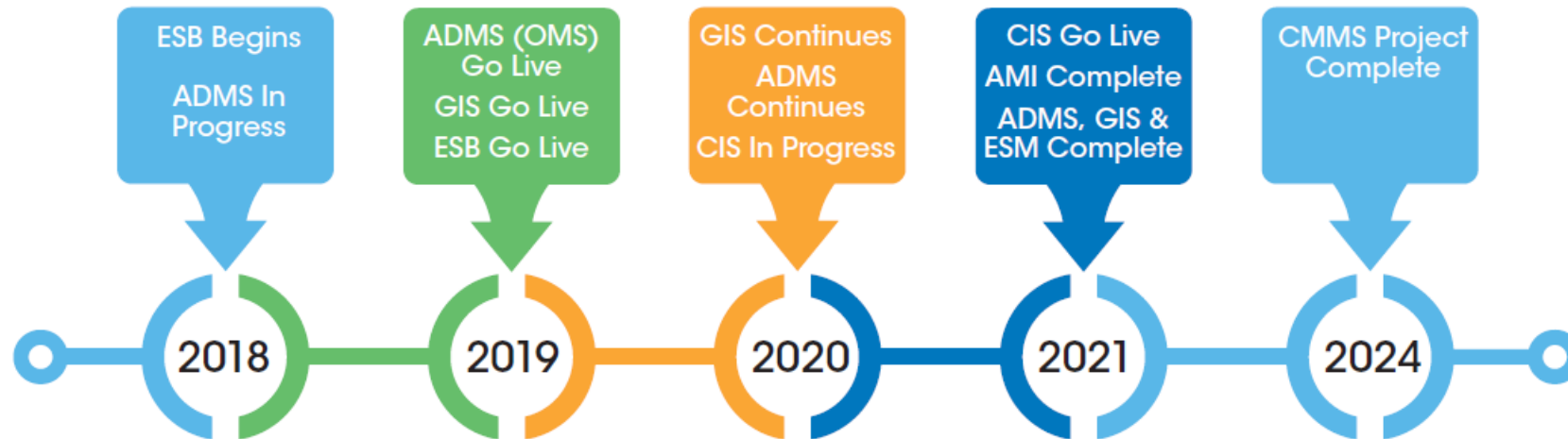
Program Update
August 2020

What is BSmart?

The BSmart Program is comprised of several projects to help move us to the utility of the future;

Advanced Metering Infrastructure (AMI),
Advanced Distribution Management System (ADMS),
Geographical Information System (GIS),
Customer Information System (CIS),
Enterprise Service Bus (ESB),
Computerized Maintenance Management System (CMMS) and
Engineering Services Management (ESM).

These significant updates are technological leaps forward for the BWL to better serve our customers, as well as our employees.



Timeline is subject to change.

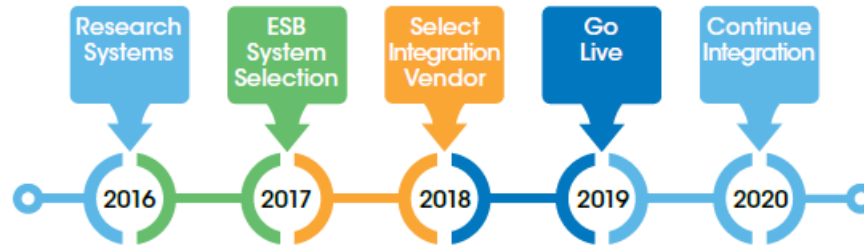
ESB

Enterprise System Bus

ESB transforms and communicates data to and from all integrated BWL systems.



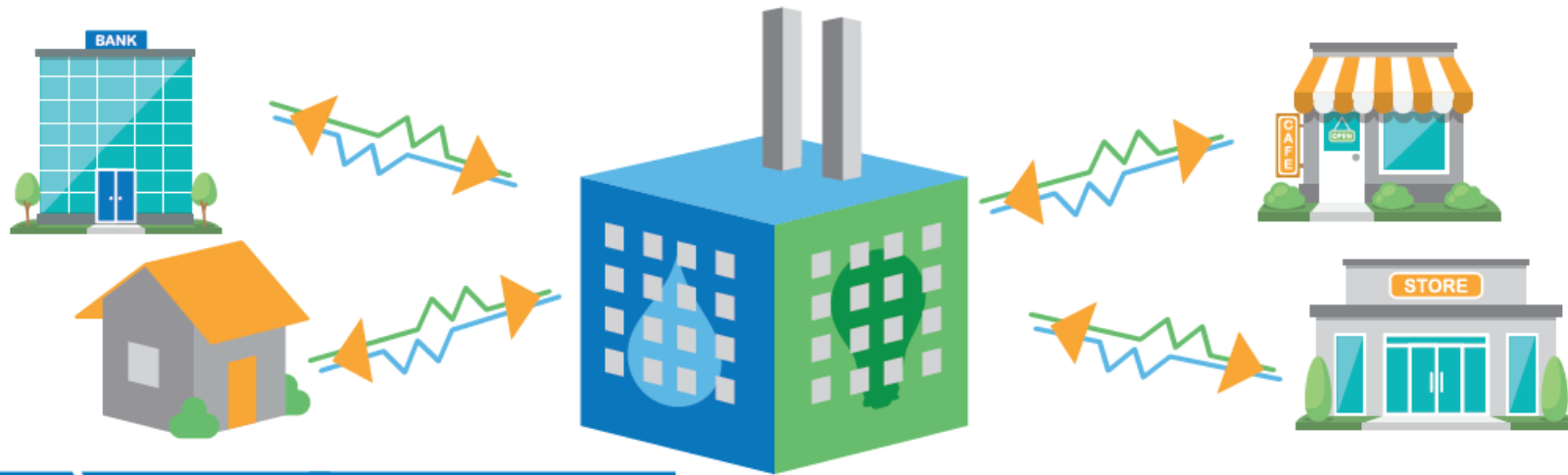
- 01 Enterprise wide deployment and benefits
- 02 Mitigates risk created by point to point integration
- 03 Reduce risks with upgrades and changing connections



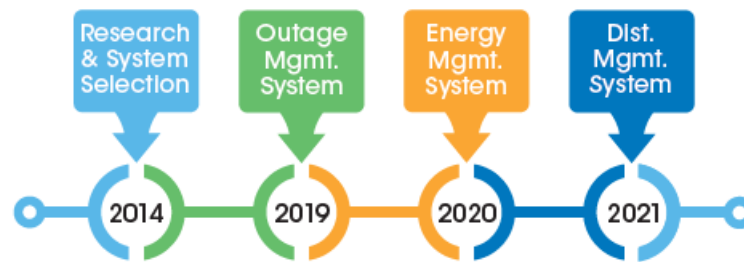
Timeline is subject to change.

Adms Advanced Distribution Management System

Enables BWL to more efficiently distribute and manage utility to its customers.



- 01 OMS will be more informative, reliable and user friendly
- 02 Integrates with AMI
- 03 Training simulator empowers BWL to be prepared for a variety of situations



Timeline is subject to change.

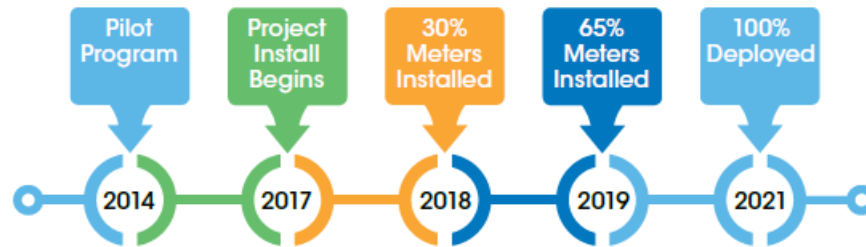


Advanced Metering Infrastructure

Enables two-way communication between the customer and the BWL.



- 01 More efficient outage restoration
- 02 Customer visibility & control over individual electricity and water usage
- 03 Integration of energy efficiency programs



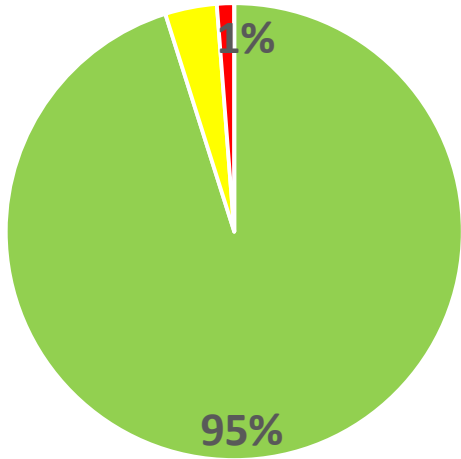
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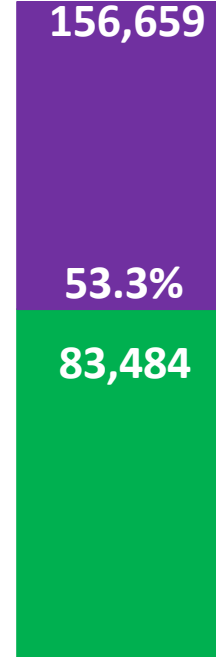
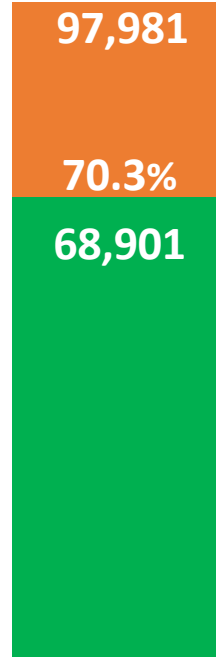
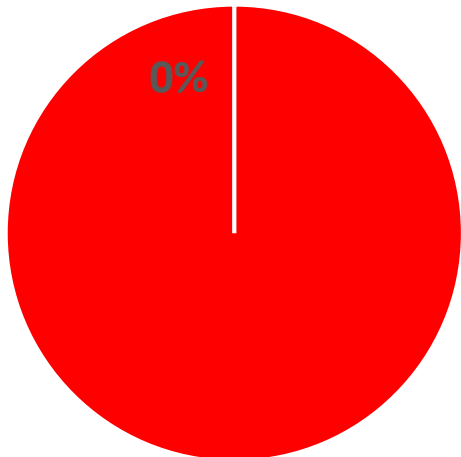
AMI Deployment Progress

METER INSTALLS

Electric/Water Network



Water Only Network

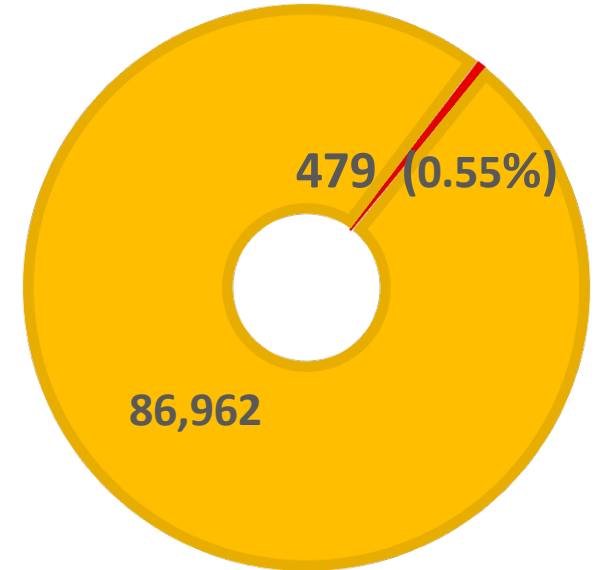


ELECTRIC
 ■ Electric Installed ■ Electric Population

WATER
 ■ Water Installed ■ Water Population

TOTAL
 ■ Total Installed ■ Total Population

CONFIRMED SKIPS OF TOTAL PLANNED INSTALLS



■ Skips ■ Planned Installs

Fiscal Year End Installation Goal: 93,000 Meters
(Electric: 68,000 Water: 25,000)

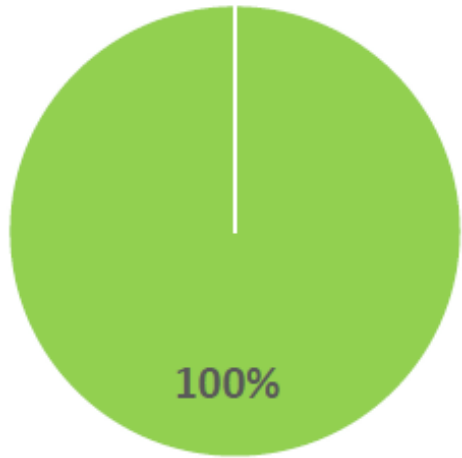
532 Days w/o Safety Incidents
532 Project Installation Days



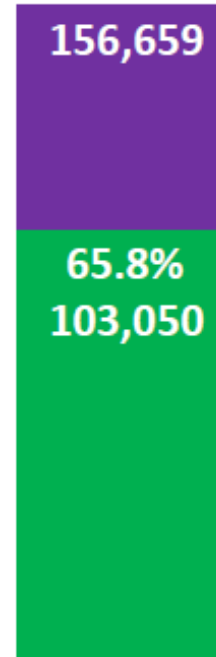
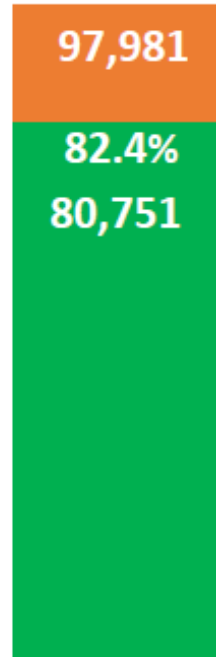
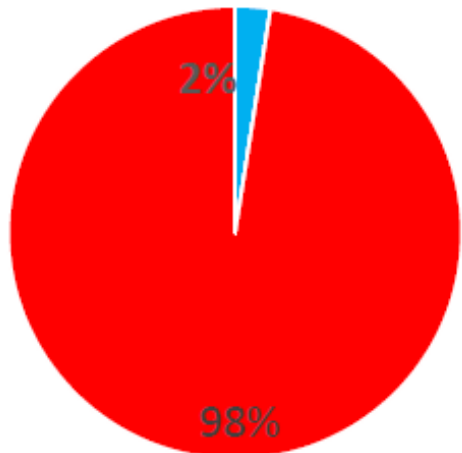
AMI Deployment Progress

METER INSTALLS

Electric/Water Network

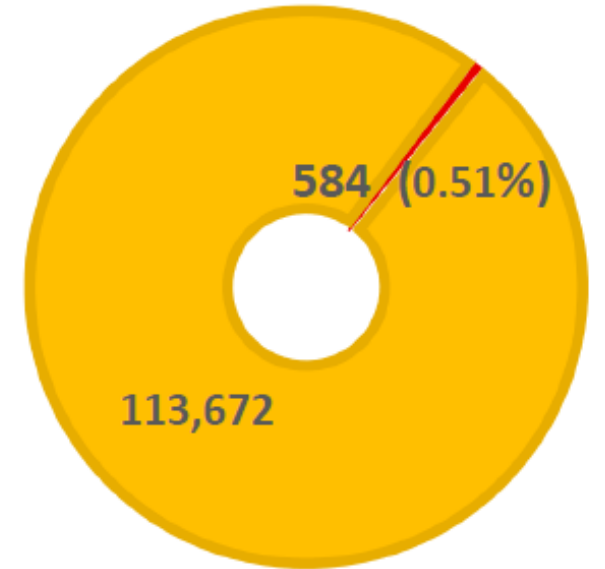


Water Only Network



ELECTRIC **WATER** **TOTAL**
 ■ Electric Installed ■ Water Installed ■ Total Installed
 ■ Electric Population ■ Water Population ■ Total Population

CONFIRMED SKIPS OF TOTAL PLANNED INSTALLS



■ Skips / Opt-out ■ Planned Installs

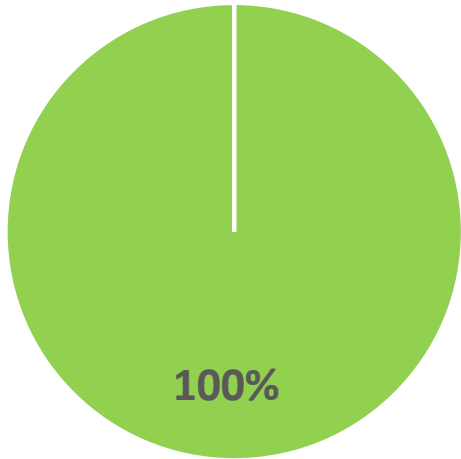
Fiscal Year End Installation Goal: 135,000 Meters
(Electric: 97,000 Water: 38,000)

627 Days w/o Safety Incidents
627 Project Installation Days

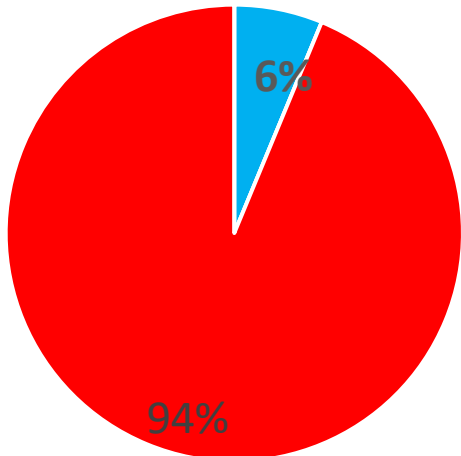


AMI Deployment Progress

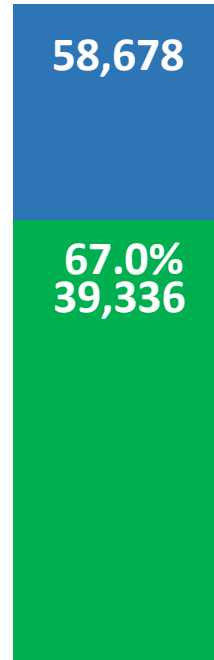
Electric/Water Network



Water Only Network



METER INSTALLS



ELECTRIC

WATER

TOTAL

■ Electric Installed

■ Water Installed

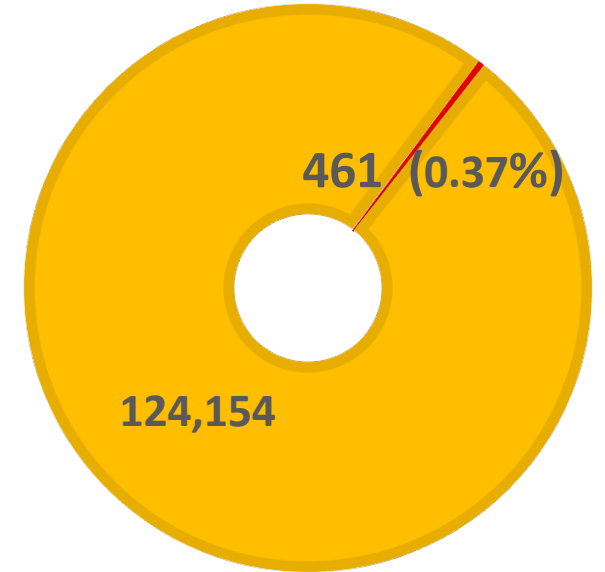
■ Total Installed

■ Electric Population

■ Water Population

■ Total Population

CONFIRMED SKIPS OF TOTAL PLANNED INSTALLS



■ Skips / Opt-out ■ Planned Installs

**Fiscal Year End Installation Goal: 135,000 Meters
(Electric: 97,000 Water: 38,000)**

**812 Days w/o Safety Incidents
812 Project Installation Days**

Updated April 22, 2020

cis Customer Information System

Enables two-way communication between customers and the BWL.



01 Increased customer communication & flexibility through self-service portal

02 Expanded functionality and capability for future growth

03 Ability to pull reports and detailed data for analysis



Timeline is subject to change.

gis Geographical Information System

Enables BWL to store and analyze geographic data related to all assets for BWL utilities.

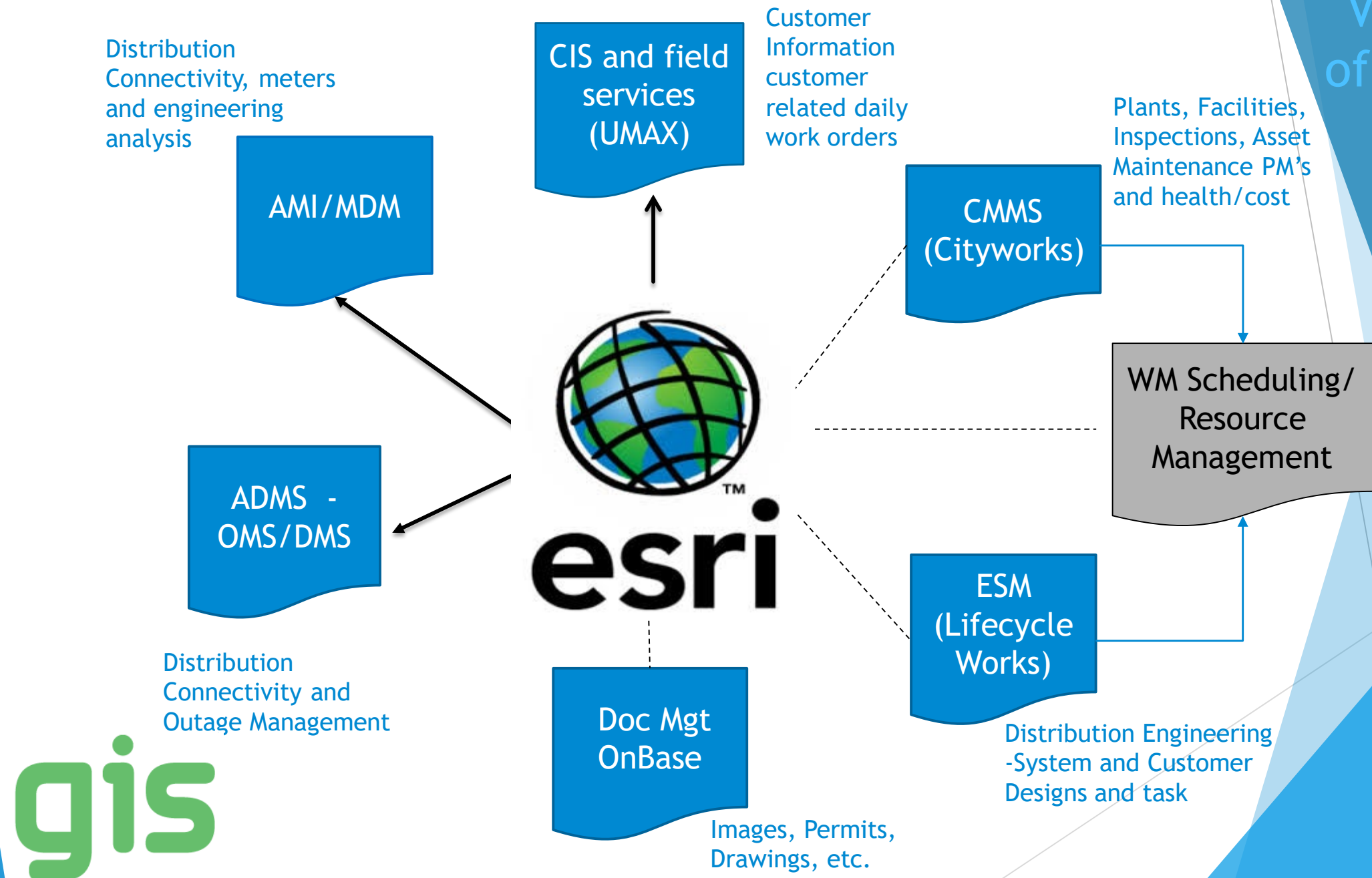


- 01 Creates greater efficiencies and improves workflow
- 02 Gives greater visibility to all assets in the field
- 03 Mobile release will grant field workers better access to map data



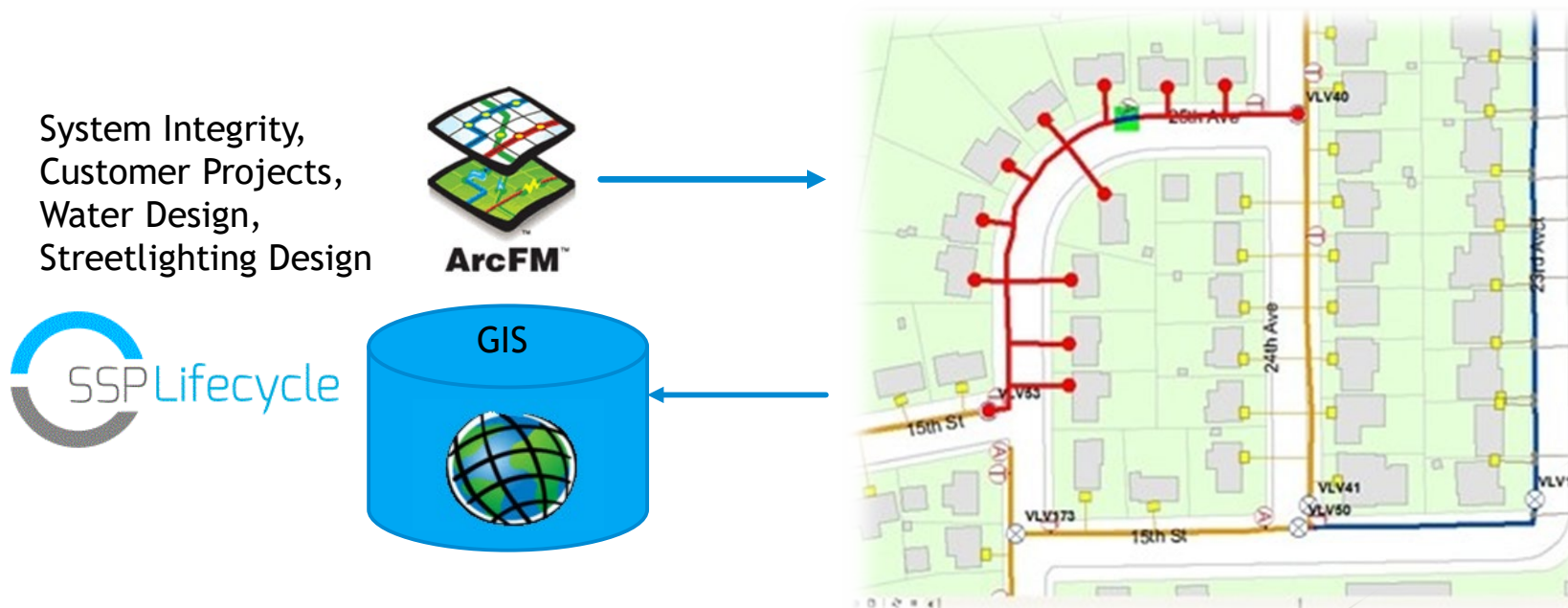
Timeline is subject to change.

Visualization of our System and Assets



gis

- ▶ Ability to design/engineer within the GIS platform; eliminates duplicate AutoCAD entry and lengthy posting times- Reduction in paper process
- ▶ ArcFM Design sits on top of GIS - new designs are created as proposed installations with mobility from the field reducing time and cost of completing designs
- ▶ This reduces the posting time and digitization- allowing Records Management staff to focus on other GIS tasks

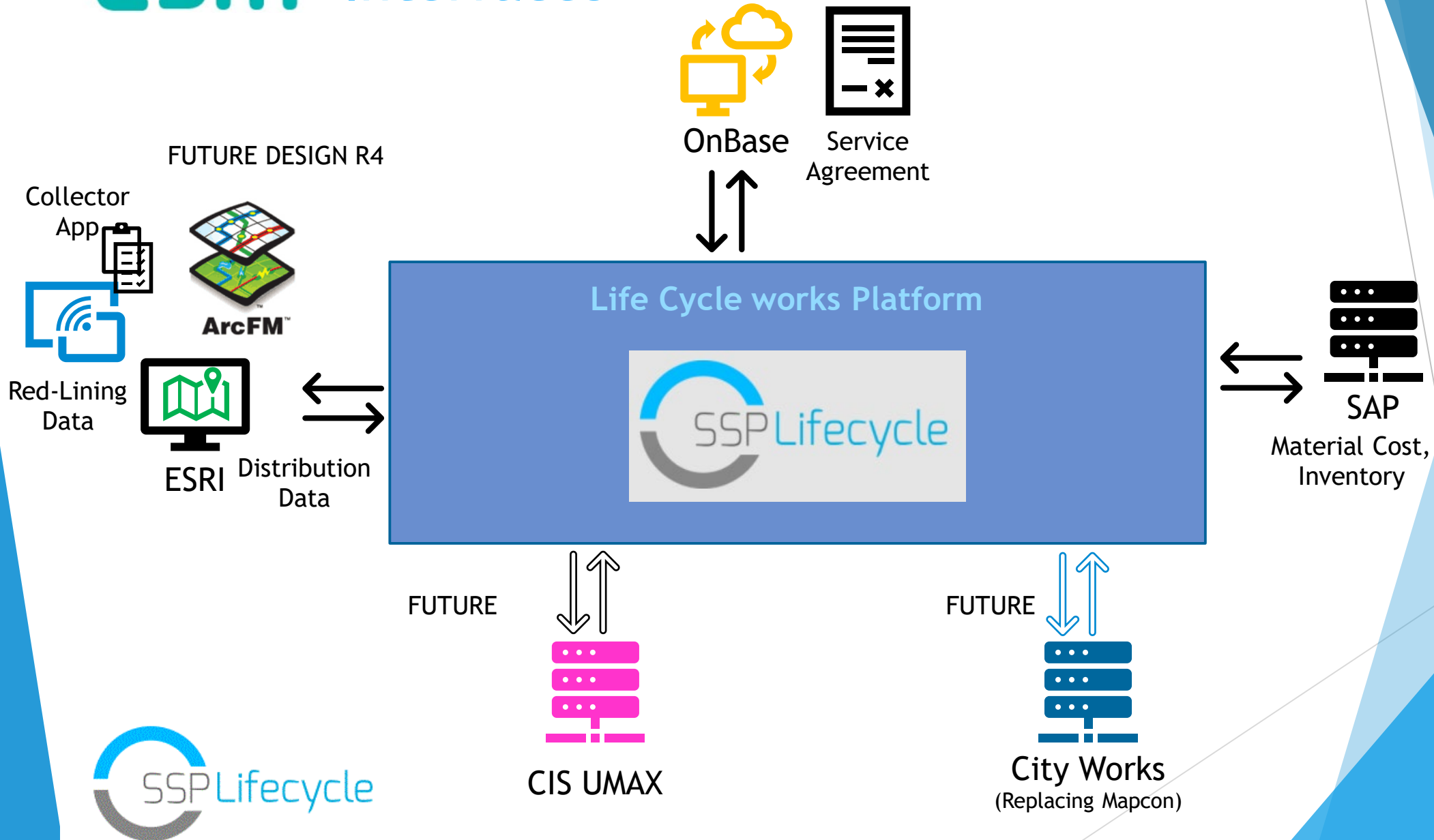


ESM Engineering Services Management

Supports the configuration of specific process workflows, job types, and process data elements related to the entire array of capital work and service requests.



ESM Interfaces

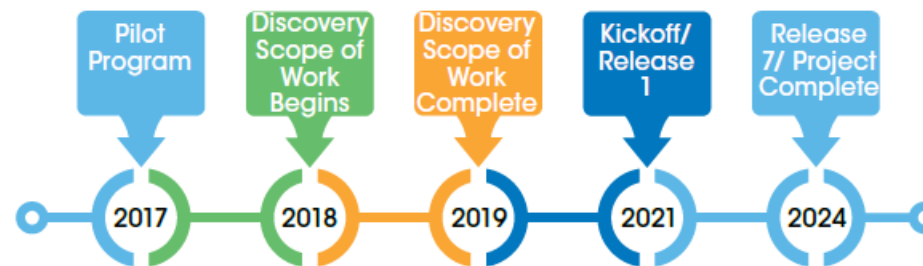


CMMS Computerized Maintenance Management System

Enables BWL to gather and manage asset health information and maintenance history in order to make better data-driven business decisions.



- 01 Enable BWL to more effectively manage assets
- 02 In conjunction with GIS, a single source of truth for asset information
- 03 Improve efficiency, communication, data accuracy and availability



Timeline is subject to change.

BSmart 2.0 - What's next?

- ▶ In conjunction with next strategic plan we are formulating BSmart 2.0 to include the remaining planned releases that are planned and budgeted from 1.0 as well as additional need to support BWL becoming the utility of the future.
- ▶ Continue measure KPI and ROI's of initial BSmart projects
- ▶ Focus on continued business process improvement/streamlining
- ▶ **Upcoming projects**
 - ▶ Construction scheduling /resource management tool to replace legacy tool
 - ▶ CRM customer relationship management
 - ▶ Finalize scope and specifications for future business operation system (replace SAP) FY22-24 will be selection and implementation years
 - ▶ Payroll and human resource management, finance, accounting, budgeting, purchasing and warehousing
 - ▶ Future interfaces of Bsmart project system to further improve functionality and efficiencies
 - ▶ Distribution automation pilot with Distribution System Management
 - ▶ Enterprise Content Management opportunities

BSmart Program Financials as of July 2020

Project	Capital Stage Gate	Pre 2021	FY 2021 Estimate	Future Estimate	Total Actual/Fcst	Budget	Over/(Under) Budget Projection	%
CIS	4	\$ 5,947,897	\$ 8,986,227	\$ 1,115,700	\$ 16,049,824	\$ 17,425,255	\$ (1,375,431)	-7.89%
AMI	4	\$ 33,323,326	\$ 3,863,962	\$ -	\$ 37,187,288	\$ 37,187,288	\$ -	0.00%
GIS	4	\$ 5,635,957	\$ 540,024	\$ -	\$ 6,175,981	\$ 5,936,152	\$ 239,829	4.04%
ADMS	4	\$ 4,572,174	\$ 1,253,800	\$ 275,867	\$ 6,101,841	\$ 5,407,790	\$ 694,051	12.83%
CMMS	3	\$ 419,531	\$ 800,000	\$ 4,573,586	\$ 5,793,117	\$ 5,793,117	\$ -	0.00%
ESM	4	\$ 134,050	\$ 450,215	\$ -	\$ 584,265	\$ 584,265	\$ -	0.00%
Total Bsmart		\$ 50,032,935	\$ 15,894,228	\$ 5,965,153	\$ 71,892,316	\$ 72,333,867	\$ (441,551)	-0.61%

- ▶ Capital Stage Gate 3 = Design and 4 = Construction
- ▶ Budget Impact
 - ▶ CIS - potential savings on reduction in travel due to Covid-19
 - ▶ AMI - Covid-19 impacts under assessment
 - ▶ GIS - Network hardware change, soft rollout, additional conflation, additional extracts,
 - ▶ ADMS - Covid-19 impacts, IVR/ESB, additional hardware/network, outage app and display's CR

Thank you Q&A?

