

AGENDA

COMMITTEE OF THE WHOLE MEETING

April 14, 2015

6:00 P.M. – 1201 S. Washington Ave.

REO Town Depot

Call to Order

Roll Call

Public Comments on Agenda Items

Regional Customer Input

1. Committee of the Whole Meeting Minutes of 3/10/15.....**TAB 1**
 2. FRIB Update..... **(INFO ONLY)**
 3. PA95 Update **(INFO ONLY)**
 4. CRT Update **(INFO ONLY)**
 5. Electric Transmission and Generator Plan..... **TAB 2**
 6. Construction Plans for Dais..... **(DISCUSSION ONLY)**
 7. Upcoming APPA Conference **(DISCUSSION ONLY)**
 8. Closed Session Discussion (Attorney – Client Memo)..... **(DISCUSSION ONLY)**
[MCL 15.268 (h); MCL 15.243 (g)]
 9. Other
- Adjourn

COMMITTEE OF THE WHOLE

March 10, 2015

The Committee of the Whole of the Lansing Board of Water and Light met at the BWL Headquarters-REO Town Depot located at 1201 S. Washington Ave., Lansing, MI, at 5:30 p.m. on Tuesday, March 10, 2015.

Committee of the Whole Chair Margaret Bossenbery called the meeting to order and asked the Corporate Secretary to call the roll.

Present: Commissioners Dennis M. Louney, Margaret Bossenbery, Anthony McCloud, Tony Mullen, Tracy Thomas, David Price, Tracy Thomas, Cynthia Ward and Sandra Zerkle.

Absent: None

Public Comments

None

Approval of Minutes

Motion by Commissioner Price, Seconded by Commissioner McCloud to approve the Committee of the Whole meeting minutes of February 17, 2015.

Action: Motion Carried

Regional Customer Input

Bob Nelson of E. Lansing spoke about Public Act 95 of 2013, a low-income Energy Assistance Fund (LIEAF) Section 9(t), which provides that money from LIEAF be expended by the State of Michigan's Human Services Department. Mr. Nelson explained that on July 1st of every year each utility in the state has to make an election as to whether or not they will surcharge their customers based on a factor that is set by the Public Service Commission and apply amount throughout the next year. The other option is to agree not to shut off customers throughout the winter months, the Board initially chose the second option. At this point, the BWL can elect another option by this July and if that happens, various agencies could apply for money that is raised by that fund and then that money would be distributed to various agencies. He stated that the BWL has concerns about keeping that money within the Board of Water & Light territory and believes that a good effort can be made to accomplish that. Mr. Nelson introduced Mr. Ivan Love, Director of Capital Area Community Services who addressed that issue.

Mr. Love stated that he wanted to start conversations and make an offer to help the Board regarding PA95. He stated if the Board of Water & Light decided to opt into PA95 where a surcharge could be added to the customer's bill, he would be willing to put forth a request to the State of Michigan to administer the fees that are collected.

After a lengthy discussion regarding this matter, Chair Price suggested that staff prepare something for the Committee to review at the next or a future Committee of the Whole meeting. Maybe a review of the different options, the cost of those options and then the Committee can have an informed discussion and move forward.

MI Air, MI Health Coalition Presentation

Rory Nuener a Representative for the Michigan Air, Michigan Health Coalition presented the Committee of the Whole with a presentation about the impacts of health and energy policies. The MI Air MI Health Coalition has existed since 2012 and works to ensure the message of their mission, which is to ensure healthy air for Michigan communities by assessing the health effects of air quality and advocating for the enforcement of policy to address air quality issues. Ms. Neuner stated that the organization connects with professional people to have conversations about how air pollution is affecting health and how energy policy connects to that. Ms. Neuner stated that the BWL is going through a hiring process for a new General Manager and suggested that now is the time to start thinking about how health, air pollution, BWL's policies and the way business is done every day and the impact on the health of the residents of the greater Lansing region. She encouraged the Commissioners to hire a General Manager who has credentials as well as leader who can be responsible for the protection of the health of the people across Greater Lansing.

David Erickson, Lansing Resident, (Registered Nurse) provided information on health impacts of our current energy. He stated the BWL has two coal-fired power plants that affect our health. Particle matter and smog have a particularly serious impact on children and we need to reduce the external factors that cause asthma exacerbations. Mr. Erickson elaborated on public health illnesses due to poor air quality, such as cancer, cardiovascular disease and asthma. He stated that outdoor air pollution, has also been recognized by the CDC and other leading organizations as a trigger for asthma attacks and believes that coal burning plants in Mid-Michigan contributes to asthma exasperations.

Jocelyn Hayward, Lansing Resident (Nurse & hold a Masters' Degree in Public Health), provided statistical information on asthma in the State of Michigan. Ms. Hayward also provided information on asthma health disparities and social determinants of health. She stated that Michigan's asthma rate is higher than the national rate for hospitalizations and coal-fired plants are a large reason for asthma attacks and premature deaths.

Ms. Neuner concluded by stating that health in all policies is a growing movement about approach to decision making development. It is acknowledging that the decision you make as a Board have impact on the health of the people of greater Lansing; also, it is the BWL creating some kind of interdepartmental team that is going to take a broad look at health and how the organization makes decisions about health. She again stated the importance of including health related questions to the interview portion of the GM hiring process, as well as the importance of exploring ways to incorporate health decision making in all policies.

Frozen Water Pipe Update

Interim General Manager Peffley provided an update on frozen water pipes. Mr. Peffley informed the Board that the company is experiencing another year of an enormous amount of frozen water services. In a typical year, the BWL may deal with 30 frozen house water pipes and this year we are at 500 and counting. Because of this issue, staff is working 7 days a week because our policy is, we will not go home until you have water. We are also experiencing a high number of main breaks associated with this winter.

Lead Service Replacement

Interim General Manager Peffley stated that about 10 years ago the BWL undertook an aggressive schedule to change all of the lead service replacements out in the city of Lansing.

Previously Mr. Peffley stated that by year-end 2017 all lead pipe replacements would be complete. However, there are 20 homes on Moore's River Drive that are due to have the replacement service; and the city has asked the BWL to push the completion date from 2017 to 2018 because they are going to rebuild the road at that time and it would save them thousands of dollars in asphalt costs if we wait 1 year.

Discussion re: Seating Options for New Advisory Commissioners

Board Chair Price stated that when the amendment passed to amend the city charter to add 3 new Advisory Board members to the Board, the Corporate Secretary questioned what to do regarding the seating arrangement with the new incoming Commissioners. Board Chair Price stated that although the new Commissioners are non-voting is it very important to accommodate them and to be inclusive and make them feel welcomed. With that, being said Corporate Secretary Griffin worked with engineering and Mr. Peffley to get some ideas and cost info to accommodate the three new Commissioners seating situation and that information is being presented this evening in the form of scenarios.

Interim General Manager Peffley reviewed the scenarios.

There was a lengthy discussion amongst Commissioners regarding the presented scenarios. At the conclusion of the dialogue, the following motion was offered.

Motion by Commissioner Zerkle, Seconded by Commissioner Price to bring seating arrangement scenario #3 to the full Board for consideration.

Discussion: Commissioner Thomas stated that if the seating situation task is not completed by July 1st the Board will not be in violation of any kind and therefore this is not a crisis.

Action: Motion Carried (7/1 Ward dissenting)

Seating Arrangement Scenarios for new Advisory Board Members

Scenario #1

Move Phil Perkins to the back of the dais area and locate the three new Advisory Commissioners at the dais. The cost of a table 48" wide by 25.25" deep for Mr. Perkins is approximately \$4,500 if we match the wood grain and color already in place. This would also require the purchase of three new high back chairs at a cost of approximately \$4,500. In addition, a matching table for the COW meetings is required, estimated cost \$5,500. Total cost is approximately \$14,500. Scenario #1 is not recommended because the spacing between the chair arms at the desk is very tight, approximately 5.5" vs. the nearly 11" which exists today.

Scenario#2

Locating a new table down in front of the dais, which you and I both talked about and decided that this may not make the new Commissioners feel included. In addition, there is the line of sight issue for the Advisory Commissioners during presentations. Estimated cost for that table would be at least \$5,500 and would require the purchase of three new high back chairs at a cost of approximately \$4,500. In addition, a matching table for the COW meetings is required, estimate cost \$5,000.00. Total cost approximately \$15,000.

Scenario#3

Add an extended dais area that would match the existing Commissioner sitting area. The cost from the Christman Constructors, Inc. for building the dais is extension is \$15,900. In addition,

three raised chairs for the Advisory Commissioners for the new dais are estimated at \$4,500. To that, we will need to add a matching table for the COW meetings estimated at \$5,500 plus three additional high back matching chairs, estimated at \$4,500.00. Total cost Scenario#3 \$30,400.

Closed Session discussion(Attorney-Client Memo)[MCL 15.268(h);MCL 15.243 (g)]

Committee of the Whole Chair Bossenbery stated that our attorneys have provided us with an Attorney Client Privilege memorandum and they are present and available to discuss the contents of that memorandum with us.

Motion by Commissioner Price, Seconded by Commissioner McCloud to go into close session For the purpose of reviewing the contents of the attorney-client privileged memorandum as permitted by the Open Meetings Act, specifically MCL 15.268(h) and MCL 15.243(g).

Roll Call Vote:

Yeas: Commissioners Bossenbery, Louney, McCloud, Mullen, Price, Thomas, Ward and Zerkle

Nays: None

The Committee of the Whole went into closed session at 6:49 p.m.

The Committee came out of closed session to discuss the recording of closed session minutes at 7:03 p.m.

Motion by Commissioner Price, Seconded by Commissioner McCloud to go *back* into close session for the purpose of reviewing the contents of the attorney-client privileged memorandum as permitted by the Open Meetings Act, specifically MCL 15.268(h) and MCL 15.243(g).

Roll Call Vote:

Yeas: Commissioners Bossenbery, Louney, McCloud, Mullen, Price, Thomas, Ward and Zerkle

Nays: None

The Committee of the Whole went back into closed session at 7:04 p.m.

Upon Closed Session at 7:13 p.m., the following motion was offered:

Motion by Commissioner Price, Seconded by Commissioner McCloud to authorize the Interim General Manager to resolve the insurance claim with FM Global as recommended by and discussed with legal counsel.

Action: Motion Carried

Motion Commissioner Zerkle, Seconded by Commissioner Price to authorize the engagement of Denenberg Tuffley to represent the BWL against JCI Jones Chemicals Inc. contingent on the approval of Lansing City Counsel.

Action: Motion Carried

Other

Commissioner Louney stated that he reviewed the CRT recommendations and notices some things that were not been updated. He suggested that the Board might want to consider having a year after the storm meeting to review all of the recommendations and get a summary of where we are and what has been completed. He stated that he believes that it is the Board's due diligence to come back to the public and tell them that we as a Board have tasked ourselves with making sure the CRT's and PSC's recommendations are complete and we have reviewed them.

Commissioner Price stated that there is some value in a one year report, specifically to report out what we have done to prepare for the next time and to remind the public that we took this seriously and that the staff continues to take this seriously and we will continue to monitor these things.

Committee of the Whole Chair Bossenbery suggested that Interim General Manager Peffley provide an updated report in the next month and then the Board could have discussion at the May Committee of the Whole meeting.

Public Comment

None

Excused Absence

None

Adjourn

On Motion by Commissioner Ward, Seconded by Commissioner Mullen, the meeting adjourned at 7:14 p.m.

Respectfully Submitted
Margaret Bossenbery, Chair
Committee of the Whole

Electric Transmission and Generation Plans

Committee of the Whole Meeting

April 14, 2015

Items for Presentation

- Historic Perspective
- Role of the Eckert Generating Station
- Reliability Standards
- Recommended changes to BWL System
- Implementation Issues

Historic Perspective

- Beginning in the 1920's, the BWL Electric System was primarily built around and supported by the Ottawa and Eckert Power Plants.
 - Had a backup interconnection with Consumer for emergency power.
- In the 1950s through the mid 1970s more generation was added to Eckert, in 1973 Erickson was completed and in the late 1970's the 138 kV transmission system was constructed.
- Since the 1970's, one interconnection has been added to the ITC system, the BWL contracted for power and transmission from the Belle River power plant and the REO Town plant has entered service.
- The majority of our electric assets have been in operation for more than 45 years, some for up to 60 years.
- Major portions of the BWL's service territory are still supported by the Eckert generating plant.

Issues Driving Development of Transmission Plan

- Eventual retirement of Eckert plant
 - Air/Water regulations
 - Mandatory Federal electric reliability standards
 - Age and condition of facilities
- Eckert generation is needed to support electric reliability for a major portion of the BWL's load
- Eckert cannot be removed from service without additional generation or transmission infrastructure
- Since a major, new generation plant cannot be built where Eckert now stands, transmission needs to be constructed to meet electric reliability requirements

Eckert is a Major Generating Station

- Eckert has been the site of a power plant since the early 1920's
 - Until recently, it was capable of producing 420 Mw's of electric generating capacity
 - It is currently capable of producing 290 Mw's
 - Because of its strategic location, Eckert is very important to maintaining and meeting electric reliability standards.
 - As the plant ages, operations and maintenance costs have been increasing while generation reliability has been decreasing.
 - Compliance with stricter air and water regulations will add to the cost of maintaining Eckert:
 - Pending Greenhouse Gas regulations may limit the amount of CO2 emitted by BWL facilities.
 - The recently released Mercury and Air Toxics rule will result in Eckert units 1 and 3 being retired March, 2016.
 - Additional regulations are pending or will be operative within the next 10 years.

Eckert is the Site of Major Transmission and Distribution Facilities

- The Eckert electric distribution plant feeds 68 circuits and nearly 1/3 of the BWL's peak load including critical parts of the BWL's service territory.
- Without electric generation at Eckert, electric service to downtown Lansing is one contingency from failure.
- Distribution circuits originating at Eckert are in need of replacement
 - Circuits feeding downtown are located in duct banks that are failing
 - Transmission and distribution facilities at Eckert are located in the 100 year flood plain

Duct Bank Under Railroad

Aging Infrastructure - Intact Duct Bank



Duct Bank Under Railroad

Aging Infrastructure – Duct Bank with Cracked Walls



Duct Bank Under Railroad

Aging Infrastructure – Duct Bank with Partial Collapse



Duct Bank Under Railroad

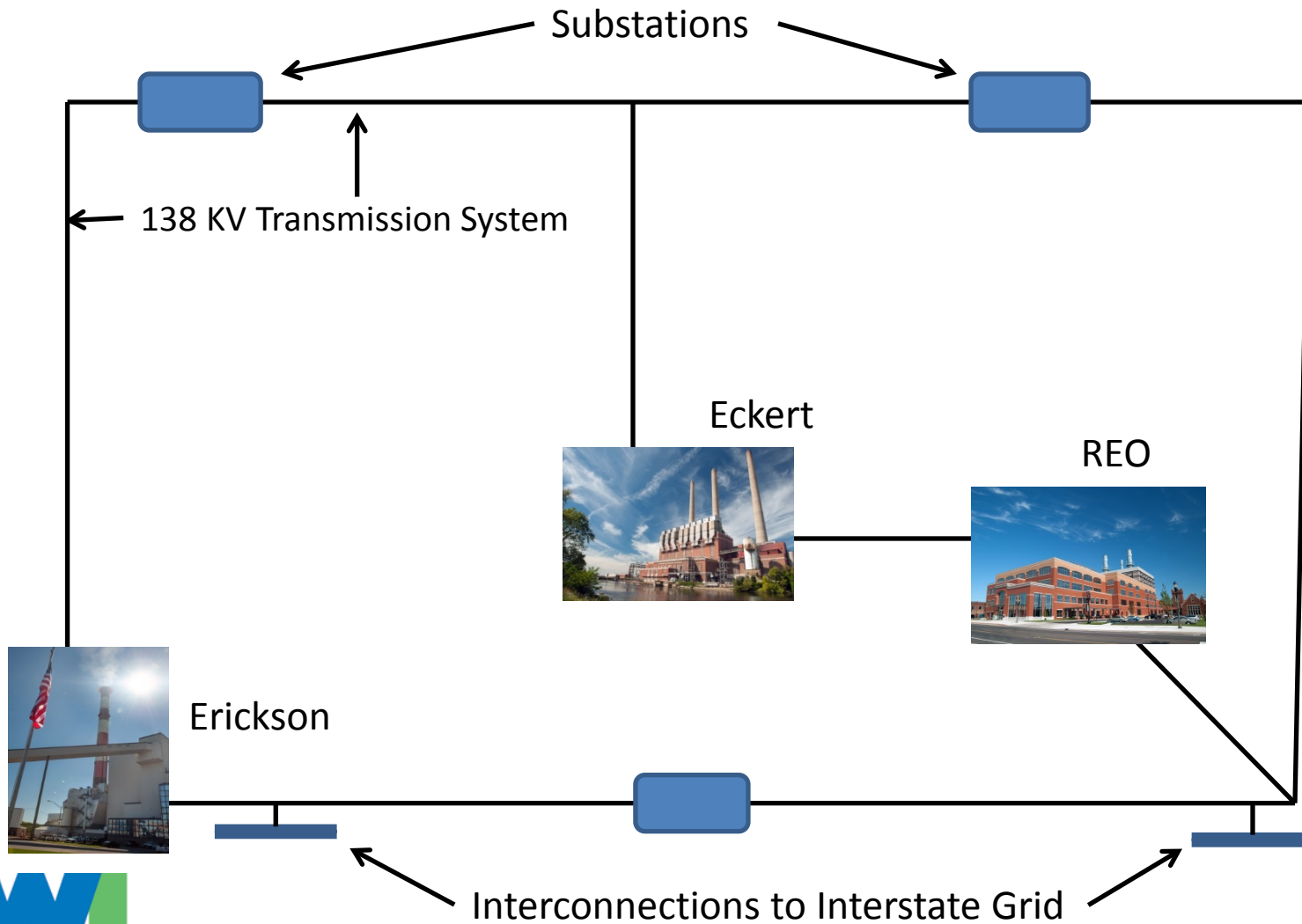
Aging Infrastructure – Duct Bank with a Crack and Protrusion



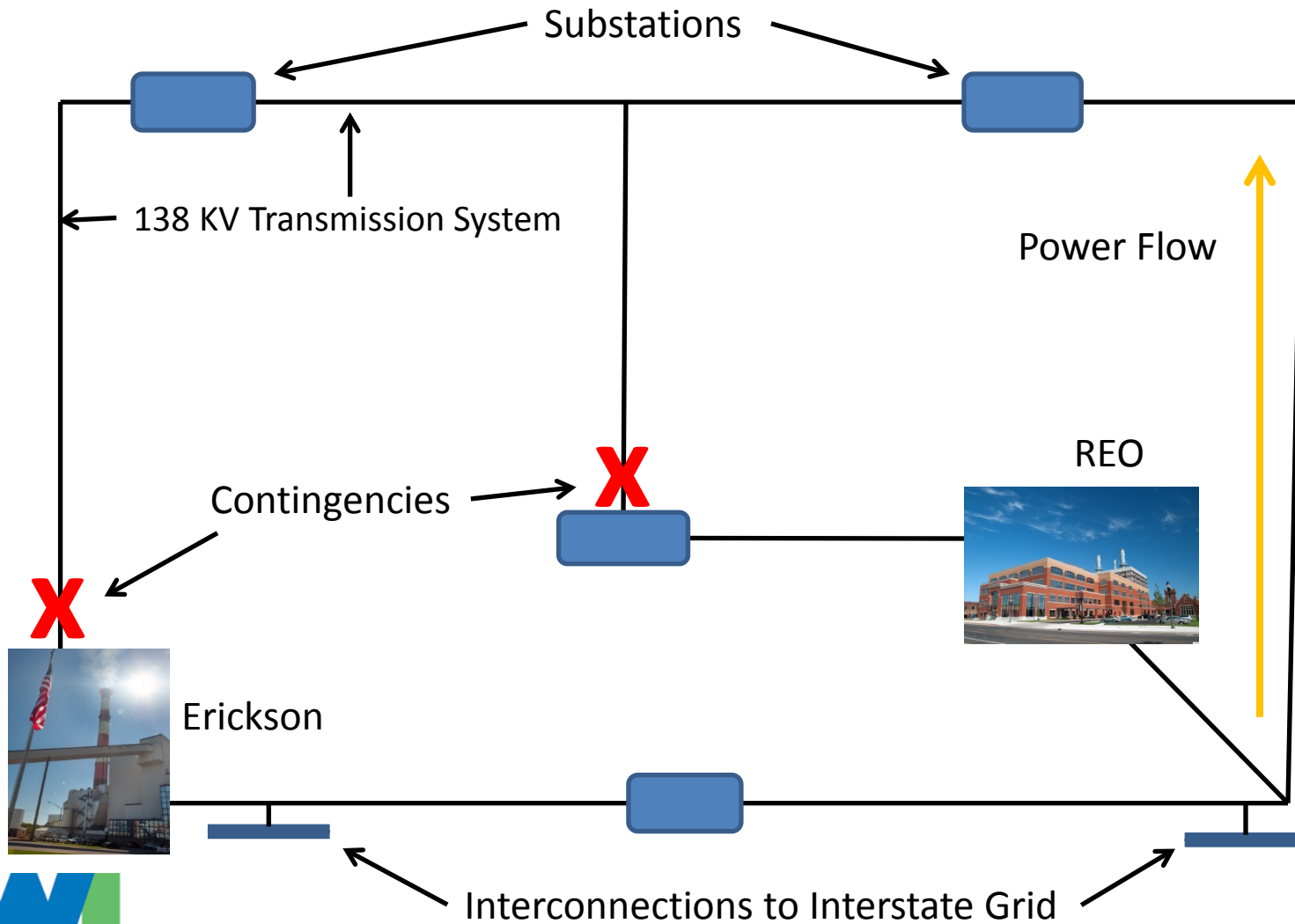
NERC Contingency Planning Requirements

- System planning requirements (N-1-1 Criteria) – The system must be designed to be able to sustain its operation when two elements (e.g. transmission line, breaker, bus, generator) are simultaneously out of service; commonly called the N-1-1 criteria.
- Operations (N-1) - Preparing System for the next Contingency
 - The T&D Supervisor is to operate (in real-time) the system such that if a contingency were to occur, the system would continue to deliver power to the remaining load centers; commonly called the N-1 criteria. If no options are available, the T&D Supervisor is authorized to shed load (i.e. cut service to some customers) until the contingency is relieved.
 - Without the Eckert generating plant, the BWL cannot meet these NERC contingency requirements with its current transmission configuration and it would violate these standards.
 - This would jeopardize reliability to the BWL's system
 - It would also expose the BWL to substantial fines or other penalties

BWL Electric System



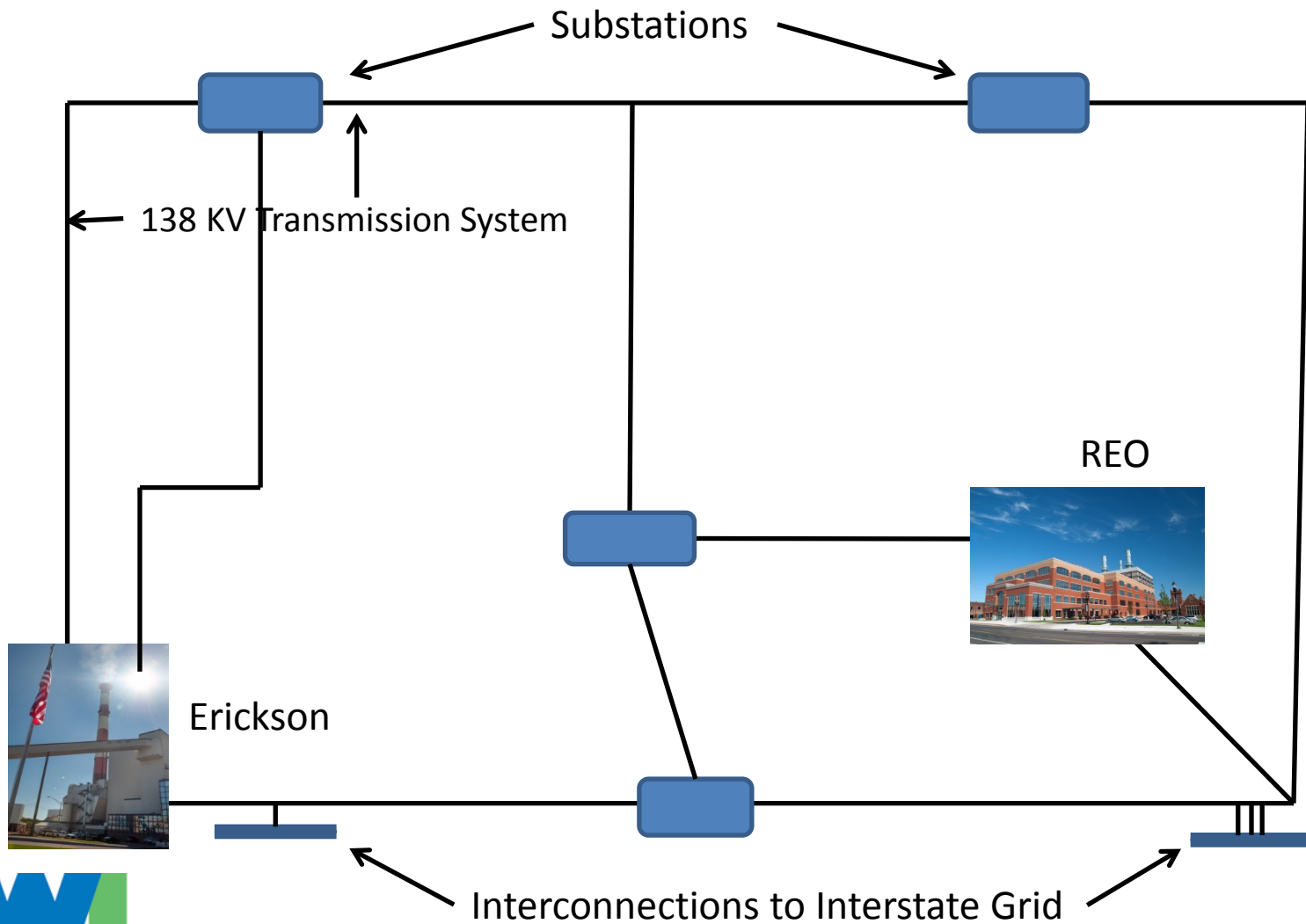
BWL Electric System with N-1-1 Contingencies



Transmission Plan Investments

- Construct new transmission lines
- Construct or rebuild six substations
- Reduce number of circuits and the amount of customer demand at the Eckert distribution facility
- Add capacitor banks at Erickson and Northeast substations

BWL Electric Transmission Plan



Summary of Issues

- Aging Infrastructure
 - Failing Duct lines under railroad
 - Facilities at Eckert are over 50 yrs. old
- Regulation Compliance
 - EPA Clean Air Act (*Retirement of Power Plants*)
 - NERC Reliability Compliance requirements (*Design T&D system for Contingencies*)
- Diversify substations serving Downtown and GM-LGR. (*Eckert substation serves 30% of BWL Customers*)
- Limited capability of cable to serve new customers and no room in duct banks for new cables.
- Removal of infrastructure from the flood plain exposure (*Eckert facility is in the 100 yr. flood zone*).

Implementation Issues

Work load Issues

- Unprecedented level of work for the next 7 to 10 years.
- Challenge to human resources, for existing work load and managing consultants and contactors
- Prepare and train technical resources to replace retiring employees
- Coordination of work with while maintaining system reliability.

Other Significant Issues

- Ability to get the property
- Availability of and timeliness of equipment / contractors
- Funding
- 4.160 voltage level Customers' ability to be moved to 13.2 kV
- Modify Transmission Service to Increase Import Capability

Project Conceptual Costs : Capital Budget

(\$1000)

Major Projects	FY 16	FY 17	FY 18	FY 19	FY 20	FY 21	FYs 16-21
West-side Reinforcement	\$ 4,100	\$13,200	\$ 6,800	\$ -	\$ -	\$ -	\$24,100
GM138 Substation	\$ 560	\$ 2,500	\$ 7,440	\$ 7,900	\$ 2,000	\$ -	\$20,400
Wise (Double-End)	\$ 3,050	\$ 3,100	\$ 3,510	\$ 500	\$ -	\$ -	\$10,160
South Reinforcement	\$ 500	\$ 800	\$ 700	\$ 4,000	\$ 1,900	\$ 800	\$ 8,700
GM-LGR Substation	\$ 100	\$ 500	\$ 4,100	\$ 2,300	\$ 4,000	\$ 1,540	\$12,540
Eckert Sub Modification	\$ 749	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 749
138 KV Cap Bank	\$ 2,400	\$ 50	\$ 2,600	\$ 7,000	\$ -	\$ -	\$12,050
South Substation	\$ 150	\$ -	\$ -	\$ 200	\$ 2,600	\$ 7,000	\$11,350
Central Substation	\$ 50	\$ 1,000	\$ 50	\$ 50	\$ 50	\$ -	\$ 1,250
Total (Major Projects only)	\$11,659	\$21,150	\$25,200	\$21,950	\$11,950	\$9,390	101,299

Generation Plan

- Eckert supplies both electric energy and capacity to meet BWL's requirements
- Additional generation will be needed when Eckert is removed from service
- The BWL can acquire the electric energy and capacity from a number of sources
 - Construct additional generation
 - Acquire more renewable energy
 - Implement demand-side measures
 - Invest in smart grid options
 - Rely on market purchases
- The BWL is beginning an IRP process that will involve the community on the best way to acquire additional electric energy and capacity.

Electric Transmission and Generation Plans

Questions