

**REGULAR MEETING**

The HBPW Board of Directors met  
**September 14, 2020**  
at 4:00 p.m.  
Via Zoom Teleconference

**Chair Hemingway called the meeting to order at 4:01 p.m.**

**Members Present:** Tim Hemingway, Diane Haworth, Paul Lilly, P.J. Thompson, City Council Liaison Nathan Bocks, and Ex Officio Members Bob Shilander and Keith Van Beek

**Members Absent:** Sue Franz

**Staff Present:** Dave Koster, Janet Lemson, Ted Siler, Becky Lehman, Joel Davenport, Chuck Warren, Chris Van Dokkumburg, Pieter Beyer, Grant Koster, Andrew Reynolds, Jane Monroe, Steve Bruinsma, Amy Yost, Pete Hoffswell.

**21.039 Approval of Agenda**

*Motion to Approve the Agenda made by Lilly  
Second Haworth  
Favor 4  
Oppose 0*

**21.040 Board Minutes – Regular Meeting Minutes of August 10, 2020, and Study Session Minutes of August 24, 2020**

*As part of the Consent Agenda, the Board of Directors approved the minutes as presented.*

**21.041 Action on Consent items:**

*Motion to approve, accept, or adopt Consent Agenda items Haworth  
Second Lilly  
Favor 4  
Oppose 0  
Hemingway Y  
Haworth Y  
Lilly Y  
Thompson Y*

**21.042 Communications from the Audience**

*None*

**21.043 Major Project Update**

*For information only*

**21.044 Appointment of Audit Committee Members**

*Recommendation: Board Chair Hemingway recommended the reappointed Diane Haworth and to newly appoint Sue Franz as the members of the HBPW Audit Committee.*

*\* Red italics indicate information or discussion added during the meeting and/or action taken.*



help determine the most cost effective location of the main and reduce construction uncertainties and costs. BPW staff recommends awarding the contract to Prein & Newhof for a total contract amount of \$735,300. The requested contract amount is within the estimated engineering costs (\$1,155,000) for the project.

*Recommendation: The Board of Directors approved a contract with Prein & Newhof, Inc. for a not-to-exceed amount of \$735,300 and a 10% contingency of \$73,500 for a total of \$808,800, pending approval as to form by the City Attorney.*

<i>Motion to approve recommendation</i>	<i>Haworth</i>
<i>Second</i>	<i>Lilly</i>
<i>Hemingway</i>	<i>Y</i>
<i>Haworth</i>	<i>Y</i>
<i>Lilly</i>	<i>Y</i>
<i>Thompson</i>	<i>Y</i>
<i>Favor</i>	<i>4</i>
<i>Oppose</i>	<i>0</i>

21.047 **16<sup>th</sup> Street Water Main Replacement**

The City Transportation Department is in the process of reconstructing 16th Street between River Avenue and Central Avenue. Part of this work includes installation of a new storm sewer and snow melt system. In July, during excavations for the storm sewer, it was discovered that the existing water main was only buried 3 feet deep and is in conflict with the proposed storm sewer system as well as the snow melt system. This conflict was not discovered until construction commenced. Given the timing required, HBPW treated this as an emergency approval and gave the City permission to proceed with the water main replacement to keep the project on schedule.

- The existing water main was a 6" cast iron main that was approximately 120 years old. It does not have any break history, so it had not previously been identified as a priority for replacement by HBPW.
- Due to the age of the main and the shallow bury depth, it is probable that the main will have experienced failures in the near future, especially after experiencing heavy construction traffic as part of this project.
- The current work will also result in the installation of a snow melt system over the water main so any future breaks or service line work would require disturbance and repair of the snow melt system.
- The existing 6" water main was undersized relative to current HBPW standards, and the main to the east and west of the section in question has already been replaced and upsized to 8".
- A future replacement project would have required significantly more HBPW funding since the City is paying for all indirect costs as well as restoration costs of the current project, and future site conditions would entail more utility conflicts and extensive restoration.
- Moving forward with the main replacement also resulted in replacement of six lead service lines. The costs for the service line replacements will be covered in the FY21 expense budget.

For the above reasons, it is recommended that HBPW proceed with a transfer of funding from contingency to cover the costs of the unplanned water main replacement for this City project.

*Recommendation: The Board of Directors approved a transfer from contingency in the amount of \$86,700 for payment to the City of Holland for water main replacement in 16th Street from River Avenue to Central Avenue.*

<i>Motion to approve recommendation</i>	<i>Haworth</i>
<i>Second</i>	<i>Lilly</i>

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<i>Hemingway</i>	Y
<i>Haworth</i>	Y
<i>Lilly</i>	Y
<i>Thompson</i>	Y
<i>Favor</i>	4
<i>Oppose</i>	0

21.048 **Water Only Area AMI System**

Background

HBPW is currently in the process of replacing the end-of-life Aclara AMI for the water system with a newer Landis & Gyr (L&G) AMI system. The L&G platform is a shared platform that includes both electric and water meter transmitting units (MTUs). There are approximately 17,300 water meters that require installation of new L&G MTUs (including the new Park Township retail area). To date, this effort has resulted in the installation of 9,500 L&G MTUs.

The L&G MTUs were designed to operate on a mesh network that is broadcast from HBPW electric meters. In areas of the water system where HBPW also provides electric service, this has proven to be a stable AMI platform. However, the current and future western portions of the water distribution system falls outside of the HBPW's electric service area.

In the absence of an electric meter mesh network, the L&G MTUs transmit data to a network of pole mounted routers. The MTUs transmit data in the 900 Mhz frequency spectrum. Because the 900 Mhz spectrum is a relatively high frequency spectrum, it is prone to rapid signal loss and has difficulty penetrating obstructions such as walls, vegetation, and uneven terrain. As a result, complete installation of the L&G system in the water-only areas (including Park Township) would require 54 pole mounted routers.

Due to the short range of the MTUs and the high number of routers, some routers in the water-only area need to be located along private streets and on private property in order to ensure complete coverage. There has been significant push back and denial of agreements from private property owners where this is required, primarily on the grounds that the routers require installation of utility poles in areas where above ground utilities are not allowed. Township planning commissions have also indicated they are not able to support approval of utility poles unless the private property owners agree to the installation.

Because of the private property conflicts, and the high number of routers required for the 900 Mhz spectrum, staff investigated alternative solutions for meter data transmittal in the water-only areas.

Aclara AMI System Upgrades

HBPW's existing Aclara MTUs operate on the 450 Mhz spectrum which is able to transmit more readily through obstructions and over greater distances. The current MTUs are therefore able to transmit to a relatively small network of strategically placed, solar powered, Data Collector Units (DCUs). This has proven to be a reliable AMI system for HBPW in the water-only area on the south side of Lake Macatawa. Although this system is considered to be at the end of life, HBPW has learned that some upgrades will be necessary to ensure continued operation of the remaining MTUs as the Landis & Gyr deployment continues.

These upgrades include:

- Renewal of DCU Cellular Communications – Verizon wireless has announced that it will cease 3G cellular services at the end of December 2020. The current Aclara DCUs transmit data via Verizon's 3G network and need to be upgraded to Verizon's 4G network to ensure continued transmittal of meter data from the remaining Aclara MTUs. The communications

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upgrade will also allow for two-way communications with MTUs whereas the current DCUs are only capable of one-way communication.

- Meter Data Management (MDM) Software Upgrade - HBPW utilizes a legacy Aclara MDM software called AclaraSTAR to manage incoming meter data. The AclaraSTAR system is a first generation MDM system that lacks functionalities that have become industry standard and necessary to provide the level of service HBPW seeks to provide. This legacy system has been unsupported by Aclara for some time, will become non-operational in 2021, and an upgrade to the newer AclaraOne MDM system is necessary.

The benefit of implementing these upgrades is that the resulting renewed Aclara system will be capable of deploying and utilizing Aclara's newest AMI products that were not compatible with HBPW's legacy Aclara system. This includes new high power 450 Mhz MTUs that are well suited for deployment in the water-only area.

#### Aclara AMI System Expansion

Because the upgrades to the Aclara system will result in the ability to deploy new Aclara products, HBPW staff engaged with Aclara to determine whether they could provide a competitive alternative system for the water-only area. After completing a study of the area, Aclara has proposed an AMI system that requires significantly less network infrastructure investments to deploy than Landis & Gyr requires, and overcomes the constructability challenges discussed previously.

The main benefit of the proposed Aclara system is that it only requires installation of 4 new collectors to extend 450 Mhz coverage to the new Park Township retail area. Due to their long range communications these 4 new collectors can easily be installed on HBPW facilities or other locations that do not require private agreements. The collectors are also solar powered and do not require an electricity feed from Consumer's Energy.

Given that a 450 Mhz Aclara system has also been in operation for many years in the water-only area on the south side of Lake Macatawa, there is high confidence that an upgraded version of this system will continue to meet the needs of HBPW while also providing increased analytical capabilities for water usage, leak detection, and MTU troubleshooting.

Staff also requested a lower frequency MTU from Landis & Gyr but they were unable to provide a proven solution that worked with the existing mesh network AMI system.

#### Cost of AMI for Water-Only Area

To provide an equal comparison for the cost of the Aclara system versus the Landis & Gyr mesh system a 20 year life-cycle cost analysis was performed for both. A 20 year analysis was chosen because both the Landis & Gyr and Aclara MTUs are advertised to have a 20 year battery life.

#### Landis & Gyr Cost

The current network design for the water-only area requires 54 router installations. The routers also require an electric feed that would be provided from Consumers Energy at a cost of \$30 per month per router. The costs of the L&G MDM solution is not included in this total because that cost is already budgeted and necessary for the existing HBPW water and electric systems. The total 20-year life cycle cost for the L&G system is estimated to be \$960K.

#### Aclara Cost

The Aclara design for the water-only area includes installation of 4 new collectors and refurbishment of 14 existing collectors. The Aclara solution also benefits from having solar powered collectors that do not require a Consumers Energy electric meter. The total 20-year life cycle cost for the L&G system is estimated to be \$760K. For the Aclara expansion and upgrade, approximately \$245k of the initial \$455k equipment investment will be charged to the Park Township meter replacement project, and the remaining portion will be charged to the MTU upgrades project for the existing water system.

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Additional Considerations

Wastewater Metering - An additional issue that was discovered during the deployment of the Landis & Gyr system is that the Landis & Gyr MTUs are not able to transmit data from 13 sewer flow meters that are used at industrial customers. These meters are used for quantifying wastewater volumes for deduct and surcharge billing. A costly third-party encoder was ultimately identified as a work around at these sites for \$3,051 per site. The proposed Aclara MTUs would be able transmit the sewer meter data out of the box if DCU coverage was available at the sites. Providing coverage at the 13 sites required renewing 5 additional DCUs that would otherwise not be needed. These 5 DCUs are included in the 14 renewals provided in the cost estimate but will be charged to WRF as part of the IPP program.

Lift Station Communications – Several lift stations currently rely on Verizon cellular or Spectrum cable internet for communications. The new Aclara DCUs are equipped with 16 channels for communication but only require 3 of those channels for the MTUs. Aclara has indicated that they intend to deploy new technology in the coming year that would allow the remaining 13 channels to be used for SCADA data transmittal. This would provide additional cost savings for the wastewater utility.

*Recommendation: The Board of Directors approved the following agreements with Aclara Technologies for upgrades and expansion to the Aclara AMI system in HBPW water-only areas for a total of \$504,277, pending approval as to form by the City Attorney.*

- 1. Software License Agreement*
  - Total value of implementation work - \$38,600*
- 2. Software Maintenance Agreement*
  - Annual maintenance fee - \$10,000*
- 3. Terms and Conditions for Equipment & Services*
  - Total value of equipment and services – \$455,677*

<i>Motion to approve recommendation</i>	<i>Haworth</i>
<i>Second</i>	<i>Lilly</i>
<i>Hemingway</i>	<i>Y</i>
<i>Haworth</i>	<i>Y</i>
<i>Lilly</i>	<i>Y</i>
<i>Thompson</i>	<i>Y</i>
<i>Favor</i>	<i>4</i>
<i>Oppose</i>	<i>0</i>

21.049 **HEP Mezzanine Stairs**

Holland Energy Park (HEP) has a mezzanine inside the building 65' above grade that allows access to several building exhaust fans and two tanks. This equipment requires periodic maintenance and is currently only accessible from a set of three fixed ladders equipped with cages. Two of these ladders are 25' long and will require substantial modifications if they are to remain in service. The new regulations would require the cages to be removed and replaced with fall arrest systems by 2036. In addition to the initial cost of modifications, the fall arrest systems and associated harnesses would require additional maintenance and inspections to verify proper operation.

Apart from being OSHA compliant, carrying tools up fixed ladders is not permitted. Tools must be lifted with a rope and bucket and can be tedious and risky for the person lifting the tools as well as anyone below. Several solutions were considered but installing a new set of stairs was selected as the safest and most economical solution that addressed all concerns.

The stairs will be constructed on the roof where the gas turbine air inlet housings are located on the north side of HEP and therefore will not be seen from the south or east side of the building. This roof

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is lower than the inside mezzanine and adjacent to the wall the mezzanine is supported by, making it the best location for an alternate point of access. This roof is already accessible by stairs from within the building. The stairs constructed for this project will allow personnel to carry tools safely from the ground floor up to the mezzanine. This would make the fixed ladders obsolete and a candidate for removal prior to their required modification date.

The new set of stairs will be constructed in accordance with the original technical specifications for HEP and all applicable regulations and codes. The stair design includes a canopy for protection from falling snow and ice, a grated walking surface, and a switchback layout to reduce the footprint. Materials and finishes will match the aesthetics of the gas turbine air inlet housings for consistency.

Included in the EV Construction proposal is \$49,700.00 for labor and \$70,400.00 for material, which includes reinforcement and stiffening steel members that will be added to the existing structure. Another \$4,300.00 is included as an option for EV Construction to lay down Oriented Strand Board (OSB) on the roof to protect it during construction. Also included in the proposal is \$19,150.00 for an engineering analysis on the stairs and building's supporting structure to ensure that the extra load will be adequately supported. The engineering calculations and analysis will be accompanied by a stamp from a Professional Engineer.

Proposals were requested from four area contractors that are qualified to perform this work, however only two proposals were received. Rockford Construction's proposal was very similar to EV Construction's however; they did not include costs for the reinforcement of the existing structure while EV Construction did. This additional cost will make the difference between the two proposals even greater and therefore EV Construction is recommended for the project.

Bidder Name	Business Location	Quote Amount	Meets Specifications	Previous Contracts
EV Construction	Holland, MI	\$ 143,550.00	YES	YES
Rockford Construction	Grand Rapids, MI	\$ 147,800.00	YES	NO
Lakewood Construction	Holland, MI	DECLINED	N/A	YES
Pioneer Construction	Grand Rapids, MI	DECLINED	N/A	NO

The capital budget for fiscal year 2021 included \$150,000 for this project. The total requested amount would put the project over budget by \$15,000 if the full project contingency is used. The requested contingency is meant to cover possible additional reinforcement and/or stiffeners if determined necessary during the engineering analysis, as well as any unforeseen issues that may arise during construction.

*Recommendation: The Board of Directors approved a contract with EV Construction, in the amount of \$143,550 with a 15% contingency of \$21,450 for a total of \$165,000, pending approval as to form from the city attorney. Also approve a transfer from contingency of \$15,000 to the project budget.*

<i>Motion to approve recommendation</i>	<i>Haworth</i>
<i>Second</i>	<i>Thompson</i>
<i>Hemingway</i>	<i>Y</i>
<i>Haworth</i>	<i>Y</i>
<i>Lilly</i>	<i>Y</i>
<i>Thompson</i>	<i>Y</i>
<i>Favor</i>	<i>0</i>
<i>Oppose</i>	<i>0</i>

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21.050 **Updates to Governance Policy G002 Agenda Planning**

Periodic reviews to HBPW Governance and Delegation policies are needed to stay current and cohesive with our 2020 Strategic Plan. Working toward this goal, the Board Chair, Vice Chair, and General Manager are submitting an update to the Governance Policy for Agenda Planning.

*Recommendation: The Board of Directors adopted the revisions to HBPW Governance Policy G002 Agenda Planning with one change under point (b) in the Policy section: Change the word "Member" to "Constituent."*

<i>Motion to approve recommendation</i>	<i>Lilly</i>
<i>Second</i>	<i>Haworth</i>
<i>Hemingway</i>	<i>Y</i>
<i>Haworth</i>	<i>Y</i>
<i>Lilly</i>	<i>Y</i>
<i>Thompson</i>	<i>Y</i>
<i>Favor</i>	<i>4</i>
<i>Oppose</i>	<i>0</i>

21.051 **Communications from the General Manager**

Our next BOD meeting is scheduled for September 28. Chair Hemingway is unable to attend. Vice Chair Haworth will lead this meeting.

Ted Siler recapped our very successful Energy Savings Tress event which took place Saturday, September 12. The event lasted five hours!

Joel Davenport discussed our Water Reclamation MWEA award and the Premiere Utility Management Award won by the HBPW. This award was entitled *Utility of the Future Today!* This award focused on the beneficial reuse of solids in addition to workplace culture.

The Mayor and the Strategic Development Program Team for the CEP convened for the first time via teleconference on September 21 from 3-5:00.

21.052 **Communications from the Board**

At the request of the Board, Dave Koster gave everyone an update of the status of the Broadband Community. We've newly created a "listening tour" by addressing the needs and whys of several groups in the area. Thus far, 7-8 listening tours have been conducted by the task force.

**ADJOURNMENT**

A motion to adjourn the meeting of *September 14, 2020*, was made by *Haworth* supported by *Lilly* and agreed upon by the Board of Directors present.

The Board Meeting of September 14, 2020, adjourned at *5:56 p.m.*

Minutes respectfully submitted by,

Janet Lemson, Secretary to the Board

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