



CITY COUNCIL/ELECTRICAL
ADVISORY COMMITTEE

January 13, 2016 – 6:00 p.m.
Regular Meeting

CITY COUNCIL

Marc Tall, Mayor
Ronald Beauchamp, Mayor Pro-Tem
Patricia Baribeau, Council Member
Michael Sattem, Council Member
Ralph Blasier, 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
Melissa Becotte, City Controller

ELECTRICAL ADVISORY COMMITTEE

Tim Wilson, Chairperson
Ann Bissell, Vice Chairperson
Larry Arkens, Committee Member
Glendon Brown, Committee Member
John Anthony, Committee Member
John Mellinger, Committee Member
Vacant Seat

Escanaba City Council Chambers: 410 Ludington Street - Escanaba, MI 49829

Meeting Agenda

Wednesday, January 13, 2016

CALL TO ORDER

ROLL CALL

APPROVAL/ADJUSTMENTS TO THE AGENDA

CONFLICT OF INTEREST DECLARATION

NEW BUSINESS

1. Update - Electric Department –General Operations.

Explanation: An update on departmental operations will be given by Electrical Superintendent Mike Furmanski.

2. Approval – Substation Engineering Professional Services – Krause Power Engineering.

Explanation: Administration is seeking Council approval to retain Krause Power Engineering of Chippewa Falls, WI in an amount not to exceed \$280,000 for professional design services, project oversight and construction management of a new Escanaba North Substation. This request is budgeted in the current fiscal year budget.

3. Update – Solar Garden Project – Feasibility Study.

Explanation: Administration will update the City Council, Electrical Advisory Committee and the Citizens of Escanaba on the progress of the solar garden feasibility study.

4. Update – Power Plant Sale.

Explanation: Administration will update the City Council, Electrical Advisory Committee and the Citizens of Escanaba regarding the sale of the plant.

GENERAL PUBLIC COMMENT

COMMISSION/STAFF COMMENT AND ANNOUNCEMENTS

ADJOURNMENT

The City of Escanaba will provide all necessary, reasonable aids and services, such as signers for the hearing impaired and audiotapes of printed materials being considered at the meeting to individuals with disabilities at the meeting/hearing upon five days notice to the City of Escanaba. Individuals with disabilities requiring auxiliary aids or services should contact the City of Escanaba by writing or calling City Hall at (906) 786-9402.

Respectfully Submitted,

James V. O'Toole
City Manager

OFFICIAL PROCEEDINGS
CITY COUNCIL
ELECTRICAL ADVISORY COMMITTEE
CITY OF ESCANABA, MICHIGAN
Special Joint Meeting
Thursday, November 11, 2015

Pursuit to a meeting notice posted November 5, 2015, the meeting was called to order by the Mayor Marc D. Tall at 6:00 p.m. in the Council Chambers of City Hall located at 410 Ludington Street.

Present: Mayor Marc D. Tall, Council Members, Patricia A. Baribeau, Ronald J. Beauchamp, Ralph B. Blasier, and Michael R. Sattem.

Absent: None.

Present: Electrical Advisory Committee (EAC) Members: Chairperson Tim Wilson, John Anthony, John Mellinger, Ann Bissell, and Glendon Brown.

Absent: Electrical Advisory Committee (EAC) Members: Larry Arkens, One vacancy and Power Plant Liaison.

Also Present: City Manager James V. O'Toole, Electric Superintendent Mike Furmanski, County Commissioners Dave Rivard and John Malnar, Marilyn Kinsey-Brown, members of the public and media.

ADJUSTMENTS TO THE AGENDA

Beauchamp moved, Sattem seconded, **CARRIED UNANIMOUSLY**, to approve the Joint City Council & Electrical Advisory Committee Agenda as submitted.

CONFLICT OF INTEREST – None

UNFINISHED BUSINESS – None

NEW BUSINESS

Update - Electric Department –General Operations.

Electrical Superintendent Mike Furmanski updated the City Council, Electrical Advisory Committee and Citizens of Escanaba on the current departmental activities.

- Garland was up on Main Street;
- Staff was Working on LED lights on Ludington Street and finishing Commercial Services;
- Council Members discussed an SSR status update with Administration;
- Reviewed electric rates compared with other municipalities around the state;

Discussion – Community Solar Garden Concept – P.A. 295 – The Clean, Renewable and Efficient Energy Act.

Electric Superintendent Mike Furmanski, and Electric Advisory Board Member Glendon Brown discussed the concept of installing a Community Solar Garden in the City of Escanaba that would be in compliance with energy efficient requirements found in P.A. 295, the Clean, Renewable and Efficient Energy Act. The following was discussed:

- Reviewed the basics of a community solar garden; how would it benefit the City, and asked Council how they would want to proceed (See Attachment – A);
- Requested Council and Electrical Advisory Committee for permission to pursue an internal staff and volunteer feasibility study of the Community Solar Garden concept, with specific deliverables at the completion of the study in 5 months.

It was the consensus of the Electrical Advisory Committee to pursue the Community Solar Garden concept.

Blasier moved, Baribeau seconded, to support an internal staff and volunteer feasibility study of the Community Solar Garden concept, with specific deliverables at the completion of the study in 5 months.

Upon a call of the roll, the vote was as follows:

Ayes: Blasier, Baribeau, Sattem, Beauchamp, Tall
Nays: None

MOTION CARRIED.

Update – Power Plant Facility and Site.

Administration updated the City Council, Electrical Advisory Committee and the Citizens of Escanaba regarding the status of the sale of the Power Plant.

GENERAL PUBLIC COMMENT – None

COUNCIL/COMMITTEE, STAFF REPORTS – None

ADJOURNMENT

Hearing no further public comment, or further reports from the Electrical Advisory Committee or Council, the meeting adjourned at 7:35 p.m.

Respectfully submitted,

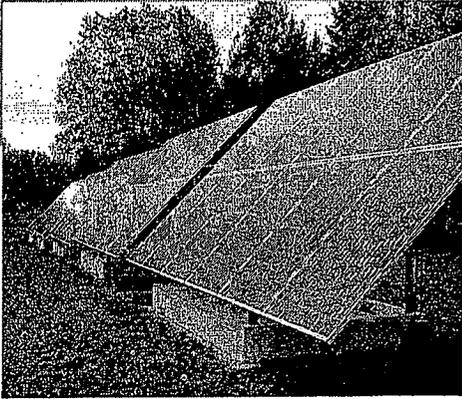
Joint City Council & Electrical Advisory Minutes
November 11, 2015 – cont.

Robert S. Richards
City Clerk

Approved:

Marc D. Tall, Mayor

Community Solar Garden Discussion



November 11, 2015

1

What is a Community Solar Garden?

Larger scale solar generation facility, e.g. 50KW through 5MW

Typically built by a municipal, co-operative or an investor owned utility

Shares in the solar generation facility capacity are sold to individual residents or businesses in exchange for generation output credits to apply against their normal monthly electric bill for 20 to 25 years. (Virtual Net Metering)

Potentially eligible for the Federal Production Tax credits 30% off the total cost of the solar panel and installation costs if the facility is operational before 12/31/2016

Large Scale projects are the most cost effective approach for solar generation

Economies of scale - lower installed cost

Ideal site locations (full sun, secure, easily accessible)

2

Community Solar Gardens in the Midwest

	Company	Size, KW	Cost, \$/KW	Notes
Michigan	Cherryland Electric Cooperative and Traverse City Light & Power	53		2013 <ul style="list-style-type: none"> 61% of the capacity was sold at start-up.
	Consumers Energy	3000	\$2,580	Spring 2016 at Grand Valley State University <ul style="list-style-type: none"> Suniva panels manufactured in Michigan Participation by any full service Consumer Energy electric customer
Wisconsin	Eau Claire Energy Co-op	875	\$2,100	1st phase started up in October, 2015
	Clark Co-op	53	\$2,610	2015 start-up
	Taylor Co-op	95	\$2,700	2015
Many more community solar garden projects are under development by WPPI Energy, Xcel, Madison Gas & Electric and other Co-ops				
Minnesota: A major area of community solar installation activity since 2013. Legislature required Xcel Energy, the largest utility in Minnesota, to offer community solar programs. Individual projects are up to 1MW in size.				
Nationwide		.68MW		33% of that capacity was added in 2014

3

What are the Benefits of an Escanaba Community Solar Garden?

A 2015 NextEra study found that **total generation costs on a levelized basis over 25 to 30 years favor new natural gas combined cycle generation plants and wind and solar clean renewable technologies**. Installation costs for solar generation have dropped dramatically in the last decade and are continuing to decrease.

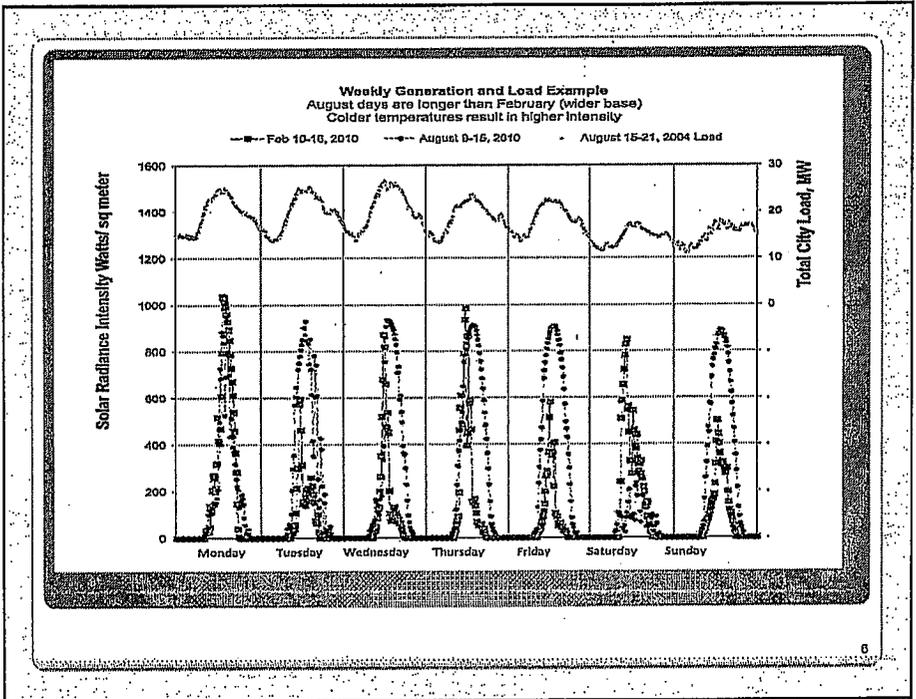
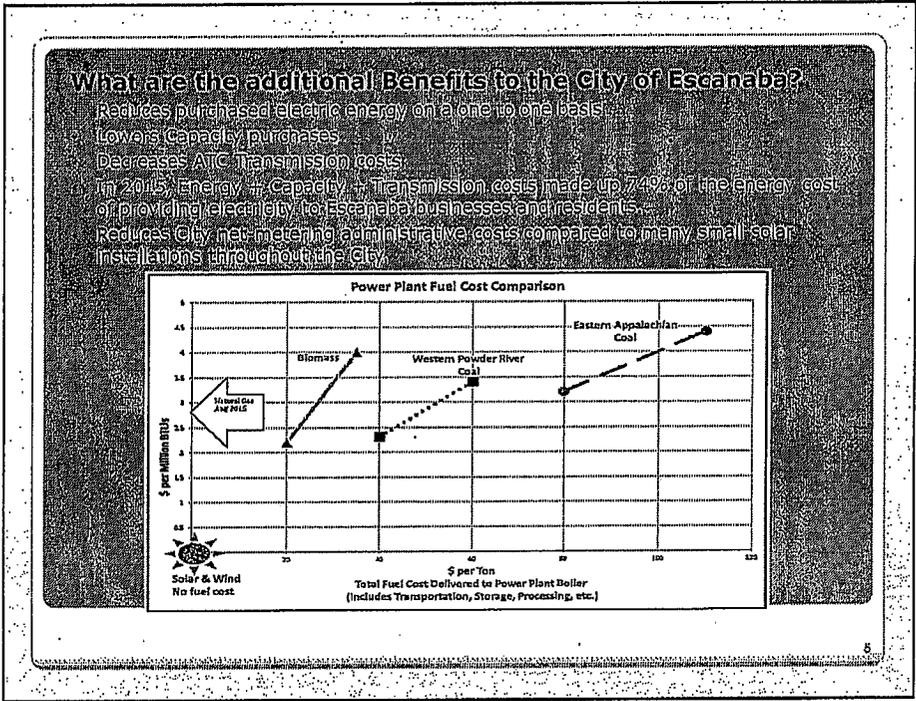
Combining city resident and business investment drives down the investment cost per kW. Bigger solar farms, buying solar panels by the truckload, have significantly lower installation costs than smaller scale installations.

Solar generation provides an essentially fixed electricity cost for 25+ years after the initial investment. Fuel is free.

Very low maintenance costs, e.g., clean the panel surface annually.

A Community Solar Garden offers residents and businesses, who do not have a suitable solar panel installation site (**most residences and businesses**), or do not want to research, contract and purchase their own system, the opportunity to participate in a Solar Community Garden at a known cost. The 30% Production Tax Credit (PTC) ends 12/31/2016 (unless extended by congress), and is reduced to 10% in 2017 under the current legislation. Private individuals and businesses may be eligible for the PTC which covers purchase and installation costs.

4



Proposed Funding Source for Escanaba Community Solar Garden

The Escanaba Electric Department could construct a Community Solar Garden using a portion or all of the remaining Renewable Energy Fees collected from the Escanaba Electric ratepayers. (Renewable Energy Fees were required by the State of Michigan)

For example, at a \$2,500/KW installed construction cost, a \$1 million investment would build a facility with:

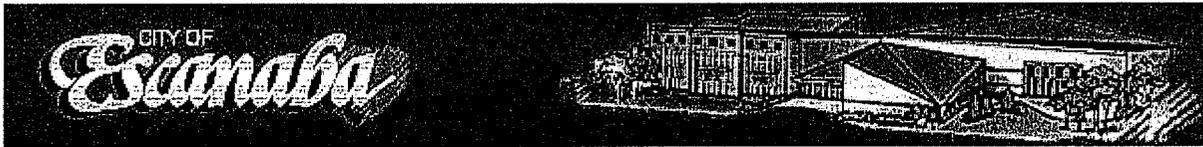
Up to ~400KW or 0.4 MW solar generation capacity
 Up to ~1330 individual 300 watt solar panels
 Solar generation to supply ~1.4% of the City's recent peak loads, or 2.4% of the average load
 ~2-3 acre site

Repayment of the initial investment from the City's Electric Department funds would come from the subscription or participation payments schedule depending on:

Share payment options (One time up front, or monthly payment over XX years)
 % of capacity sold to residents and businesses

This specific request is for the EAC and Council to support an internal staff and volunteer feasibility study of the Community Solar Garden concept, with the following specific deliverables at the completion of the study in 5 months:

Research restrictions on using Renewable Energy Fees
 Estimate cost and capacity of the proposed facility based on utility scale contractor/developer contacts and proposals
 Propose site or sites for Community Solar Garden project(s)
 Preliminary economic analysis and payback period for investment in the Community Solar Garden capacity by:
 Escanaba residents
 Escanaba businesses
 Escanaba Municipal Government
 Quantify benefits to Escanaba Electric Department: Reduced energy capacity (Variable Energy Resource for MISO?) & transmission costs
 Develop a new net metering policy for Escanaba
 Survey residents and business community interest in the concept
 Clarify Federal Production Tax Credit (30% on installed cost if operational by 12/31/2016) for residents and businesses
 Define impact of any new Michigan energy legislation on concept and economics
 Propose contract language and terms for purchase of Community Solar Garden capacity by a resident or business.



CITY OF ESCANABA COUNTY OF DELTA STATE OF MICHIGAN

**NOTICE OF SPECIAL MEETING OF THE CITY COUNCIL, AND
ELECTRICAL ADVISORY COMMITTEE**

PLEASE TAKE NOTICE that the Escanaba City Council and Electrical Advisory Committee will conduct a special joint meeting on January 13, 2016, 6:00 p.m. in Room 101, of the City Hall. The purpose of the meeting is to discuss the solar garden update, the plant update and a proposal on the substation, and/or any other items for discussion.

January 13, 2016; 6:00 p.m.

City Clerk's Office

This notice is given in accordance with Act 267 of the 1976 Public Acts of State of Michigan and Chapter II, Section 5, of the Escanaba City Charter. The City of Escanaba will provide necessary, reasonable auxiliary aids and services, such as signers for the hearing impaired and audio tapes of printed materials being considered at the meeting, to individuals with disabilities at the meeting/hearing upon five (5) days notice to the City of Escanaba. Individuals with disabilities requiring auxiliary aids or services should contact the City of Escanaba by writing or calling the below named City Clerk. Public notice will be given regarding any changes of the above meeting.

James O'Toole, City Manager
(906) 786-9402

or

Robert S. Richards, CMC
City Clerk
(906) 786-1194

TAW/bms

posted 1/6/2016 7:58 AM



MEMORANDUM

To: Jim O'Toole

From: Mike Furmanski

Date: 08JAN16

Re: Krause Power Engineering approval

We have been using Krause Power Engineering for a number of years now on substation and other distribution system work. Their latest proposal is for the construction of the Escanaba North Substation. Their work for this substation includes:

- Design the substation
- Specify equipment
- Equipment bid solicitation
- Equipment bid evaluation
- Labor bid solicitation
- Labor bid evaluation
- Construction oversight
- Commissioning and testing

Their proposal is for an hourly fee, which is estimated to not exceed \$280,000. The total project is estimated to be \$2,500,000, which puts the engineering costs at 11.2% of the project, which is reasonable.



Krause Power Engineering, LLC
2029 County Highway I, Suite 1
Chippewa Falls, WI 54729
TEL 715 577 1369 FAX 715 861 3916
WEB www.krausepowerengineering.com

December 28, 2015

Mr. Mike Furmanski
City of Escanaba – City Electric Department
410 Ludington Street
Escanaba, MI 49829

RE: Proposal for Professional Services – North Substation Engineering

Dear Mr. Furmanski:

Per your request, Krause Power Engineering, LLC, is pleased to provide you the following proposal for the engineering services associated with the construction of the North Substation and the associated Electric Distribution System feeder reconstruction.

Our proposed Scope of Work includes the following:

- Develop a project budget and timeline based on the current project scope.
- File a revised Transmission Load Interconnection Application with ATC. Support the application through receipt of authorization.
- Provide requirements to a geotechnical testing firm to provide soil borings of the site, soil resistivity testing and a geotechnical engineering report for foundation and grounding grid design requirements.
- Provide a property boundary and topographic survey.
- Design the grounding grid based on the fault current and overcurrent study results we have and the soil resistivity/borings reports.
- Design the substation foundations including power transformer support and bus and switch support foundations.
- Design the structural steel elements including switch and bus support structures.
- Layout the SCADA system architecture.
- Layout the feeder cable routing and conduit provisions.
- Provide standard insurance requirement options for Owner's consideration for use in bidding documents
- Write plans and specifications, advertise and bid, review and recommend the following bid packages (includes contract development and management):
 - Power Transformer
 - Substation construction (includes physical construction and control wiring)
 - Testing and commissioning
- Conduct pre-design meetings and design review meetings with Utility staff.
- Conduct pre-construction meetings as required.
- Provide construction administration for the substation building, foundation work, electrical construction work and testing/commissioning.

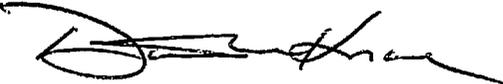
- Provide major material lists as required and assist the Utility with evaluations of materials for procurement (may be a combination of existing excess stock materials, direct purchases and bids).
- Update the Utility's arc-hazard assessment as required.
- Provide pertinent information for the update the Utility's SPCC plan (by others).
- Create relay and voltage regulator control settings files.
- Work with Utility staff for in-house construction activities.
- Create and/or update drawings as required. Provide hard copy, pdf and CADD files for records.
- Train operators/linemen in the operation of the new systems, including on-site training.
- Track estimate to actual construction costs and schedule progress.
- Review contractor applications for payment. Recommend payments as applicable.

We can begin this work with your written authorization to proceed and in accordance with our Miscellaneous Services Contract approved by the Utility on June 24, 2010, for an hourly fee estimated not to exceed \$280,000.00.

If our Proposal for Professional Services is acceptable, please sign and date in the space provided below and return to Krause Power Engineering, LLC, at 2029 County Highway I, Suite 1, Chippewa Falls, WI 54729.

If you have any questions, I can be reached at 715-577-1369 or by email at dkrause@krausepowerengineering.com. Thank you for the opportunity to work with you.

Sincerely,



Dave Krause, P.E.

Note: This proposal may be withdrawn or modified if not accepted within 30 days of the Proposal Date.

Authorized representative:

Signature

Date