

VILLAGE OF CHATHAM, ILLINOIS

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ORDINANCE NO. 06 - 53

AN ORDINANCE APPROVING A BID FOR  
A SUBSTATION TRANSORMER

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ADOPTED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF  
CHATHAM, ILLINOIS THIS 26<sup>TH</sup> DAY OF SEPTEMBER, 2006

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Published in pamphlet form by the authority of the President and  
Board of Trustees of the Village of Chatham, Sangamon County,  
Illinois, this 26<sup>th</sup> day of September, 2006.

ORDINANCE NO. 06-53

AN ORDINANCE APPROVING BID FOR SUBSTATION TRANSFORMER

WHEREAS, the Village of Chatham sought and obtained bids for one 138kV/13.2 kV 15MVA/20MVA/25MVA Transformer for a new substation on Independence Boulevard; and

WHEREAS, the bids were opened and evaluated by Staff and PCI Management Consulting Company and made recommendations to the Public Works Committee; and

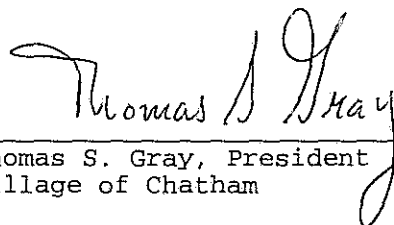
WHEREAS, on September 19, 2006 the Public Works Committee met to review the bids and is recommending the following bids from Waukesha Electric Systems, Inc. for a price not to exceed \$577,528, inclusive of both a payment bond and a performance bond, each in the full amount of the bid price, inclusive of field installation and testing services. All in accordance with Project Manual Volume 1 - Transformer 1 - Contact 98-06-01.

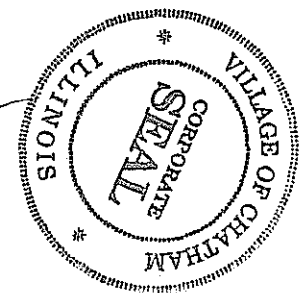
NOW, THEREFORE, BE IT ORDAINED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF CHATHAM, ILLINOIS, AS FOLLOWS:

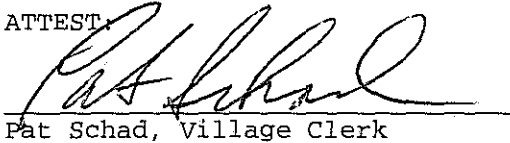
SECTION 1: That the bid for the Transformer described above from Waukesha Electric Systems, Inc. is hereby approved.

SECTION 2: This Ordinance is effective upon its passage and approval.

PASSED THIS 26<sup>th</sup> DAY OF SEPTEMBER, 2006

  
Thomas S. Gray, President  
Village of Chatham



ATTEST:  
  
Pat Schad, Village Clerk

HERR SCHATTEMAN BOYLE

AYES: 6 MCCARTHY M'CRATH KAUAHAHA  
NAYS: 0  
ABSENT: 0

PASSED: 9-26-06  
APPROVED: 9-26-06

**ORDINANCE CERTIFICATE**

STATE OF ILLINOIS     )  
                                  )   SS.  
COUNTY OF SANGAMON    )

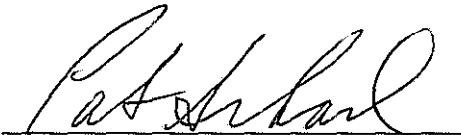
I, the undersigned, do hereby certify that I am the duly qualified and acting Village Clerk of the Village of Chatham, Sangamon County, Illinois.

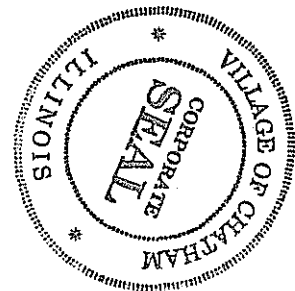
I do further certify that the Ordinance attached hereto is a full, true, and exact copy of Ordinance No. 06 -53, adopted by the President and Board of Trustees of said Village on the 26<sup>th</sup> day of September, 2006, said Ordinance being entitled:

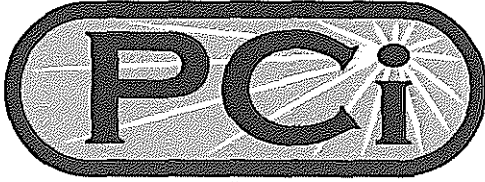
**AN ORDINANCE APPROVING A BID  
FOR A SUBSTATION TRANSORMER**

I do further certify that prior to the making of this certificate, the said Ordinance was spread at length upon the permanent records of said Village, where it now appears and remains.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of said Village this 26<sup>th</sup> day of September, 2006.

  
Pat Schad, Village Clerk





## PCI MANAGEMENT & CONSULTING COMPANY

1325 WILEY ROAD, SUITE 158 - SCHAUMBURG, IL 60173

847/885-3400 - FAX: 847/885-3481 - PCI@PCIENERGY.COM

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25,685

September 26, 2006

Mr. Del McCord  
Administration & Utilities Director  
Village of Chatham  
116 E. Mulberry  
Chatham, IL 62629

Subject: **Bid Analysis and Recommendation – Revision 1**  
**Project Manual Volume 1 – Transformer 1**  
**Contract 98-06-01**

Dear Mr. McCord:

PCI Management & Consulting Company ("PCI") has completed its analysis of proposals received for Transformer 1 in connection with the Independence Substation and Existing System Upgrades Project ("Project").

### **Bid Evaluation Summary**

Proposals were requested from three pre-qualified companies:

1. GE-Prolec ("GE").
2. Siemens Power Transmission & Distribution, Inc. ("Siemens").
3. Waukesha Electric Systems, Inc. ("Waukesha").

### **Recommendation**

Based upon the review of the proposals, it is recommended that the contract for the supply of Transformer 1 be awarded to Waukesha for the price of \$577,528, inclusive of both a payment bond and a performance bond, each in the full amount of the bid price, inclusive of field installation and testing services (the evaluation below does not take into account the installation and testing optional prices, i.e., \$566,528 Waukesha base bid plus \$21,000 installation and testing equals \$577,528), and subject to copper pricing adjustment at the time of order.

### **Summary of Bid Analysis**

All three bidders submitted a detailed proposal for the supply of Transformer 1 in accordance with the request for proposal (Project Manual Volume 1 – Transformer 1) and subsequent Addenda Nos. 1 and 2.

Although GE was substantially higher than Siemens and Waukesha, all proposals were subjected to a complete analysis, including requests for additional information and clarification, and the analysis of additional information and clarification submittals. Detailed analysis of proposals is

usually necessary because the prices provided by the bidders are not comparable as proposed due to differences in the (i) installation technical supervision scope; (ii) freight scope; (iii) delivery lead time; and (iv) warranty period. As a result, the analysis included the following:

1. Comparison and cost adjustment to equalize the scope of the installation supervision. It is recommended that this option be included in the scope of the transformer supply (see table below).
2. Comparison and cost adjustment to equalize the scope of completing the transformer installation, check-out and testing. Although this option was not included in the evaluation below, it is recommended that this option be included in the scope of the transformer supply, rather than being performed by the installation contractor to be selected by the Village of Chatham.
3. Comparison and cost adjustment to include freight costs (see table below).
4. Comparison and cost adjustment to account for differences in delivery lead times (not included in table below).
5. Comparison and cost adjustment to account for differences in manufacturing location proximity to the Project (not included in table below).
6. Comparison and economic evaluation of the core (no load) losses (see table below).
7. Comparison and economic evaluation of the winding (load) losses (see table below).

The original bid prices and adjustments noted above, as well as the economic evaluation of losses, are summarized in the table below:

ITEM	GE	SIEMENS	WAUKESHA
Base Bid	\$663,875	\$442,000	\$582,213
Freight to Jobsite	Included above	\$ 30,000	Included above
Installation Technical Support	Included above	\$ 6,000	Included above
Commissioning Technical Support	Included above	\$ 4,500	Included above
Witness Test Expenses – Buyer	\$ 7,600	\$ 3,000	Included above
Witness Test Expenses – Engineer	\$ 3,800	\$ 1,500	Included above
Five Year Warranty	\$ 13,278	\$ 7,080	Included above
<b>Subtotal Equipment Cost</b>	<b>\$688,553</b>	<b>\$494,080</b>	<b>\$582,213</b>
No load losses @100% Voltage (Watts)	17,000	18,000	16,000
Full load losses@ 15MVA (Watts)	28,000	57,000	66,500
<b>Loss Evaluation @ 33% Average Load Level</b>			
No Load Loss Evaluation at \$5.91 per Watt	\$100,470	\$106,380	\$94,560
Load Loss Evaluation at \$0.64 per Watt	\$17,920	\$36,480	\$42,560
<b>Total Evaluated Cost (@ 33% load)</b>	<b>\$806,943</b>	<b>\$636,940</b>	<b>\$693,648</b>

The assumptions made for the evaluated cost summary above are as follows:

1. Power costs escalate at 6% per year. Separate escalations for power versus energy were not performed.
2. The value of money increases at 5% per year.
3. The average load on this transformer would be approximately 33% of the 15,000 kVA base nameplate rating, which is 5,000 kVA when averaged over all time.
4. From the detailed evaluation spreadsheet, the evaluated cost for each watt of core (no load) loss is \$5.91 and the evaluated cost for each watt of winding (load) loss is \$0.64. The evaluated costs for core and winding losses represent the present value of the power costs over the life of the transformer.

The above evaluated cost summary indicates that Siemens is the low evaluated bid based upon the criteria presented in the table. However, in PCI's opinion, purchasing the Waukesha transformer will provide the highest level of value for the Village of Chatham, based upon the factors listed below, which again were not included in the above economic evaluation:

- The Waukesha transformer will be manufactured in either Waukesha, Wisconsin or Goldsboro, North Carolina, providing for substantially reduced travel times for shop inspections, witness testing and engineering coordination.
- Both the GE and Siemens transformers are manufactured in Mexico, adding additional cost and turnaround time for service and potential warranty issues.
- The Waukesha transformer will ship oil-filled, while the GE and Siemens transformers ship dry, adding to the installation costs for those units.
- The Waukesha transformer has an approximate 25 week shorter lead time for delivery than Siemens, reducing the interest costs during construction.

Upon agreement and acceptance, please sign and return a copy of this bid analysis and recommendation for our files.

Sincerely,  
PCI MANAGEMENT & CONSULTING COMPANY

*Scott P. Farley*

Scott P. Farley  
Project Manager

**Acknowledged and Agreed To by the Village of Chatham:**

*Del McCord*

Del McCord, Administration & Utilities Director

Date: 9/26/2006