
# CITY COUNCIL/ELECTRICAL ADVISORY COMMITTEE

**March 16, 2010 - 6:00 p.m.**

**CITY COUNCIL**
Gilbert X. Cheves, Mayor
Leo Evans, Mayor Pro-tem
Patricia Baribeau, Council Member
Brady Nelson, Council Member
Walter Baker, Council Member

**ADMINISTRATION**
James V. O'Toole, City Manager
Robert S. Richards, CMC, City Clerk
Ralph B.K. Peterson, City Attorney
Mike Furmanski, Electrical Superintendent

**ELECTRICAL ADVISORY COMMITTEE**
Ronald Beauchamp, Chairman
John Mellinger, Vice Chairman
Larry Arkens, Committee Member
Glendon Brown, Committee Member
Ann Bissell, Committee Member
Tim Wilson, Committee Member
John Anthony, Committee Member

City Council Chambers located at: City Hall - 410 Ludington Street - Room C101 - Escanaba, MI 49829

## Joint Meeting Agenda
**Tuesday, March 16, 2010**

CALL TO ORDER
ROLL CALL - City Council Members and Electrical Advisory Committee Members
APPROVAL/CORRECTION/REVIEW (S) TO MINUTES: Joint Meeting Minutes of February 10, 2010
APPROVAL/ADJUSTMENTS TO AGENDA
CONFLICT OF INTEREST DECLARATION

NEW BUSINESS

1. **Update-Electric Department.**
   Administration will provide an overview and status report on activities and issues concerning the Electric Department including current coal issues.

   a. General Operations/Electrical Distribution Update.
   b. Substation Request for Proposal(s) Update.
   c. Coal/Dock Storage Lease Agreement Update.

2. **Update-Power Generation.**
   The Escanaba Generating Plant operator will provide an overview and status report on activities and issues concerning the Power Plant.

   a. Power Plant Update.
   b. Peaking Generator (CT) Update.

3. **Management Briefing and Discussion - Various Issues.**
**Explanation:** Administration will update the City Council, Electrical Advisory Committee and Citizens of Escanaba on the various issues being evaluated with respect to the power supply scenarios and related issues. Discussion topics will include, but not be limited to:

a. **All Requirements Power Purchase Proposal(s)** - Administration will provide an update on the status of the short and long-term power supply options.
b. **Plant Sale Negotiations** - Administration will provide an update on the status of the plant sale negotiations.
c. **Professional Services Costs and Power Generation/Purchase Costs - August 2009 to Present** - Administration will provide an update on the costs incurred for professional services related to the sale of the power plant and obtaining an all requirements power purchase agreement. Additionally, Administration will provide an overview on the costs related to power generation and power purchase.
d. **Wholesale Power Pricing Concept - Fix to Float Analysis-** Administration will discuss a Fix for Float Block Power Purchase analysis/concept which could potentially fix the price for a share of power purchases in the upcoming months.
e. **Phase II, Environmental Site Assessment** - Administration will provide an update on the status of obtaining a Phase II, Environmental Site Assessment.

GENERAL PUBLIC COMMENT
COUNCIL/COMMITTEE, STAFF REPORTS
ANNOUNCEMENTS - Michigan Great Lakes Wind Council Meeting, 04/14/10 at 6:00 p.m. Danforth Place
ADJOURNMENT

Respectfully Submitted,

James V. O'Toole
City Manager

NB #1.6
CC/EAC.
3/16/10

# REQUEST FOR PROPOSAL

**For**

## ENGINEERING AND CONSTRUCTION SERVICES
## DANFORTH AND ESCANABA SUBSTATIONS

**February 2, 2010**

**Proposal Due Date: March 9, 2010**

**Escanaba Electric Department**
**1711 Sheridan Rd.**
**Escanaba, MI 49829**

**Request for Proposal (RFP)**
**Escanaba Electric Department**
**for the**
**DANFORTH AND ESCANABA SUBSTATIONS**

# 1 Project Description

## 1.1 Background:

The City of Escanaba, MI, Electric Distribution Department (Owner) is seeking to construct 2 (two) new substations. The Danforth substation will be located in the northwest part of the City. The Escanaba substation will be located approximately ½ mile west of the Escanaba Generating Station. The Escanaba Electric Department is requesting professional services to specify, design, project manage, and commission the project described within "Scope of Work." Consultants are encouraged to submit a detailed Request for Proposal (RFP) to assist Escanaba for the design, project management, and commissioning of 2 (two) electric substations. The Escanaba substation will be needed in service as soon as possible. The Danforth substation will follow after the Escanaba substation, with an anticipated commissioning date in late 2011 or early 2012.

## 1.2 Due Date

All RFP documents are to be submitted **before 2:00pm Tuesday, March 9, 2010.**

## 1.3 Selection Process

Escanaba will review the RFP submittals and will then either select firms to interview or immediately begin contract negotiations with the preferred consultant.

## 1.4 Submission

RFP submittals must be submitted by mail to the following address:

City of Escanaba
Substation RFP of March 9, 2010
410 Ludington St
P.O. Box 948
Escanaba, MI 49829

Questions concerning this RFP may be addressed by phone, fax, or e-mail at:

Phone: 906-786-0061
Fax: 906- 786-0791
Attention: Mike Furmanski, Electric Superintendent
Email: mfurmanski@escanaba.org

# 2 Scope of Work

## 2.1 Definition of Project

2.1.1 The Escanaba substation will be constructed ½ mile west of the power plant, owned and operated by the City of Escanaba. The parcel for the substation has not been determined at this time. The Danforth substation will be constructed 1 mile west of the Escanaba substation.

2.1.2 Both substations shall include a 69kV interconnection to transmission lines owned and operated by ATC (Refer to Attachment 1- Existing One-Line Diagram).

2.1.3 For each substation, the major equipment shall include 69kV/12.47kV power transformers, a 12.47kV outside bus, voltage regulators, and four 12.47kV reclosers. The Escanaba substation will replace an aging substation and will connect to the existing distribution system. The Danforth substation will be a new substation needed for load growth and also will connect to the existing distribution system.

2.1.4 Each substation shall include a substation building for housing protective relay panels, station batteries, and SCADA equipment.

2.1.5 All distribution line interconnections and extensions will be completed by Owner.

2.1.6 The existing SCADA system and communications will be used on this project. The Engineer will design the substation compatible with this system.

## 2.2 Definition of Owner's General Responsibilities:

2.2.1 Obtain and provide a surveyed base map for the site to be supplied to the Engineer.

2.2.2 Shall describe and assist in all permitting activities.

2.2.3 Shall assist in coordinating meetings between Engineer and other parties.

2.2.4 Provide overall project management and direction for Engineer.

## 2.3 Definition of Engineer's Responsibilities

2.3.1 The Owner is seeking a qualified Engineer to design the substations. These substations will be located in Escanaba, MI. The substations will consist of 69kV feeders, step-down transformers (69/12.47kV), 69kV circuit switchers, 12.47kV reclosers, voltage regulators, control buildings, and all other associated equipment for complete and working substations.

2.3.2 The engineering shall include all civil, electrical, structural, and geotechnical engineering design components.

2.3.3 Compile bidding package for the materials and labor for construction of the tasks described within.

2.3.4 Analyze all bids received with the Owner, recommend, and award bids.

2.3.5 The work product of the Engineer is intended to provide engineering design and specifications for bidding documents for use in selecting equipment and construction contractor. The Engineer will provide project management through successful completion and testing of the substation.

2.3.6 The Engineer shall allow for site progress meetings with the Owner. These meetings are projected to cover the review of work completed for all tasks listed herein.

2.3.7 All construction and material specifications provided by the Engineer shall be in Microsoft Word format.

2.3.8 All drawings provided as part of the design shall be in electronic format in AutoCAD (2006 version) and shall meet the labeling and formatting requirements of the Owner. Drawings shall include appropriate plans, sections, wiring diagrams, and schematics, and shall be fully detailed (including elevations, stationing, bench marks, notes, etc.) as required for construction.

## 2.4 Substation Design

2.4.1 Preliminary Design. The Engineer will visit the site, accompanied by the Owner, to review the layout, design, and overall project approach. After this visit, a preliminary design will be developed and presented to the Owner for review and comment. Key deliverables of Preliminary Design will include: one-line diagram including major equipment sizes and ratings, site layout, and project cost estimate.

The Substation shall include the following designs and specifications. Designs shall include appropriate detailed drawings for the following:

2.4.2 Foundations design, including but not limited to power transformers, regulators, breakers, and structural steel. The Engineer shall specify a complete geotechnical assessment, including soil borings, as a basis for the proposed foundation designs.

2.4.3 Prepare a site development plan. The site development plan shall address but not be limited to equipment and structure configuration (electrical and non-electrical), grading, site fencing, site access, drive and parking area surfaces, site drainage, future development areas, and site landscaping. The site development plan should include the following features:

- Two points for vehicle ingress and egress.
- Site drainage shall satisfy regional and local requirements for storm water pollution control and prevention.
- Spill Prevention, Control, and Countermeasures plan.
- Yard lighting.
- Site fencing shall consist of 8' high chain link fence including access/security gates.
- Conduits or wire way system.

2.4.4 Design a control building and layout for the substation switchgear controls. The building shall be designed to include but not be limited to the following features:

- easy access to all control wiring
- interior and exterior lighting
- DC power source
- SCADA equipment
- interior and exterior power outlets
- interior space for drawing and manual storage
- temperature controls

2.4.5 Secondary oil containment system to contain the liquid of oil-bearing equipment located at the site.

2.4.6 Design of a ground grid adequate for protection of the substation, building, and all other associated equipment.

2.4.7 Design of all control, protective relaying, instrumentation, and metering systems. This shall include single line drawings, three line drawings, control schematics, and wiring diagrams.

2.4.8 Design ATC interconnections including equipment for protective relaying and site layout requirements.

2.4.9 Design a complete protective relaying scheme that meets the requirements of ATC. The relaying scheme shall protect the substation equipment and distribution lines.

2.4.10 The Engineer shall prepare the transformer specifications for two 69/12.47kV units located at the substations.

2.4.11 The Engineer shall prepare the following equipment specifications to bid:

- 69kV circuit switcher
- 12.47kV reclosers
- 12.47kV voltage regulators
- Substation steel package
- Protective relay panels
- Building

2.4.12 The Engineer shall prepare material specifications for the balance of equipment and structural components included in the design, described within Items 2.4.2 through 2.4.11. The materials shall include a listing of suggested manufacturers for equipment required by the design.

2.4.13 The Engineer shall prepare specifications for construction of the substation.

## 2.5 Project Management

2.5.1 The Engineer shall provide overall project management from design through final acceptance of the substation. The Engineer shall manage the construction contractor(s) work, by providing design clarification, inspection, and progress reports to the Owner.

2.5.2 The Engineer shall recommend to Owner contractor progress payments or any Change Orders.

2.5.3 On successful completion of work, the Engineer shall provide as-built drawings and operating manuals to the Owner.

# 3 Proposal Response

Please provide your response in the order and structure as specified below.

## 3.1 Statement of Qualifications

3.1.1 Provide a statement of Interest and commitment to schedule.

3.1.2 Provide a statement regarding the firm's ability to meet the project schedule.

3.1.3 Provide a discussion of the firm's experience with work of this nature and the availability of staff to ensure adherence to the project schedule.

## 3.2 Similar Project Experience and References

3.2.1 List and describe the firm's experience of a minimum of five (5) projects that are similar to or contain common design considerations as this proposed project.

3.2.2 Previous project descriptions should include as a minimum the; project title, location, year(s), client name, project summary, consultant's project responsibility, and approximate project construction cost.

3.2.3 Provide a minimum of three (3) project references. These references should include individuals who had either direct ownership or management responsibility for the project.

## 3.3 Firm Capabilities and Resources

3.3.1 Provide information regarding the overall project capabilities of the firm.

3.3.2 Include information regarding all the firm's professional service areas which may include technical tools, or other resources available for completing proposed or related work.

3.3.3 Provide an organizational chart for the firm. The chart should denote the departmental structure of the firm, key management staff, positions of authority and the reporting hierarchy.

## 3.4 Scope of Service

3.4.1 Provide a detailed description of the services to be provided by the Engineer. Clearly identify and define all work tasks that will be provided by the Engineer and by any proposed sub-consultants. Address the sequential steps and processes to be used in completing the scope of services as described previously herein.

3.4.2 Provide a description of the Engineer's quality assurance procedures to ensure that work efforts are efficient, accurate, and on schedule.

## 3.5 Project Schedule

3.5.1 Provide an engineering project schedule identified as the Construction Schedule.

3.5.2 The engineering schedule provided should be either a bar (Gantt) chart or critical path chart that identifies all significant project tasks and activities.

## 3.6 Project Organization Chart and Resume:

3.6.1 Provide a project staff organization chart. The chart should identify all the key staff members, their general project responsibilities, and the reporting hierarchy.

3.6.2 Sub-consultants should be included on the chart, including the name of the firm, the primary project contact person, and their reporting relationship to the Engineer.

3.6.3 Include resumes of the primary project staff members. These should include all project management staff and engineers responsible for completing major portions of the project work. List registered Professional Engineers licensed in Michigan. Resumes should also be included for key sub-consultant staff members where possible.

## 3.7 Project Cost Estimate

3.7.1 Provide a total estimate of cost to complete the Engineers Scope of Services as defined herein, including estimates for sub consultants. Include estimated site visits.

NB# 2.b.
CC/EAC
3/16/10

# Escanaba Generating Station

## Update for the March 16, 2010 EAC Meeting

Unit 1 is off-line for the major turbine overhaul. The turbine rotor, diaphragms, seals, and bearings are at ReGenco's shop in Milwaukee for reconditioning. The generator was electrically tested and found to be in excellent shape. The generator rotor was not removed since it was re-wound in 2007.

With Unit 1 being down for the turbine overhaul, other work is taking place within the plant. The stokers are being repaired. Motors for the ID Fan, FD Fan, Boiler Feed Pump and other miscellaneous motors are being reconditioned. The bucket elevator and precipitator are being inspected and repairs will be made.

There are two environmental permits in the works. The first is the Ground Water Discharge permit, which is currently up for public comment. The other is the Air Permit which will be put out for public comment in the near future.

Coal: The Plant used 3030 tons of coal in February leaving 82,350 tons on the dock.

Combustion Turbine Update: The fuel nozzles are being reconditioned and will be shipped back later in the month of March. The fuel oil distributor was reconditioned and re-installed. Two combustion liners are being repaired, a return date has not yet been determined.

Budget update: The January O&M expenses were slightly below budget. Year to date operating expenses are right on track, maintenance expenses are above budget but should come back in after April. The overall Plant budget is well below that anticipated because of low fuel consumption throughout the year.

**From:** "Jim O'Toole" <jotoole@escanaba.org>
**To:** jotoole@escanaba.org
**Subject:** CT - Escanaba Troubleshooting Recap
**Attachments:** Data_Escanaba CT_VCO vs EGT at Failure to Fire_01-08-10.pdf


**Date:** Thursday, March 11, 2010 1:22 PM
**HTML** | Plain Text | Header | Raw Content

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**Subject:** Escanaba Troubleshooting Recap

As we discussed this morning, the following is a summary of our current start-up problem and the troubleshooting actions performed to date:

**Problem Description**

The MS5001LA combustion turbine (serial number 179401, standard combustor, liquid fuel only, upgraded to PLC-based ICS control system) is capable of lighting off, as verified by the rise in exhaust gas temperature (reaches 550 to 600 degrees F, with a spread of 60 degrees F) and intermittent detection of flame, but appears to be unable to sustain combustion and trips off at the end of the ignition timer sequence. Unit trips on "failure to fire". High-pressure fuel oil pump discharge pressure is lower than expected; pump delivers 65 to 70 psig (at a suction pressure of 55 psig) compared to expected value of 130 psig when in firing mode.

**Troubleshooting Recap**

1) Verified functionality of UV-type flame detectors (using a lighter)

2) Inspected 2 of 10 combustors through flame detector ports (via borescope); no signs of hardware damage

3) Removed spark plugs, tested (forced them to spark while lying on deck grating), re-installed; strong spark noted

4) Replaced all liquid fuel filter elements located between fuel forwarding pumps and fuel nozzles; found

fine brass shavings in high-pressure filter housing

5) Replaced high-pressure fuel oil pump (Oilgear model PVAZKM-054-ZZN) with spare pump (spare number 1, first of two); attempted to start unit, failed to fire

6) Discovered that Moog servo-valve (I/P device used to control VCO oil pressure; part of the control system upgrade) could not be properly calibrated in the field, also noted that spare pump did not stroke properly; both issues were subsequently addressed

7) VR-4 pressure relief valve verified to crack at 1250 psig

8) Liquid fuel check valves verified to crack at 65 psig; atomizing air check valve crack pressure was also checked (but I do not have as-found data available)

9) Moog servo-valve was factory refurbished and calibrated (by Moog); re-installed

10) Original high-pressure fuel oil pump was factory refurbished by Hydraulic Specialists, Inc; shop tested at 1100 psig, 26 GPM at 1200 RPM; re-installed; attempted to start unit, failed to fire

11) Field service engineer on-site to troubleshoot; ignition timer changed from 60 seconds to 90 seconds

12) Tested the check valves located at the "AA" and "BB" ports of the high-pressure fuel oil pump ("AA" port is used to return case drain flow to the suction side of the pump [as opposed to returning to the storage tank], "BB" port is unnecessary in this application); found not to seal properly, replaced check valves; attempted to start unit, failed to fire

13) Removed "BB" check valve from discharge side of high-pressure fuel oil pump, replaced with pipe plug; attempted to start unit, failed to fire

13) Removed "AA" check valve from suction side of high-pressure fuel oil pump, replaced with pipe plug, and added a temporary connection to pump case drain; measured case drain flow at approximately 0.1 GPM; attempted to start unit, failed to fire

14) Installed temporary gauges on CCO and VCO oil supply tubing at high-pressure fuel oil pump connections; while in firing mode, CCO oil pressure found to be consistently 250 psig and VCO oil pressure noted to be 90 psig; as-found readings match GE specifications (per drawing 215A3187, section 2, sheet 4, ML-7L5A1PLA118-1,2,3,4)

15) While in crank mode (with the liquid fuel stop valve closed), checked pump stroke across full range of operation by adjusting VCO pressure (via PLC-based ICS control system) and measuring movement of the pump's slideblock indicator; at VCO of 40 psig, 80 psig, 120 psig, 165 psig, pump stroke slightly exceeded GE specifications (per drawing 215A3187); at VCO of 200 psig, pump stroke fell slightly short of expectation; overall, pump appears to be stoking as designed

16) Removed original high-pressure fuel oil pump and replaced with a factory refurbished exchange unit supplied by Oilgear (spare number 2); attempted to start unit, failed to fire

17) Disconnected fuel oil piping at the suction connection of the high-pressure fuel oil pump, installed throttle valve and temporary piping to divert flow to a collection drum; with valve partially throttled to simulate a 55 psig suction pressure, fuel forwarding system delivers between 29 GPM and 33 GPM (range across 3 trials); suction side restrictions do not appear to be present; reconnected piping to pump flange

18) Removed VR-4 pressure relief valve and installed blind flanges at each piping connection; attempted to start unit, failed to fire; re-installed relief valve; pump recirculation to suction side is no longer suspected

19) Disconnected fuel oil piping at outlet flange of high-pressure liquid fuel filter housing, installed throttle valve and temporary piping to divert flow to a collection drum; with valve partially throttled, pump quickly developed 400 psig+ (pegged existing pressure gage) against a restricted outlet

20) Verified that no drain lines are open on discharge side of high-pressure fuel oil pump (OFD-3,4,5 and selector valve drain; all drains are either not used [plugged] or verified closed)

21) Flow divider does not appear to be seized as evidenced by a fuel flow of 11 gallons (from totalizer reading at fuel forwarding skid) across two, 90 second start attempts, calculated flow of 3.6 GPM vs. expected 2.5 GPM; flow divider can be rotated by hand, using a screwdriver at the slotted shaft extension (accessed by removing the socket head plug on end plate located near selector valve); while some drag is present (presumably attributable to the "trapped" volume of fuel oil between the flow divider and the liquid fuel check valves), the flow divider does indeed spin; fuel delivery issues no longer suspected (but we are giving some consideration to a flow divider exchange or factory refurbishment to completely eliminate this as a potential contributor)

22) A single fuel nozzle was removed for inspection; no signs of physical damage via visual inspection;

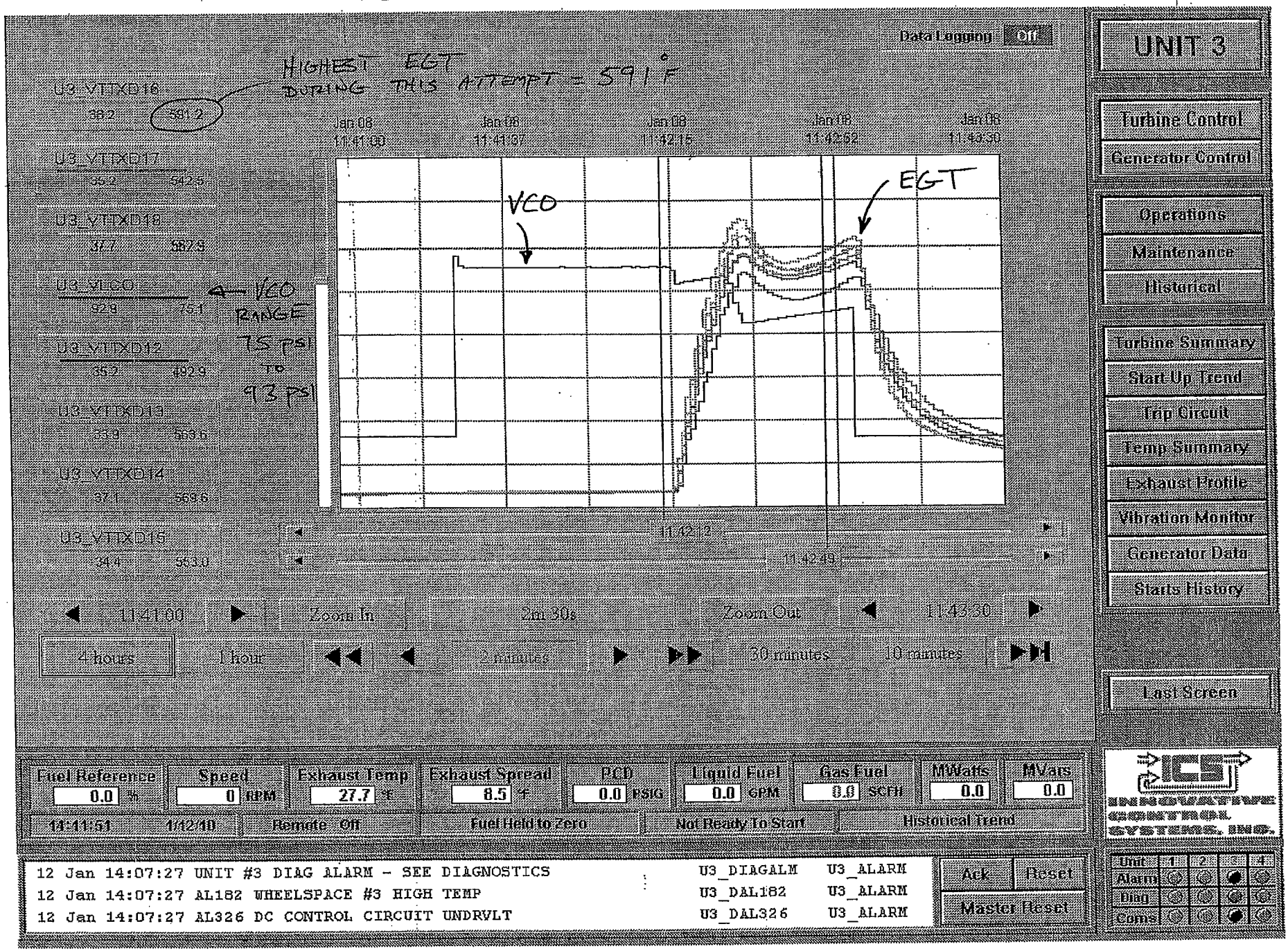
currently removing all fuel nozzle assemblies to facilitate off-site inspection and refurbishment at a qualified fuel nozzle service center (Wood Group Fuel Systems is currently developing a related proposal).

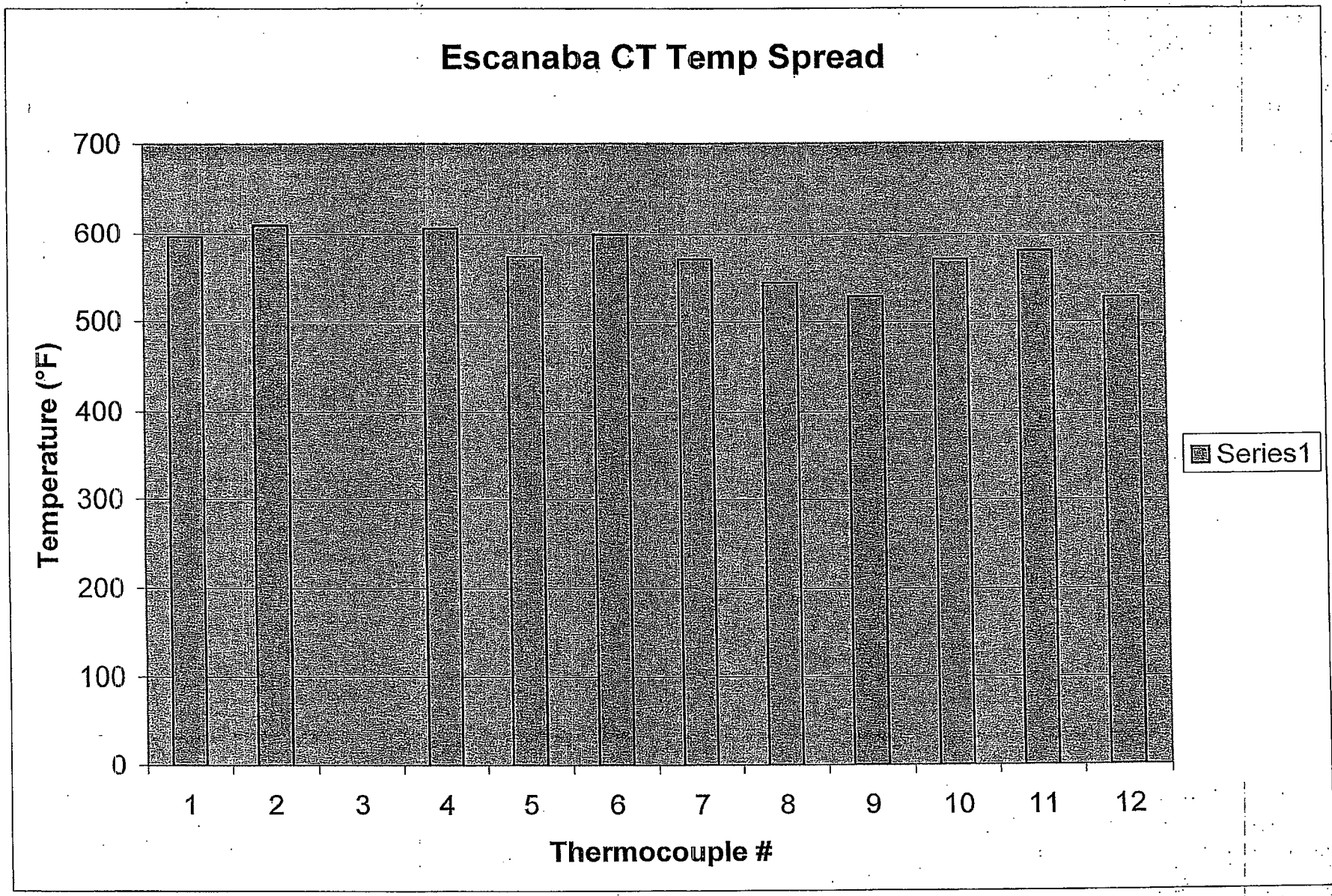
As an outside the box idea, I am wondering whether degradation and/or contamination of the cooling holes/louvers in the unit's Combustion Liner & Cap Assemblies could factor into this start-up issue; any thoughts? I would not propose to flow test the liners/caps unless the fuel nozzles are found to be good, but it could represent an additional troubleshooting step. Also, for your reference, I have attached some VCO vs. EGT data from a failed start-up attempt (second page also has EGT spread info).

Thanks again for your time and consideration of this issue; your help is greatly appreciated!

Mark Jensky
CT Engineering Group Leader
Wisconsin Public Service Corporation
920-433-1331 (office)
920-609-5895 (cell)
majensky@wisconsinpublicservice.com

# ESCANABA CT "FAILURE TO FIRE"




Escanaba CT Temp Spread
Temperature (°F)
700
600
500
400
300
200
100
0
1
2
3
4
5
6
7
8
9
10
11
12
Thermocouple #
Series1

NB #3.
CC/EAC
3/16/10

MEMORANDUM March 3, 2010

TO: Jim O'Toole, City Manager

INFO: Electrical Advisory Committee

FROM: Michael Furmanski, Electrical Superintendent

SUBJ: Escanaba Electrical Department – Issues and Answers

I offer the following schedule of events, activities and meetings on various matters being handled by the department:

1) **Power Purchase Proposals** The power purchase proposals continue to be evaluated. The ad-hoc committee has come to the conclusion that we should pursue a short term agreement that may be extended by our choice if market conditions warrant such extensions. If market conditions do not warrant an extension, we should pursue a long term at that time. Documents have been received from 2 parties which will be needed to execute an agreement. ***We are investigating the possibility of the City having Auction Revenue Rights (ARRs). MISO recently asked us for information pertaining to Rate Schedule 26, which the City singed with UPPCO in 1982. If we are found to have ARRs, we could use them for FTRs, or sell them.***
2) **Plant Purchase Proposals** The first face to face meeting with Traxys was held on January 14, 2010. The second face to face meeting was conducted on February 9, 2010. ***We continue to work with our attorneys on the terms.***
3) **Power Plant Property Environmental Site Assessment** The Phase 1 draft ESA was received on January 13, 2010. The final phase 1 was received on February 17, 2010. A phase 2 will need to be done, but we are working on the details regarding the timing of when we should do the phase 2. ***The Phase 2 RFP will go out very soon.***
4) **CT** Another rebuilt main pump was tried on the CT on February 1, 2010. The CT still did not start. The investigation continues as to what the problem is on this unit. ***The nozzles are suspected to be the problem now and they have been sent out for repair. Work continues to get this unit back on-line.***
5) **Power Costs** Our all-in cost for December power was $84.90/MWh. ***Our all-in cost for January power was $84.78/MWh.***
6) **Fix for Float** ***We have been in recent talks with power companies investigating our Fix for Float options. The prices that we have been quoted seem reasonable. Further number crunching is needed.***

**Upcoming meetings**

March 16, 2010, 6:00 Joint CC/EAC meeting

**All Requirement Purchase Power**

| | |
|---|---|
| ***March 4, 2010*** | ***Conference call with AEP to discuss confirmation details*** |
| February 5, 2010 | Conference call with AEP to discuss credit issues. |
| February 3, 2010 | Met with WE Energies to discuss their proposal and explain how we are operating in the market today |
| December 2, 2009 | EAC recommends and Council approves retaining SchiffHardin, LLP |
| December 1, 2009 | Ad-Hoc committee met and recommended that 1 more proposal be dropped. |
| November 11, 2009 | EAC passes recommendation that 3 of the power purchase proposals be dropped. |
| November 10, 2009 | Ad-Hoc committee met to discuss the proposals and recommended cutting 3 of the proposals. |
| November 5, 2009 | Ad-Hoc committee met to discuss the proposals. |
| October 1, 2009 | Met with a representative of American Electric Power to discuss the Escanaba Energy Plan. |
| September 28, 2009 | Wholesale power purchase proposals were received from 7 companies. They were: UPPCO, WPS, We Energies, Traxys N.A., Minnesota Power, Great Lakes Utilities, and American Electric Power. |
| September 22, 2009 | Met with representatives of Great Lakes Utilities to discuss our full requirements RFP and learn about their organization. |
| September 9, 2009 | Joint City Council and Electrical Advisory Committee meeting was conducted. Update on All Requirement Purchase Power RFP was given by Administration. |
| September 2, 2009 | All Requirement Purchase Power RFP's were sent out. |
| August 25, 2009 | Draft RFP's were sent to City Council and Electrical Advisory Committee members for review and comment. |
| August 24, 2009 | Administration and Electrical Advisory/City Council Study Committee meet to discuss RFP content and format. |
| August 5, 2009 | Joint City Council and Electrical Advisory Committee meeting conducted. Administration directed to re-issue All Requirement Purchase Power RFP's to the same list of people/companies that was used in the November 5, 2008 process. |
| August 4, 2009 | Referendum passes. |
| May 7, 2009 | City Council directs administration to draft new referendum language for an August 4, 2009 vote. |
| May 5, 2009 | Referendum fails by narrow margin. |
| February 19, 2009 | Ballot language approved by the City Council for the May 5, 2009 referendum. |
| February 4, 2009 | Special meeting of the Electrical Advisory Committee conducted to discuss all requirement purchase power proposals. |

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| January 7, 2009 | Special meeting of the Electrical Advisory Committee conducted to discuss all requirement purchase power proposals |
| December 8, 2008 | All Requirements Purchase Power RFP's due back to PSE/City of Escanaba. |
| November 5, 2008 | PSE issues All Requirement Purchase Power RFP's to vendors. |
| October 16, 2008 | Escanaba City Council Moves Electrical Advisory Committee recommendation forward and approves motion to proceed with All Requirement Purchase Power RFP's. |
| October 8, 2008 | City of Escanaba retains Power Systems Engineering to assist in RFP and review process of proposals. |
| October 8, 2008 | City of Escanaba issues Power Purchase Request for Proposals to potential providers. |

**Upcoming Events:**

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|---|---|
| March 16, 2010 | Joint City Council and Electric Advisory Committee meeting scheduled. |

**Sale of Steam and/or Combustion Turbine Generation Facilities**

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|---|---|
| February 23, 2010 | Conference call with the SchiffHardin attorneys to discuss the term sheet that we forwarded to Traxys. A task list and a timeline are being developed to ensure that nothing gets missed in this transaction. |
| February 9, 2010 | Second meeting with Traxys to discuss plant sale |
| January 14, 2010 | First meeting with Traxys to discuss plant sale. |
| January 12, 2010 | The Escanaba negotiating team met to discuss milestones, goals, issues, etc. |
| December 17, 2009 | The Escanaba City Council names Traxys N. A. as the primary party to begin negotiations with. |
| December 2, 2009 | EAC recommends and Council approves retaining SchiffHardin, LLP |
| November 11, 2009 | EAC passes recommendation that Traxys N.A. be named the #1 bidder to begin negotiations with. |
| November 10, 2009 | Ad-Hoc committee met to discuss the 2 remaining proposals. |
| November 5, 2009 | Ad-Hoc committee met to discuss the 2 remaining proposals. |
| September 21, 2009 | Traxys toured the power plant. |
| September 14, 2009 | Sale of Steam and/or Combustion Turbine Generation Facilities Notice of Intent to propose are due back to the City of Escanaba/PSE. A total of four (4) proposals were received. Traxys, DTE Energy Services, Avant Energy Services and Rockland Capital. |

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|---|---|
| September 9, 2009 | Joint City Council and Electrical Advisory Committee meeting was conducted. Update on All Requirement Purchase Power RFP was given by Administration. |
| September 2, 2009 | Sale of Steam and/or Combustion Turbine Generation Facilities RFP's were sent out. |
| August 25, 2009 | Draft RFP's were sent to City Council and Electrical Advisory Committee members for review and comment. |
| August 24, 2009 | Administration and Electrical Advisory/City Council Study Committee meet to discuss RFP content and format. |
| August 5, 2009 | Joint City Council and Electrical Advisory Committee meeting conducted. Administration directed to re-issue Sale of Steam and/or Combustion Turbine Generation Facilities RFP's to the same list of people/companies that was used in the November 5, 2008 process. |
| August 4, 2009 | Referendum passes. |
| May 7, 2009 | City Council directs administration to draft new referendum language for an August 4, 2009 vote. |
| May 5, 2009 | Referendum fails by narrow margin. |
| February 19, 2009 | Ballot language approved by the City Council for the May 5, 2009 referendum. |
| February 4, 2009 | Special meeting of the Electrical Advisory Committee conducted to discuss Sale of Steam and/or Combustion Turbine Generation Facilities proposals. |
| January 16, 2009 | Sale of Steam and/or Combustion Turbine Generation Facilities proposals are due back. A total of three (3) proposals were received. |
| January 7, 2009 | Special meeting of the Electrical Advisory Committee conducted to discuss status of proposals. |
| December 8, 2008 | Power Plant tours are scheduled for the five (5) bidders who submitted a notice of intent. |
| November 28, 2008 | City of Escanaba/PSE receives five (5) notices of intent to bid as required in the RFP. |
| November 14, 2008 | PSE issues Sale of Steam and/or Combustion Turbine Generation Facilities to vendors. |
| October 16, 2008 | Escanaba City Council Moves Electrical Advisory Committee recommendation forward and approves motion to proceed with Sale of Steam and/or combustion Turbine Generation Facilities RFP's. |
| October 8, 2008 | City of Escanaba retains Power Systems Engineering to assist in RFP and review process of proposals. |
| October 8, 2008 | City of Escanaba issues Power Purchase Request for sale of plant proposals to potential providers. |

**Upcoming Events:**

| | |
|---|---|
| March 16, 2010 | Joint City Council and Electric Advisory Committee meeting scheduled. |

**Midwest System Operator Load Declaration/Market Participation (MISO)**

| | |
|---|---|
| December 1, 2009 | We were accepted by the MISO to become a market participant and began operating in the MISO market. |
| November 3, 2009 | Met with ATC and UPPCo representatives to discuss our market strategy, responsibilities, etc. |
| October 7, 2009 | Had a follow-up conference call with UPPCO regarding our MISO MP application and the Energy Services Agreement. |
| September 30, 2009 | Had a conference call with UPPCO regarding our MISO MP application. |
| September 23, 2009 | Responded to MISO questions regarding our Load Zone and our expected load profile. |
| September 15, 2009 | MISO acknowledges receipt of Market Participation Application. |
| September 15, 2009 | Administration with the assistance of PSE completed the on-line Market Participation Application and submitted same. |
| September 14, 2009 | Administration with the assistance of PSE completed the MISO Market Participation Application (hard copy) and overnighted to MISO. |
| September 9, 2009 | Joint City Council and Electrical Advisory Committee meeting was conducted. Administration was directed to complete the MISO Market Participation Application and submit to the MISO no later than September 15, 2009. |
| September 9, 2009 | Received written notification from the Upper Peninsula Power Company that they will be terminating Rate Schedule 59 – Short Term Power Sales Agreement effective December 1, 2009. |
| August 12, 2009 | Meeting with American Transmission Company (ATC) highlighted some of their future possible system improvements and they encouraged us to consider signing up as a Network Integrated Transmission Service (NITS) customer. |
| August 8, 2009 | Advised by the Upper Peninsula Power Company (Plant Operator) of their intent to terminate Rate Schedule 59-Short-term Power Sales Agreement. |

**Brownfield Phase I Environmental Site Assessment – Power Plant Property**

| | |
|---|---|
| ***March 12, 2010*** | ***Targeted date for releasing RFP for Phase 2 work. We have decided to have this work done now rather than wait to see if the Delta County Brownfield Redevelopment*** |

| | |
|---|---|
| | ***Authority is awarded the grant they applied for. This is strictly a timing issue as the phase 2 must be completed before we can execute a Definitive Agreement.*** |
| January 13, 2010 | We received the phase 1 ESA. |
| December 2, 2009 | Received a status letter from Environmental Consulting & Technology, Inc which stated that they are in the process of finalizing their Phase 1 Environmental Site Assessment. |
| October 2, 2009 | The Phase 1 Environmental Site Assessment started. Bittner Engineering, UPPCO employees and City employees toured the site and the plant and went through historical documents and photos. |
| September 16, 2009 | Delta County Brownfield Redevelopment Authority unanimously approves and authorizes the completion of a Phase I Environmental Site Assessment. Bittner Engineering and Environmental Consulting & Technology, Inc will perform the assessment and schedule site inspection dates with City staff. |
| September 11, 2009 | County Site Consideration Form, Consent to enter Private Property authorization, and power plant legal description submitted to the Delta County Brownfield Redevelopment Authority for inclusion into the county program so that a Phase I Environmental Site Assessment could be completed. |
| September 9, 2009 | Joint City Council and Electrical Advisory Committee meeting was conducted. Administration was directed to submit the Power Plant property to the Delta County Brownfield Redevelopment Authority for a Phase I Environmental Site Assessment. |

**<u>Other Significant Dates, Issues and Matters</u>**.

| | |
|---|---|
| June 4, 2011 | UPPCO discontinues operating Power Plant. |

NB#3.C

# CITY OF ESCANABA

u:\123R3\ELECTRIC\Financial\0910Professional

C.C | E.A.C.
3/16/10

## Summary of Professional Services

**Fiscal Year 09/10 to Date**
(POSTED THROUGH 2/25/10)

| | | |
|---|---|---|
| | **2009/10 Budget** | **$225,000.00** |
| Power Systems Engineering | Plant Sale / Purchases Contract | $65,323.77 |
| UPPCo | Legal - EPA Inquiry (Shared 50%) | $17,936.19 |
| Ventyx Energy, LLC | Review PSE work | 15,685.49 |
| Schiff Hardin LLP | Plant Sale / Purchases Contract | 9,945.00 |
| Miller Canfield | Cargill Fixed for Float Legal | 1,629.00 |
| Troutman Sanders | Cargill Fixed for Float Legal | 1,080.00 |
| Other | Other | 3,031.39 |
| | | $114,630.84 |

# CITY OF ESCANABA

u:\123R3ELECTRIC\PowerCosts\200910\DetailedCostCalculations\Jan2010

## Detailed Electric Cost Calculations

**January 2010**

| | KWh's | $$$ | Cents per KWh |
|---|---|---|---|
| PURCHASES OF POWER | | | |
| Day Ahead Transactions | 13,431,500 | $656,526.91 | $0.048880 |
| RealTime Transactions | (28,470) | (1,648.25) | 0.057894 |
| **Power Purchases** | **13,403,030** | **$654,878.66** | **$0.048860** |
| MISO Overhead Charges | | 9,934.79 | 0.000741 |
| Distribution of Losses Amount | | (15,892.17) | -0.001186 |
| MISO Miscellaneous Charges | | 12,704.13 | 0.000948 |
| ATC Charges | | 100,432.81 | 0.007493 |
| UPPCo Charges | | 15,510.04 | 0.001157 |
| | **13,403,030** | **$777,568.26** | **$0.058014** |
| S55 / S105 Adjustments | | (7,355.00) | |
| | 13,403,030 | $770,213.26 | $0.057466 |
| SALES OF POWER | | | |
| Day Ahead Transactions | (5,471,500) | ($284,411.63) | $0.051981 |
| RealTime Transactions | (1,539,599) | (80,408.56) | 0.052227 |
| **Power Sales** | **(7,011,099)** | **($364,820.19)** | **$0.052035** |
| As Offered Make Whole Payments | | (1,002.11) | 0.000143 |
| RT Make Whole Payments | | (42,294.49) | 0.006033 |
| **Total Sales** | **(7,011,099)** | **($408,116.79)** | **$0.058210** |
| Less: Cost of Sales | | | |
| Steam Generation | 7,010,430 | 741,905.65 | 0.105829 |
| CT Generation | (26,661) | 30,043.53 | -1.126872 |
| **Net Loss On Sales** | **(27,330)** | **$363,832.39** | |
| NET CITY Power Transactions | **13,375,700** | **$1,134,045.65** | **$0.084784** |

# CITY OF ESCANABA

u:\123R3\ELECTRIC\Financial\PlantExpenditures

## Generating Station Expenditures - Select Categories

### For the Last Ten Fiscal Years

| Date Acquired | Description | Capital Expenditures | Totals By Year | | Total Maintenance |
|---|---|---|---|---|---|
| 99/00 | Opacity Monitor System | $32,330 | $1,506,206 | 99/00 | $735,917 |
| | Ash System | 128,183 | | | |
| | Fly Ash Upgrade | 100,639 | | | |
| | Turbine Overhaul #1 | 573,919 | | | |
| | Turbine Overhaul #2 | 671,135 | | | |
| 00/01 | Toyota Forklift-S/N 61685 | 23,837 | 23,837 | 00/01 | 900,374 |
| 01/02 | Ash Unloader Room | 18,549 | 51,616 | 01/02 | 840,479 |
| | Enclosed Fueling Station | 31,275 | | | |
| | Video Monitoring System | 1,792 | | | |
| 02/03 | Boiler Control System #1 | 200,243 | 4,176,811 | 02/03 | 718,944 |
| | Demineralizer | 210,995 | | | |
| | Peaking Generator (Partial) | 3,765,573 | | | |
| 03/04 | Boiler Fuel Dist Upgrade-Unit #1 | 198,778 | 239,503 | 03/04 | 807,133 |
| | PA System | 24,854 | | | |
| | Air Compressor | 15,871 | | | |
| 04/05 | Boiler/Turbine Controls-Unit #2 | 204,117 | 1,212,793 | 04/05 | 927,028 |
| | Peaking generator (Final) | 850,000 | | | |
| | Front-End Loader | 158,676 | | | |
| 05/06 | Underthrow Feeder project | 170,460 | 170,460 | 05/06 | 1,153,523 |
| 06/07 | Battery/Rack/Charger | 25,237 | 25,237 | 06/07 | 747,383 |
| 07/08 | Rotor/Stator (Lightning) Project | 969,974 | 1,000,577 | 07/08 | 1,142,039 |
| | Office Remodel | 25,600 | | | |
| | Parking Lot Project | 5,003 | | | |
| 08/09 | Parking Lot Project | 17,450 | 17,450 | 08/09 | 1,062,290 |
| | Nine Year Sub-Total | $8,424,490 | $8,424,490 | | $9,035,110 |
| Anticipated 2009/10 Expenditures | | | | | |
| | Turbine Overhaul #2 | 1,100,000 | | | 1,150,000 |
| | Stack Inspection / Repair | 300,000 | | | |
| | Opacity Upgrade (paid) | 38,110 | | | |
| | Lightning Protection (paid) | 32,155 | | | |
| | AGC Upgarde | 50,000 | | | |
| | Turbine Overhaul #1 | 1,100,000 | | | |
| | Estimated Eleven Year Totals | $11,044,755 | | | $10,185,110 |

# CITY OF ESCANABA

u:\123R3ELECTRIC\PowerCosts\200910\DetailedCostCalculations\Dec2009

## Detailed Electric Cost Calculations

**December 2009**

| | KWh's | $$$ | Cents per KWh |
|---|---|---|---|
| PURCHASES OF POWER | | | |
| Day Ahead Transactions | 13,084,800 | $682,594.53 | $0.052167 |
| RealTime Transactions | 422,404 | 29,127.15 | 0.068956 |
| **Power Purchases** | **13,507,204** | **$711,721.68** | **$0.052692** |
| MISO Overhead Charges | | 8,751.42 | 0.000648 |
| Distribution of Losses Amount | | (22,613.85) | -0.001674 |
| MISO Miscellaneous Charges | | 12,397.62 | 0.000918 |
| ATC Charges | | 90,338.15 | 0.006688 |
| UPPCo Charges | | 0.00 | 0.000000 |
| | **13,507,204** | **$800,595.02** | **$0.059272** |
| S55 / S105 Adjustments | | 0.00 | |
| | 13,507,204 | $800,595.02 | $0.059272 |
| SALES OF POWER | | | |
| Day Ahead Transactions | (6,230,700) | ($375,422.61) | $0.060254 |
| RealTime Transactions | (305,518) | (14,842.04) | 0.048580 |
| **Power Sales** | **(6,536,218)** | **($390,264.65)** | **$0.059708** |
| As Offered Make Whole Payments | | (4,589.52) | 0.000702 |
| RT Make Whole Payments | | (5,752.99) | 0.000880 |
| **Total Sales** | **(6,536,218)** | **($400,607.16)** | **$0.061290** |
| Less: Cost of Sales | | | |
| Steam Generation | 6,532,200 | 725,108.50 | 0.111005 |
| CT Generation | (50,642) | 17,025.55 | -0.336194 |
| **Net Loss On Sales** | **(54,660)** | **$341,526.89** | |
| NET CITY Power Transactions | **13,452,544** | **$1,142,121.91** | **$0.084900** |

Michigan Great Lakes Wind Council

# Great Lakes Wind Council Meetings in Coastal Communities – Saginaw/Bay City, Escanaba, and Muskegon – Spring 2010

The Michigan Great Lakes Wind Council is hosting a series of meetings to get input from the public on its recommendations related to offshore wind energy development.

## MEETING SCHEDULE

| Date | Location | Meeting Time |
|---|---|---|
| **March 25** | **Saginaw Valley State University**<br>Curtis Hall, 2nd Floor<br>7400 Bay Road, Saginaw, MI | Open house begins at 6:00 PM.<br>Presentations begin at 7:00 PM.<br>Meetings end at 9:00 PM. |
| **April 14** | **Danforth Place,**<br>4989 Danforth Road, Escanaba, MI | |
| **May 4** | **Location TBD**<br>Muskegon | |

***No RSVP is required. Please note that meeting space and materials will be limited based on the capacity of the venues (approximately 250 maximum).***

***To sign up for future updates on meetings, including the Muskegon meeting location, go to www.michiganglowcouncil.org and fill out the form on the Contact Us page.***

## MEETING TOPICS

Information will be presented on the council's work and its recommendations, followed by interactive sessions for the public to provide input to the council. Information and discussion will be focused on:

- Emerging offshore wind energy trends and the impetus for creation of the council.
- Criteria recommended by the council to identify and map the least and most favorable areas for development of offshore wind energy in the state's Great Lakes. For example, the most favorable areas must be at least six miles offshore and avoid shipping lanes, sensitive fish and wildlife habitats, etc. The five largest most favorable areas are located in southern Lake Michigan near Berrien County, northern Lake Michigan near Delta and Mackinac Counties, outer Saginaw Bay, and Lake Huron near Sanilac County.
- Elements of a proposed regulatory framework to establish a clear process in state law to review any siting applications for offshore wind energy projects on state-owned bottomlands.

Individuals or organizations that want to provide comments to the council on these topics but are unable to attend a meeting can submit comments via the council's website at www.michiganglowcouncil.org.

**About the council:** The Great Lakes Wind Council serves as an advisory body within the Michigan Department of Energy, Labor & Economic Growth to examine issues and make policy recommendations related to offshore wind energy development in Michigan. The council consists of key state agency representatives and stakeholders appointed by Governor Jennifer M. Granholm. The council does not review or make recommendations related to specific development proposals. For more information, including a copy of the council's September 2009 report and meeting materials, visit www.michiganglowcouncil.org.