

VILLAGE OF CHATHAM, ILLINOIS

ORDINANCE NO. 07 - 72

AN ORDINANCE APPROVING A BID FOR
SUBSTATION CIRCUIT BREAKERS

ADOPTED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE OF
CHATHAM, ILLINOIS THIS 18TH DAY OF DECEMBER, 2007

Published in pamphlet form by the authority of the President and
Board of Trustees of the Village of Chatham, Sangamon County,
Illinois, this 18th day of December, 2007.

ORDINANCE NO. 07-72

AN ORDINANCE APPROVING BID FOR SUBSTATION CIRCUIT BREAKERS

WHEREAS, the Village of Chatham sought and obtained bids for four 138kV Dead Tank Gas Circuit Breakers; two for a new substation on Independence Boulevard and two for the existing substation on Main Street; and

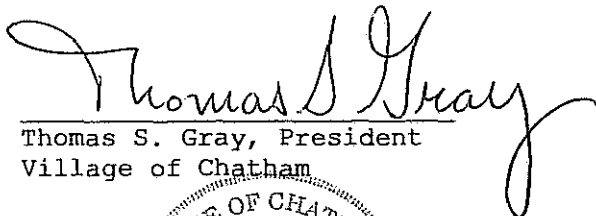
WHEREAS, the bids were opened and evaluated by Staff and PCI Management Consulting Company and are recommending the bid from ABB Inc. for a price of \$255,266, inclusive of freight charges and inclusive of two days of on-site commissioning technical support for each substation. All in accordance with Project Manual Volume - 138kV Dead Tank Gas Circuit Breakers and subsequent Addenda 1 and 2. Contact 98-07-01.

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 Circuit Breakers described above from ABB Inc. is hereby approved.

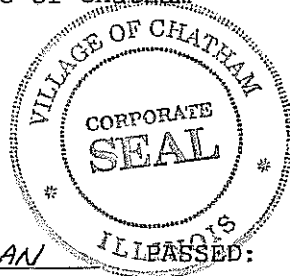
SECTION 2: This Ordinance is effective upon its passage and approval.

PASSED THIS 18th DAY OF DECEMBER, 2007


Thomas S. Gray, President
Village of Chatham

ATTEST:


Pat Schad, Village Clerk



AYES: 4 HERR, REYNOLDS, McGRATH, SCHATTEMAN
NAYS: 0
ABSENT: 2 BOYLE KAVANAGH

PASSED: 12-18-07
APPROVED: 12-18-07

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. 07-72, adopted by the President and Board of Trustees of said Village on the 18th day of December, 2007, said Ordinance being entitled:

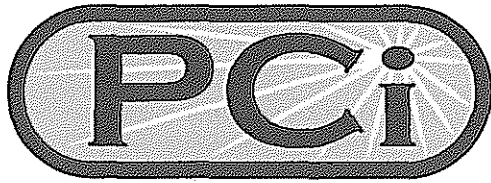
**AN ORDINANCE APPROVING BID FOR
SUBSTATION CIRCUIT BREAKERS**

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 18th day of December, 2007.



Pat Schad
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

December 18, 2007

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

Subject: **Bid Analysis and Recommendation**
Project Manual Volume – 138 kV Dead Tank Gas Circuit Breakers
Contract 98-07-01

Dear Mr. McCord:

PCI Management & Consulting Company ("PCI") has completed its analysis of proposals received for the 138 kV Dead Tank Gas Circuit Breakers in connection with the Independence Substation and Existing System Upgrades Project ("Project").

Bid Evaluation Summary

Proposals were requested from three pre-qualified companies:

1. ABB Inc. ("ABB").
2. Mitsubishi ("Mitsubishi").
3. Pennsylvania Breaker ("Pennsylvania").

Recommendation

Based upon the review of the proposals, it is recommended that the contract for the supply of the 138 kV Dead Tank Gas Circuit Breakers be awarded to ABB for the price of \$255,266, inclusive of freight charges (F.O.B. Jobsite), and inclusive of two (2) days of on-site commissioning technical support for each substation. It is not recommended that any of the optional pricing provided be included in the order.

Summary of Bid Analysis

ABB submitted a detailed proposal for the supply of the 138 kV Dead Tank Gas Circuit Breakers in accordance with the request for proposal (Project Manual – 138 kV Dead Tank Gas Circuit Breakers) and subsequent Addenda Nos. 1 and 2. The ABB proposal was subjected to a complete analysis, including requests for additional information and clarification, and the analysis of additional information and clarification submittals.

The ABB bid price breakdown is summarized in the table below:

ABB BID PRICE BREAKDOWN	QTY	UNIT PRICE	TOTAL
138 kV Dead Tank Gas Circuit Breakers, 2000 amps – Independence	2	\$ 61,673	\$123,346
Freight to Jobsite - Independence	n/a	Included above	Included above
Commissioning Technical Support – Independence Substation	2	\$ 4,000	\$ 4,000
138 kV Dead Tank Gas Circuit Breakers, 2000 amps – Main Street	2	\$ 61,960	\$123,920
Freight to Jobsite – Main Street	n/a	Included above	Included above
Commissioning Technical Support – Main Street	2	\$ 4,000	\$ 4,000
Total Bid Price	n/a	n/a	\$255,266
Optional Pricing (options not taken):			
Witness Test Expenses – Buyer	2	\$ 3,000	\$ 6,000
Witness Test Expenses – Engineer	1	\$ 3,000	\$ 3,000
Synchronous closing unit (SCU)	4	\$ 32,000	\$128,000
Circuit Breaker Sentinel (CBS)	4 (gang)	\$ 8,900	\$ 35,600
Circuit Breaker Sentinel (CBS)	4 (IPO)	\$ 13,500	\$ 54,000

Although Mitsubishi and Pennsylvania Breaker provided “no bid” responses, PCI recommends that the contract for the supply of the 138 kV Dead Tank Gas Circuit Breakers be awarded to ABB based upon the factors below:

- The ABB price is within the budgetary estimate for the four 138 kV Dead Tank Gas Circuit Breakers of approximately \$275,000 to \$280,000.
- ABB provided a delivery lead time favorable to the current schedule of the Project.
- The Mitsubishi manufacturer’s representative was present at the bid opening and indicated Mitsubishi’s pricing would have most likely been slightly higher than that provided by ABB and felt that ABB had provided a very fair price.

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, Administration & Utilities Director

Date: December 18, 2007

High Voltage Products



ABB Inc
100 Distribution Circle
Mount Pleasant, Pennsylvania, USA

138 kV SF6 Dead Tank Breakers
For
Village of Chatham

SUBMITTED BY:
ABB Inc.
100 Distribution Circle
Mount Pleasant, PA 15666

Jess Mains III
724-696-1505
jess.mains@us.abb.com

Lynn Sowerbrower
724-696-1506
lynn.sowerbrower@us.abb.com

REPRESENTED BY:

Dave Reinke
4508 Santa Clara
Springfield, IL 62707
217-793-7330

Kelly Hinerman
222 West Las Colinas Blvd., Suite 1222
Irving, TX 75039
972-401-3998

High Voltage Products



19 Nov 2007

ABB Negotiation Number: 07Q385624

Equipment: Dead Tank Breakers

Dear Sir or Madam:

Attached is a quotation from ABB Inc., per your request.

The opportunity to provide these items to you is greatly appreciated, and this offering is intended to meet your highest expectations.

ABB has a long-standing reputation for providing the customer with custom and standard High Voltage Products that are desired for the customers' unique application. Rather than forcing the customer to accept a standard configuration, ABB has invested in systems and processes to allow us to provide custom configurations to the customer with short cycle times at a high degree of accuracy and quality. ABB Inc. stands ready to work with you to supplement this product offering with technical application experts, training and support services intended to reduce your total cost of ownership.

We look forward to your consideration of this offering, and will be pleased to answer any questions you may have.

Jess Mains III
ABB Inc.
100 Distribution Circle
Mount Pleasant, PA 15666

Scope of Supply and Prices

Total Bid Package Pricing Schedule	
Item 10	
	145PM40-20
Unit Price	\$63,673
Total Price for (2) units	\$127,346
Lead Time	24 - 26 weeks
Item 20	
	145PM40-20
Unit Price	\$63,960
Total Price for (2) units	\$127,920
Lead Time	24 - 26 weeks

Total Bid Package	
Total Price	\$255,266 USD

Type 145PM40-20, outdoor, dead tank, SF6 gas puffer circuit breakers having a 145 kV maximum voltage, 650 kV BIL, 40 kA maximum interrupting current, 2000 A continuous current, 60 Hz, 3 cycle interrupting time, mini-Solon density monitor system, 98" creep gray porcelain bushings, a -40° C minimum operating temperature and a type FSA-2 motor charged spring drive operating mechanism. Each breaker includes twelve (12) – 2000/5 C800 multi-ratio relaying accuracy bushing current transformers. One set of general maintenance tools, one travel recorder kit and one SF6 gas fill kit, including hose and regulator assembly, has been included. The breaker and accessories will be furnished in accordance with the drawings provided, except as qualified herein under proposal section, "Technical Comments and Exceptions".

Adders

1. Synchronous closing unit (SCU).....\$32,000.00 per unit
2. Circuit Breaker Sentinel (CBS)\$8,900.00 gang operated per
3. Circuit Breaker Sentinel (CBS)\$13,500 for IPO breakers per

Technical Data Sheet

Item 10

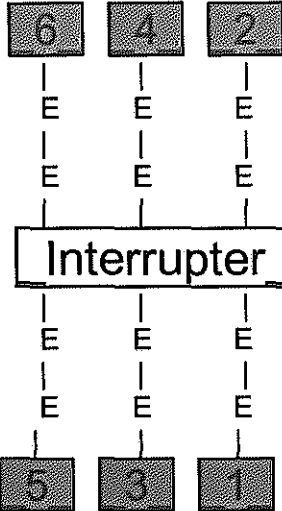
ABB Product ID:	145PM40-20
Cabinet NEMA Rating	3R
CT Frequency	60 Hz
Trip Coil Circuit	Primary and Secondary
Close Coil Circuit	Primary Only
Cold Weather Kit Rating	120V / 800W Single Heater
Maximum	145 (kV)
Continuous Current	2000 (A)
Interrupting Current	40 (kA)
BIL	650 (kV)
Interrupting Time	3 Cycles
Mechanism Type	FSA-2 (SPRING-SPRING)
Bushing Material	Porcelain
Bushing Creep	98 in.
Motor Voltage	125 VDC / 120 VAC
Heater Voltage	120 Volt
Control Voltage	125 VDC
Cabinet Material	Standard
Exterior Paint Color	ANSI 70 Gray
Interior Paint Color	ANSI 70 Gray
Duty Cycle	0-0.3Sec-CO-3min-CO
Energy Storage	Spring - Spring
SF ₆ GAS	ABB TO SUPPLY

Item 20

ABB Product ID:	145PM40-20
Cabinet NEMA Rating	3R
CT Frequency	60 Hz
Trip Coil Circuit	Primary and Secondary
Close Coil Circuit	Primary Only
Cold Weather Kit Rating	120V / 800W Single Heater
Maximum	145 (kV)
Continuous Current	2000 (A)
Interrupting Current	40 (kA)
BIL	650 (kV)
Interrupting Time	3 Cycles
Mechanism Type	FSA-2 (SPRING-SPRING)
Bushing Material	Porcelain
Bushing Creep	98 in.
Motor Voltage	120 VAC
Heater Voltage	120 Volt
Control Voltage	48 VDC
Cabinet Material	Standard
Exterior Paint Color	ANSI 70 Gray
Interior Paint Color	ANSI 70 Gray
Duty Cycle	0-0.3Sec-CO-3min-CO
Energy Storage	Spring - Spring
SF ₆ GAS	ABB TO SUPPLY

Item 10

ABB Product ID: 145PM40-20



Y Relaying 2000:5 C800

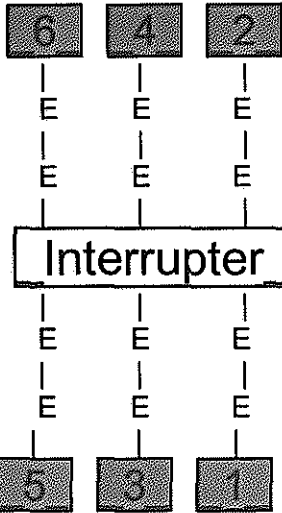
X Relaying 2000:5 C800

X Relaying 2000:5 C800

Y Relaying 2000:5 C800

Item 20

ABB Product ID: 145PM40-20



Y Relaying 2000:5 C800

X Relaying 2000:5 C800

X Relaying 2000:5 C800

Y Relaying 2000:5 C800

Comments and Clarifications

Specification 06098.1-138-GCB, Rev 01

- 9.1.2.1 ABB will supply its insulated MOLEX wire terminals.
- 9.1.2.2 All external wire runs will be in water tight PVC coated flexible metal conduit.
- 9.2.1.3 The proposed interrupter will be the SF6 Puffer type dead tank breaker design. No bottles are associated with this design and therefore are not applicable.
- 9.3.2 All breakers will be ASME certified via air pressure test, In addition, each pole will be tested by a helium mass spectrometer under vacuum to verify casting integrity.
- 9.3.3 The proposed breaker has no plumbing. Affixed to each phase is a temperature-compensated mini-Solon density monitor, whose three sets of Form C dry contact outputs are run through a conduit to terminal blocks in the control cabinet. Also attached to the each phase is a temperature-compensated SF6 pressure gauge, oriented to optimum reading position. The breaker can readily be filled by removing the gauges from their self-sealing Malmquist valves. The density monitors are also attached to the tanks by Malmquist valves, so they are easily isolated from the breaker for calibration as desired. (Calibration recommendations per Solon do not exceed once per ten-year period.) Please refer to the enclosed SF6 gas schematics for details. Note that the normal operating pressures at 68° are as follows:
- 145PM40 is 87 psig; alarm at 76 psig; lockout at 72 psig.
- 9.3.7 ABB can provide a common manifold assembly with a single temperature compensated density monitor and temperature compensated pressure gauge per breaker. The breaker can be filled from the Malmquist valve located on the bell crank housing near the control cabinet. If this is not acceptable, an installation modification kit can be provided that allows the customer to add an adapter to the plumbing system to provide access to the gas system via the main control cabinet. This will not be done at the factory but is only available as part of the field installation. A sample drawing has been provided with this quote.
- 9.4.1 See attached outline for physical layout of breaker and control cabinet location.
- 9.5 Frames shall be galvanized.
- 10.0 See attached sample production test. All tests performed shall be per this document.

Comments and Clarifications

Specification 06098.1-138-GCB, Rev 01, continued..

10.3.4 All factory testing will be via Programma travel analyzers.

13.0 All instruction manuals will be ABB standard format and layout.

Comments and Clarifications

Specification 06098.2-138-GCB, Rev 01

- 9.1.2.3 ABB will supply its insulated MOLEX wire terminals.
- 9.1.2.4 All external wire runs will be in water tight PVC coated flexible metal conduit.
- 9.2.1.3 The proposed interrupter will be the SF6 Puffer type dead tank breaker design. No bottles are associated with this design and therefore are not applicable.
- 9.3.2 All breakers will be ASME certified via air pressure test, In addition, each pole will be tested by a helium mass spectrometer under vacuum to verify casting integrity.
- 9.3.3 The proposed breaker has no plumbing. Affixed to each phase is a temperature-compensated mini-Solon density monitor, whose three sets of Form C dry contact outputs are run through a conduit to terminal blocks in the control cabinet. Also attached to the each phase is a temperature-compensated SF6 pressure gauge, oriented to optimum reading position. The breaker can readily be filled by removing the gauges from their self-sealing Malmquist valves. The density monitors are also attached to the tanks by Malmquist valves, so they are easily isolated from the breaker for calibration as desired. (Calibration recommendations per Solon do not exceed once per ten-year period.) Please refer to the enclosed SF6 gas schematics for details. Note that the normal operating pressures at 68° are as follows:
- 145PM40 is 87 psig; alarm at 76 psig; lockout at 72 psig.
- 9.3.7 ABB can provide a common manifold assembly with a single temperature compensated density monitor and temperature compensated pressure gauge per breaker. The breaker can be filled from the Malmquist valve located on the bell crank housing near the control cabinet. If this is not acceptable, an installation modification kit can be provided that allows the customer to add an adapter to the plumbing system to provide access to the gas system via the main control cabinet. This will not be done at the factory but is only available as part of the field installation. A sample drawing has been provided with this quote.
- 9.4.1.10 If a 48 VDC motor source is being used an AC to DC throw over cannot be provided. Please specify if the motor is to be 120 VAC or 48 Vic at time of order.
- 9.5.1 See attached outline for physical layout of breaker and control cabinet location.
- 9.6 Frames shall be galvanized.

Comments and Clarifications

Specification 06098.2-138-GCB, Rev 01, continued..

- 10.0 See attached sample production test. All tests performed shall be per this document.
- 10.3.5 All factory testing will be via Programma travel analyzers.
- 14.0 All instruction manuals will be ABB standard format and layout.

General Terms and Conditions

ABB Inc. will quote their standard attached terms and Conditions.

General Terms and Conditions

PRICES

Prices are firm for shipment quoted, and do not include federal, state, or local taxes of any kind.

PAYMENT

Net payment is due within 30 days after date of invoice.

VALIDITY

Bid is valid for acceptance for a period of 30 days following bid opening.

SHIPMENT/DRAWINGS

Based on receipt of an order within the quoted validity period, we can ship the equipment based on the lead times listed above, after receipt of a complete and valid purchase order or contract. Each breaker will be shipped with an instruction manual, field assembly drawing, outline drawing, wiring diagram, and wiring connection drawing, located in the documentation storage pocket inside the control cabinet.

Drawings for approval, if required, will be submitted electronically via e-mail within 8 weeks after receipt of a written and valid purchase order. Drawings for approval include a breaker outline drawing, wiring diagrams, connection diagrams, CT performance curves, nameplate drawings, and bushing outline drawing. Instruction manuals are fixed documents and are not submitted for approval. The quoted breaker shipment is contingent upon the customer returning approval drawings within 2 weeks after submittal. Delays in the return of approval drawings that cause a delayed final release to production will result in rescheduling of the circuit breaker shipment to the next available production slot, which may significantly exceed the time of drawing delay.

Final drawings as well as production test reports will also be submitted via e-mail in electronic format within 2 weeks after shipment of the circuit breakers.

WARRANTY

Standard warranty period is the earlier of 12 months from energization but not to exceed 18 months from shipment. Further clarification regarding warranty coverage is included in the attached document, ABB Inc. General Terms and Conditions of Sale.

FREIGHT/DELIVERY TERMS

Freight prepaid and allowed (CIP per INCOTerms 2000) with the destination as defined in the bid. Freight is prepaid and allowed to first truck unload point. Title and Risk of loss transfers from ABB to Customer when the product is loaded on the truck at the factory. Freight prepaid and allowed includes only the trucking expense and does not include offloading equipment, cranes, rail, ship or any other carriage. Re-consignment or redirection of shipment will incur a \$725 handling fee and additional freight charges will apply. All prices are contingent upon gaining valid shipping clearances at the time of shipment. If clearance is not available due to highway construction, changes in state regulations, changes in bridge limitations or other items beyond our control, ABB will not be responsible for any additional shipping or handling charges. Due to the volatility in the price of fuel a surcharge may apply at time of shipment.

LIMITATION OF LIABILITY

Manufacturer's total, aggregate liability for any claims made or damages arising out of the performance of this contract shall not exceed the contract price. Further provided that in no event shall the manufacturer be liable for any incidental or consequential damages whatsoever, including but not limited to loss of use of product or work, loss of profits, capital or revenue.

SF6 GAS

Quoted prices include SF6 gas to be furnished in returnable cylinders.

WITNESS TESTING

Customers are welcome to visit our assembly facilities to witness ANSI Standard production tests. Please note that production test dates, in order to assure smooth production flow for all customer's products, are set at the time of product scheduling. Should a customer elect to witness production testing, notification is required 4 weeks prior to the scheduled test date to afford sufficient time to coordinate the visit with our test laboratory.

CONDITIONS

Except as otherwise noted herein, the attached ABB Inc. General Terms and Conditions of Sale shall apply to this quotation and subsequent purchase order or contract.

ABB INC. GENERAL TERMS AND CONDITIONS OF SALE

1. General. The terms and conditions contained herein, together with any additional or different terms contained in ABB's Proposal, if any, submitted to Purchaser (which Proposal shall control over any conflicting terms), constitute the entire agreement (the "Agreement") between the parties with respect to the order and supersede all prior communications and agreements regarding the order. Acceptance by ABB of the order, or Purchaser's acceptance of ABB's Proposal, is expressly limited to and conditioned upon Purchaser's acceptance of these terms and conditions, payment for or acceptance of any performance by ABB being acceptance. These terms and conditions may not be changed or superseded by any different or additional terms and conditions proposed by Purchaser to which terms ABB hereby objects. Unless the context otherwise requires, the term "Equipment" as used herein means all of the equipment, parts, accessories sold, and all software and software documentation, if any, licensed to Purchaser by ABB ("Software") under the order. Unless the context otherwise requires, the term "Services" as used herein means all labor, supervisory, technical and engineering, installation, repair, consulting or other services provided by ABB under the order. As used herein, the term "Purchaser" shall include the initial end use of the Equipment and/or services; provided, however, that Paragraph 13(a) shall apply exclusively to the initial end user.

2. Prices.

- (a) Unless otherwise specified in writing, all Proposals expire thirty (30) days from the date thereof.
- (b) Unless otherwise stated herein, Services prices are based on normal business hours (8 a.m. to 5 p.m. Monday through Friday). Overtime and Saturday hours will be billed at one and one-half (1 1/2) times the hourly rate; and Sunday hours will be billed at two (2) times the hourly rate; holiday hours will be billed at three (3) times the hourly rate. If a Services rate sheet is attached hereto, the applicable Services rates shall be those set forth in the rate sheet. Rates are subject to change without notice.
- (c) The price does not include any federal, state or local property, license, privilege, sales, use, excise, gross receipts, or other like taxes which may now or hereafter be applicable. Purchaser agrees to pay or reimburse any such taxes which ABB or its suppliers are required to pay or collect. If Purchaser is exempt from the payment of any tax or holds a direct payment permit, Purchaser shall, upon order placement, provide ABB a copy, acceptable to the relevant governmental authorities of any such certificate or permit.
- (d) The price includes customs duties and other importation or exportation fees, if any, at the rates in effect on the date of ABB's Proposal. Any change after that date in such duties, fees, or rates, shall increase the price by ABB's additional cost.

3. Payment.

- (a) Unless specified to the contrary in writing by ABB, payment terms are net cash, payable without offset, in United States Dollars, 30 days from date of invoice by wire transfer to the account designated by ABB in the Proposal.
- (b) If in the judgment of ABB the financial condition of Purchaser at any time prior to delivery does not justify the terms of payment specified, ABB may require payment in advance, payment security satisfactory to ABB, or may terminate the order, whereupon ABB shall be entitled to receive reasonable cancellation charges. If delivery is delayed by Purchaser, payment shall be due on the date ABB is prepared to make delivery. Delays in delivery or nonconformities in any installments delivered shall not relieve Purchaser of its obligation to accept and pay for remaining installments.
- (c) Purchaser shall pay, in addition to the overdue payment, a late charge equal to the lesser of 1 1/2% per month or any part thereof or the highest applicable rate allowed by law on all such overdue amounts plus ABB's attorneys' fees and court costs incurred in connection with collection.

4. Changes.

- (a) Any changes requested by Purchaser affecting the ordered scope of work must be accepted by ABB and resulting adjustments to affected provisions, including price, schedule, and guarantees mutually agreed in writing prior to implementation of the change.
- (b) ABB may, at its expense, make such changes in the Equipment or Services as it deems necessary, in its sole discretion, to conform the Equipment or Services to the applicable specifications. If Purchaser objects to any such changes, ABB shall be relieved of its obligation to conform to the applicable specifications to the extent that conformance may be affected by such objection.

5. Delivery.

- (a) All Equipment manufactured, assembled or warehoused in the continental United States is delivered F.O.B. point of shipment. Equipment shipped from outside the continental United States is delivered F.O.B. United States port of entry. Purchaser shall be responsible for any and all demurrage or detention charges.
- (b) If the scheduled delivery of Equipment is delayed by Purchaser or by Force Majeure, ABB may move the Equipment to storage for the account of and at the risk of Purchaser whereupon it shall be deemed to be delivered.
- (c) Shipping and delivery dates are contingent upon Purchaser's timely approvals and delivery by Purchaser of any documentation required for ABB's performance hereunder.
- (d) Claims for shortages or other errors in delivery must be made in writing to ABB within ten days of delivery. Equipment may not be returned except with the prior written consent of and subject to terms specified by ABB. Claims for damage after delivery shall be made directly by Purchaser with the common carrier.

6. Title & Risk of Loss. Except with respect to Software (for which title shall not pass, use being licensed) title to Equipment shall remain in ABB until fully paid for. Notwithstanding any agreement with respect to delivery terms or payment of transportation charges, risk of loss or damage shall pass to Purchaser upon delivery.

7. Inspection, Testing and Acceptance.

- (a) Any inspection by Purchaser of Equipment on ABB's premises shall be scheduled in advance to be performed during normal working hours.
- (b) If the order provides for factory acceptance testing, ABB shall notify Purchaser when ABB will conduct such testing prior to shipment. Unless Purchaser states specific objections in writing within ten (10) days after completion of factory acceptance testing, completion of the acceptance test constitutes Purchaser's factory acceptance of the Equipment and its authorization for shipment.
- (c) If the order provides for site acceptance testing, testing will be performed by ABB personnel to verify that the Equipment has arrived at site complete, without physical damage, and in good operating condition. Completion of site acceptance testing constitutes full and final acceptance of the Equipment. If, through no fault of ABB, acceptance testing is not completed within thirty (30) days after arrival of the Equipment at the site, the site acceptance test shall be deemed completed and the Equipment shall be deemed accepted.

8. Warranties and Remedies.

- (a) Equipment and Services Warranty. ABB warrants that Equipment (excluding Software, which is warranted as specified in paragraph (d) below) shall be delivered free of defects in material and workmanship and that Services shall be free of defects in workmanship. The Warranty Remedy Period for Equipment (excluding Software, Spare Parts and Refurbished or Repaired Parts) shall end twelve (12) months after installation or eighteen (18) months after date of shipment, whichever first occurs. The Warranty Remedy Period for new spare parts shall end twelve (12) months after date of shipment. The Warranty Remedy Period for refurbished or repaired parts shall end ninety (90) days after date of shipment. The Warranty Remedy Period for Services shall end ninety (90) days after the date of completion of Services.
- (b) Equipment and Services Remedy. If a nonconformity to the foregoing warranty is discovered in the Equipment or Services during the applicable Warranty Remedy Period, as specified above, under normal and proper use and provided the Equipment has been properly stored, installed, operated and maintained and written notice of such nonconformity is provided to ABB promptly after such discovery and within the applicable Warranty Remedy Period, ABB shall, at its option, either (i) repair or replace the nonconforming portion of the Equipment or re-perform the nonconforming Services or (ii) refund the portion of the price applicable to the nonconforming portion of Equipment or Services. If any portion of the Equipment or Services so repaired, replaced or re-performed fails to conform to the foregoing warranty, and written notice of such nonconformity is provided to ABB promptly after discovery and within the original Warranty Remedy Period applicable to such Equipment or Services or 30 days from completion of such repair, replacement or re-performance, whichever is later, ABB will repair or replace such nonconforming Equipment or re-perform the nonconforming Services. The original Warranty Remedy Period shall not otherwise be extended.
- (c) Exceptions. ABB shall not be responsible for providing working access to the nonconforming Equipment, including disassembly and re-assembly of non-ABB supplied equipment, or for providing transportation to or from any repair facility, all of which shall be at Purchaser's risk and expense. ABB shall have no obligation hereunder with respect to any Equipment which (i) has been improperly repaired or altered; (ii) has been subjected to misuse, negligence or accident; (iii) has been used in a manner contrary to ABB's instructions; (iv) is comprised of materials provided by or a design specified by Purchaser; or (v) has failed as a result of ordinary wear and tear. Equipment supplied by ABB but manufactured by others is warranted only to the extent of the manufacturer's warranty, and only the remedies, if any, provided by the manufacturer will be allowed.
- (d) Software Warranty and Remedies. ABB warrants that, except as specified below, the Software will, when properly installed, execute in accordance with ABB's published specification. If a nonconformity to the foregoing warranty is discovered during the period ending one (1) year after the date of shipment and written notice of such nonconformity is provided to ABB promptly after such discovery and within that period, including a description of the nonconformity and complete information about the manner of its discovery, ABB shall correct the nonconformity by, at its option, either (i) modifying or making available to the Purchaser instructions for modifying the Software; or (ii) making available at ABB's facility necessary corrected or replacement programs. ABB shall have no obligation with respect to any nonconformities resulting from (i) unauthorized modification of the Software or (ii) Purchaser-supplied software or interfacing. ABB does not warrant that the functions contained in the software will operate in combinations which may be selected for use by the Purchaser, or that the software products are free from errors in the nature of what is commonly categorized by the computer industry as "bugs".
- (e) THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES OF QUALITY AND PERFORMANCE, WHETHER WRITTEN, ORAL OR IMPLIED, AND ALL OTHER WARRANTIES INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USAGE OF TRADE ARE HEREBY DISCLAIMED. THE REMEDIES STATED HEREIN CONSTITUTE PURCHASER'S EXCLUSIVE REMEDIES AND ABB'S ENTIRE LIABILITY FOR ANY BREACH OF WARRANTY.

9. Patent Indemnity.

- (a) ABB shall defend at its own expense any action brought against Purchaser alleging that the Equipment or the use of the Equipment to practice any process for which such Equipment is specified by ABB (a "Process") directly infringes any claim of a patent of the United States of America and to pay all damages and costs finally awarded in any such action, provided that Purchaser has given ABB prompt written notice of such action, all necessary assistance in the defense thereof and the right to control all aspects of the defense thereof including the right to settle or otherwise terminate such action in behalf of Purchaser.
- (b) ABB shall have no obligation hereunder and this provision shall not apply to: (i) any other equipment or processes, including Equipment or Processes which have been modified or combined with other equipment or process not supplied by ABB; (ii) any Equipment or Process supplied according to a design, other than an ABB design, required by Purchaser; (iii) any products manufactured by the Equipment or Process; (iv) any patent issued after the date hereof; or (v) any action settled or otherwise terminated without the prior written consent of ABB.
- (c) If, in any such action, the Equipment is held to constitute an infringement, or the practice of any Process using the Equipment is finally enjoined, ABB shall, at its option and its own expense, procure for Purchaser the right to continue using said Equipment; or modify or replace it with non-infringing equipment or, with Purchaser's assistance, modify the Process so that it becomes non-infringing; or remove it and refund the portion of the price allocable to the infringing Equipment. THE FOREGOING

PARAGRAPHS STATE THE ENTIRE LIABILITY OF ABB AND EQUIPMENT MANUFACTURER FOR ANY PATENT INFRINGEMENT.

(d) To the extent that said Equipment or any part thereof is modified by Purchaser, or combined by Purchaser with equipment or processes not furnished hereunder (except to the extent that ABB is a contributory infringer) or said Equipment or any part thereof is used by Purchaser to perform a process not furnished hereunder by ABB or to produce an article, and by reason of said modification, combination, performance or production, an action is brought against ABB, Purchaser shall defend and indemnify ABB in the same manner and to the same extent that ABB would be obligated to indemnify Purchaser under this "Patent Indemnity" provision.

10. Limitation of Liability.

(a) In no event shall ABB, its suppliers or subcontractors be liable for special, indirect, incidental or consequential damages, whether in contract, warranty, tort, negligence, strict liability or otherwise, including, but not limited to, loss of profits or revenue, loss of use of the Equipment or any associated equipment, cost of capital, cost of substitute equipment, facilities or services, downtime costs, delays, and claims of customers of the Purchaser or other third parties for any damages. ABB's liability for any claim whether in contract, warranty, tort, negligence, strict liability, or otherwise for any loss or damage arising out of, connected with, or resulting from this Agreement or the performance or breach thereof, or from the design, manufacture, sale, delivery, resale, repair, replacement, installation, technical direction of installation, inspection, operation or use of any equipment covered by or furnished under this Agreement, or from any services rendered in connection therewith, shall in no case (except as provided in the section entitled "Patent Indemnity") exceed one-half (1/2) of the purchase price allocable to the Equipment or part thereof or Services which gives rise to the claim.

(b) All causes of action against ABB arising out of or relating to this Agreement or the performance or breach hereof shall expire unless brought within one year of the time of accrual thereof.

(c) In no event, regardless of cause, shall ABB be liable for penalties or penalty clauses of any description or for indemnification of Purchaser or others for costs, damages, or expenses arising out of or related to the Equipment and/Services.

11. Laws and Regulations. ABB does not assume any responsibility for compliance with federal, state or local laws and regulations, except as expressly set forth herein, and compliance with any laws and regulations relating to the operation or use of the Equipment or Software is the sole responsibility of the Purchaser. All laws and regulations referenced herein shall be those in effect as of the Proposal date. In the event of any subsequent revisions or changes thereto, ABB assumes no responsibility for compliance therewith. If Purchaser desires a modification as a result of any such change or revision, it shall be treated as a change per Article 4. Nothing contained herein shall be construed as imposing responsibility or liability upon ABB for obtaining any permits, licenses or approvals from any agency required in connection with the supply, erection or operation of the Equipment. This Agreement shall be governed by the laws of the State of New York, but excluding the provisions of the United Nations Convention on Contracts for the International Sale of Goods and excluding New York law with respect to conflicts of law. Purchaser agrees that all causes of action against ABB under this Agreement shall be brought in the State Courts of the State of New York, or the U.S. District Court for the Southern District of New York. If any provision hereof, partly or completely, shall be held invalid or unenforceable, such invalidity or unenforceability shall not affect any other provision or portion hereof and these terms shall be construed as if such invalid or unenforceable provision or portion thereof had never existed.

12. OSHA. ABB warrants that the Equipment will comply with the relevant standards of the Occupational Safety and Health Act of 1970 ("OSHA") and the regulations promulgated thereunder as of the date of the Proposal. Upon prompt written notice from the Purchaser of a breach of this warranty, ABB will replace the affected part or modify it so that it conforms to such standard or regulation. ABB's obligation shall be limited to such replacement or modification. In no event shall ABB be responsible for liability arising out of the violation of any OSHA standards relating to or caused by Purchaser's design, location, operation, or maintenance of the Equipment, its use in association with other equipment of Purchaser, or the alteration of the Equipment by any party other than ABB.

13. Software License.

(a) ABB owns all rights in or has the right to sublicense all of the Software, if any, to be delivered to Purchaser under this Agreement. As part of the sale made hereunder Purchaser hereby obtains a limited license to use the Software, subject to the following: (i) The Software may be used only in conjunction with equipment specified by ABB; (ii) The Software shall be kept strictly confidential; (iii) The Software shall not be copied, reverse engineered, or modified; (iv) The Purchaser's right to use the Software shall terminate immediately when the specified equipment is no longer used by the Purchaser or when otherwise terminated, e.g. for breach, hereunder; and (v) the rights to use the Software are non-exclusive and non-transferable, except with ABB's prior written consent.

(b) Nothing in this Agreement shall be deemed to convey to Purchaser any title to or ownership in the Software or the intellectual property contained therein in whole or in part, nor to designate the Software a "work made for hire" under the Copyright Act, nor to confer upon any person who is not a named party to this Agreement any right or remedy under or by reason of this Agreement. In the event of termination of this License, Purchaser shall immediately cease using the Software and, without retaining any copies, notes or excerpts thereof, return to ABB the Software and all copies thereof and shall remove all machine readable Software from all of Purchaser's storage media.

14. Inventions and Information. Unless otherwise agreed in writing by ABB and Purchaser, all right, title and interest in any inventions, developments, improvements or modifications of or for Equipment and Services shall remain with ABB. Any design, manufacturing drawings or other information submitted to the Purchaser remains the exclusive property of ABB. Purchaser shall not, without ABB's prior written consent, copy or disclose such information to a third party. Such information shall be used solely for the operation or maintenance of the Equipment and not for any other purpose, including the duplication thereof in whole or in part.

15. Force Majeure. ABB shall neither be liable for loss, damage, detention or delay nor be deemed to be in default for failure to perform when prevented from doing so by causes beyond its reasonable control including but not limited to acts of war (declared or undeclared), Acts of God, fire, strike, labor difficulties, acts or omissions of any governmental authority or of Purchaser, compliance with government regulations, insurrection or riot, embargo, delays or shortages in transportation or inability to obtain necessary labor, materials, or manufacturing facilities from usual sources or from defects or delays in the performance of its suppliers or subcontractors due to any of the foregoing enumerated causes. In the event of delay due to any such cause, the date of delivery will be extended by period equal to the delay plus a reasonable time to resume production, and the price will be adjusted to compensate ABB for such delay.

16. Cancellation. Any order may be cancelled by Purchaser only upon prior written notice and payment of termination charges, including but not limited to, all costs identified to the order incurred prior to the effective date of notice of termination and all expenses incurred by ABB attributable to the termination, plus a fixed sum of ten (10) percent of the final total price to compensate for disruption in scheduling, planned production and other indirect costs.

17. Termination. No termination by Purchaser for default shall be effective unless, within fifteen (15) days after receipt by ABB of Purchaser's written notice specifying such default, ABB shall have failed to initiate and pursue with due diligence correction of such specified default.

18. Export Control.

(a) Purchaser represents and warrants that the Equipment and Services provided hereunder and the "direct product" thereof are intended for civil use only and will not be used, directly or indirectly, for the production of chemical or biological weapons or of precursor chemicals for such weapons, or for any direct or indirect nuclear end use. Purchaser agrees not to disclose, use, export or re-export, directly or indirectly, any information provided by ABB or the "direct product" thereof as defined in the Export Control Regulations of the United States Department of Commerce, except in compliance with such Regulations.

(b) If applicable, ABB shall file for a U.S. export license, but only after appropriate documentation for the license application has been provided by Purchaser. Purchaser shall furnish such documentation within a reasonable time after order acceptance. Any delay in obtaining such license shall suspend performance of this Agreement by ABB. If an export license is not granted or, if once granted, is thereafter revoked or modified by the appropriate authorities, this Agreement may be canceled by ABB without liability for damages of any kind resulting from such cancellation. At ABB's request, Purchaser shall provide to ABB a Letter of Assurance and End-User Statement in a form reasonably satisfactory to ABB.

19. Assignment. Any assignment of this Agreement or of any rights or obligations under the Agreement without prior written consent of ABB shall be void.

20. Nuclear Insurance – Indemnity. For applications in nuclear projects, the Purchaser and/or its end user customer shall have complete insurance protection against liability and property damage resulting from a nuclear incident to and shall indemnify ABB, its subcontractors, suppliers and vendors against all claims resulting from a nuclear incident.

21. Resale. If Purchaser resells any of the Equipment, the sale terms shall limit ABB's liability to the buyer to the same extent that ABB's liability to Purchaser is limited hereunder.

22. Entire Agreement. This Agreement constitutes the entire agreement between ABB and Purchaser. There are no agreements, understandings, restrictions, warranties, or representations between ABB and Purchaser other than those set forth herein or herein provided.