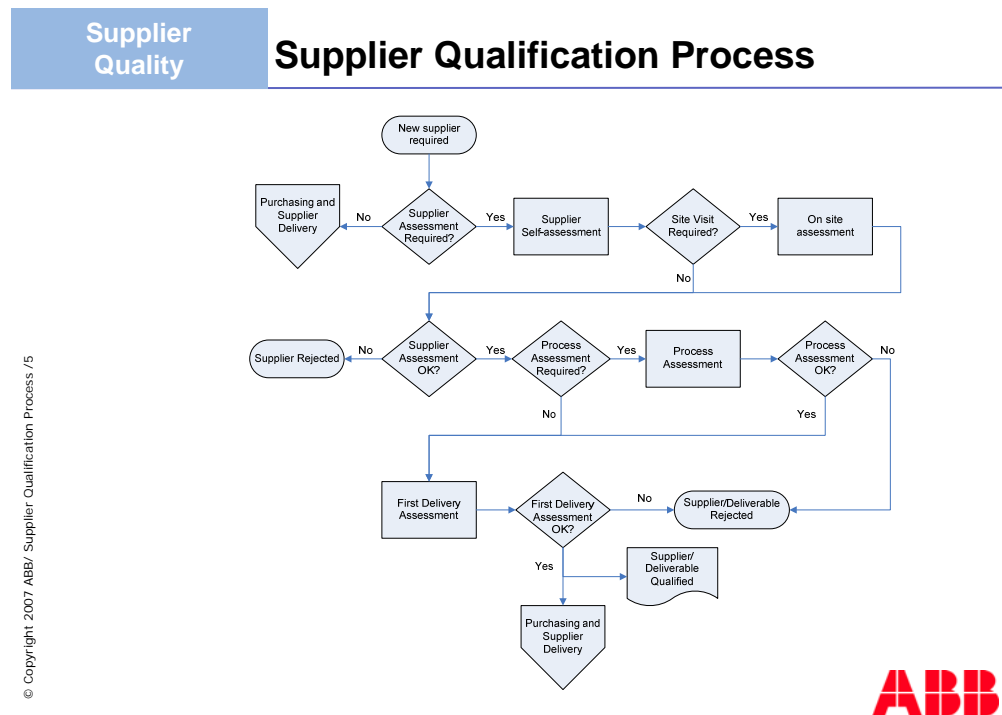


 <p>Power Products Medium Voltage North America</p>	Internal QAP Number:	QMS Document Path:
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Owner: Director of Supply Chain – PPMV NAM	Title: Supplier Requirements	
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Approver(s): PPMV Supply Managers		

1 PROCESS MAP



2 PURPOSE

This document describes the process by which a supplier of components, products, systems, and/or services can get qualified to supply ABB and the requirements to remain qualified.

3 SCOPE/INTRODUCTION

This procedure applies to all suppliers providing products or services to ABB Power Products Medium Voltage sites in North America.

The process starts with the initial qualification of the supplier, which permits ABB to determine if a new supplier meets the minimum requirements established by ABB and can be added to the ABB Approved Vendor List (AVL) and/or Nuclear Approved Vendor List (NAVL). The next step covers the qualification of the Supplier's process (manufacturing, designing, sub-contracting) which will be used to supply ABB with a specific component, system, or service.

The qualification of the first delivery is performed next with approval of initial samples and deliveries. Finally the last step of this process covers the measurement and improvement of the Supplier performance.

This process is meant to be a cooperative effort between ABB and its supplier/s to ensure and maintain good quality and on time deliveries throughout the supply chain. This is achieved by ABB working with the supplier/s to develop and maintain a controlled process which addresses ABB requirements, and ensures minimal quality costs for both ABB and the supplier.

4 RESPONSIBILITY

All suppliers are responsible to comply with the requirements of this procedure. Site Supply Managers are responsible to ensure compliance with the requirements of this procedure.

5 PROCEDURE

5.1.1 The initial step in Supplier Qualification is based on these Supplier Requirements and the Supplier Qualification Questionnaire 9AKK102951, available for download at [www.abb.com/supplying to ABB](http://www.abb.com/supplying%20to%20ABB) . All Suppliers are required to complete the Supplier Qualification Questionnaire and return it to ABB. This provides us with the basic information about our Suppliers. Based on the Questionnaire responses, the Supplier may be visited by ABB to validate information provided in the Questionnaire. The local ABB unit will review the information and determine if the Supplier will be added to the Supplier List. This qualification is valid for one particular Supplier site; if the supplier provides products or services from more than one location, the questionnaire response should clearly define which sites will supply what product/service.

5.2 Self Assessment

5.2.1 Suppliers must download the questionnaire (9AKK102951) and respond to all questions. Include:

- 5.2.1.1
- Documentation to support their self-assessment
 - a comment explaining a 'partial' or 'no' response
 - current actions being taken to address weak areas (enter this on the Summary Sheet)

5.2.2 Once completed, the questionnaire and all supporting documentation are to be sent to the ABB site Supply representative at the site where the supplier expects to do the most volume of business.

5.3 Review and Site Visit

5.3.1 ABB Materials and Quality representatives will review the questionnaire, supporting documents, and action plans sent by the supplier. ABB will decide whether it is necessary to perform a counter-assessment at the supplier site or to directly approve the supplier based on information provided. ABB reserves the right to adjust the score of individual questions based on its evaluation of the information provided by the supplier.

5.4 Supplier Qualification Status

5.4.1 Suppliers can determine their potential qualification status by looking at the Summary Sheet of the Supplier Qualification Questionnaire. According to the qualification level achieved you can see below the actions that need to be taken.

5.4.1.1 **Rejected:** Your score is under 20%: your company is too far from ABB requirements. If and when you have implemented corrective actions which permit you to reach a score of more than 20%, you can get in touch with ABB again.

5.4.1.2 **Under Development:** Your score is between 20% and 50%: you can be part of the ABB Supplier List, provided your Quality, Costs and Delivery (QCD) performance is best in class and you have a plan to reach 50% within one year.

5.4.1.3 **Qualified:** Your score is above 50%: you can be part of the ABB Supplier List, provided your Quality, Costs and Delivery (QCD) performance is best in class. We will ask you to implement continuous improvement plans to increase your score year over year, and communicate to us the results on a regular basis.

5.4.2 The decision to include a supplier on the ABB supplier list will be based on the combination of the score and the action plan to address weak areas.

5.5 Quality Management

- 5.5.1** Suppliers must agree to introduce and maintain a quality management system meeting the requirements of ISO 9001 (as revised), with the obligation to strive for defect-free and on-time delivery, and to continuously improve their performance. Certified suppliers must send a copy of their quality system certifications to ABB. Suppliers who are not third-party certified shall present to ABB their plan for management of Quality and may be subject to a Quality Management System audit by ABB.

5.6 Environmental Management

- 5.6.1** ABB's environmental management principles also apply to its suppliers ([link to ABB Sustainability Policies](#)). As a general objective, ABB wants to do business with suppliers who have implemented environmental management systems complying with the requirements of ISO 14001. Suppliers not yet having implemented ISO 14001 must at least have implemented an environmental policy and ensured that all operations and processes comply with relevant standards, legislation and international conventions. Suppliers must have identified and documented the significant environmental aspects of their manufacturing or supply processes, covering their scope of supply to ABB. Suppliers must also have implemented processes to ensure continuous improvement of their environmental performance, and must adhere to ABB's list of prohibited and restricted materials and substances when fulfilling their supply contracts.

5.7 Social Responsibility

- 5.7.1** ABB's management principles for social responsibility also apply to its suppliers. Suppliers must ensure that all operations and processes comply with relevant standards, legislation and international conventions. A senior manager shall be responsible for ensuring that systems and procedures for social responsibility are in place.
- 5.7.2** Suppliers must support and respect the protection of internationally proclaimed human rights and ensure equality of opportunity. Suppliers must also comply with applicable laws and industry standards on working hours and offer adequate wages to their employees. Suppliers must not employ children or support the use of child labor, make use of forced labor or make use of harassment or disciplinary practices nor discriminate. Suppliers must have appropriate procedures to evaluate and select sub-suppliers on their ability to meet these principles and to maintain reasonable evidence that these principles are continuing to be met.

5.8 Health and Safety Management

- 5.8.1** ABB's management principles for occupational health and safety also apply to its suppliers. Suppliers must provide and ensure a safe and healthy working environment for their own employees and sub-suppliers. Suppliers should implement a health and safety policy and establish objectives to meet this policy. As a minimum, suppliers must ensure that their operations and processes comply with relevant standards and legislation. Suppliers must also identify the health and safety risks in the scope of their supply to ABB and implement controls to eliminate or reduce these risks. ABB favors suppliers who have implemented OHSAS 18001 or equivalent systems for occupational health and safety management.

5.9 Commercial Grade Survey – Nuclear (1E) Products

- 5.9.1** A commercial grade survey is required if the supplier/s intends to produce products that are used in ABB Safety Related Applications as part of ABB's Nuclear Product Offering. The survey shall include examination of the following areas:
- Order Entry
 - Material Identification and Control

- Manufacturing/ Special Processes
- Inspection and Test Controls
- Measuring and Test Equipment Controls
- Quality Program Controls
- Design Controls

5.9.2 The Supplier will be contacted by ABB Quality to schedule the survey when required.

5.9.3 If a Supplier maintains a Quality Management system that complies with 10CFR50 Appendix B, ABB may elect to purchase Safety-related components or services directly from the supplier. Contact ABB Quality representatives to coordinate a nuclear audit prior to delivering any order.

5.10 First Article Inspection Process

5.10.1 The Supplier will develop a plan to monitor the initial delivery of components, products, systems or services to ensure that the manufacturing/delivery process is generating the quality level expected by ABB. The plan may involve submittal of initial samples or demonstration of services by the supplier.

5.10.2 Initial samples, if required, must be manufactured with the final means and be representative of the normal production components and/or systems. They must be dispatched on time for the attention of ABB Supply Chain Management department. A specific label 'Initial Samples' with at least the following information: quantity, number, and index of the drawing, will be provided by the Supplier. With the initial sample, the Supplier is expected to provide Certified Material test report, and an inspection plan reporting actual measured dimensions for all features.

5.10.3 ABB will use its own means to carry out the checking of the measurements presented by the Supplier and will check the scope of supply under practical conditions of use. ABB will issue the results to the Supplier.

5.10.4 The plan should include necessary actions to detect and contain any non-conformity. This containment plan should be submitted and approved by ABB.

5.11 Supplier Performance Metrics

5.11.1 Supplier Scorecard

Suppliers' overall performance will be measured on a Supplier Scorecard in two areas:

Measurement

- On-Time Delivery
- As-Received Quality

Suppliers' Objective

- 100% on-time
- Zero defects

5.11.2 The Supplier Scorecard will provide objective criteria in the awarding of new business. Additional consideration will be given to the supplier's historic responsiveness to ABB's requests for support and the supplier's record of continual improvement.

5.11.3 The Supplier Scorecard will be reported to key suppliers on a monthly basis.

5.12 On Time Delivery

5.12.1 Suppliers should not promise delivery dates they cannot meet. **For each Purchase Order line delivered in full into our building we measure the promise date consigned on the PO against the actual delivery date to our dock.** Promised dates may be modified only if a supplier obtains written approval from ABB Supply Management. ABB defines "On-Time Delivery" as the percentage of PO lines received in full at ABB's Receiving Dock (i.e. from the dock date, not the date of shipment).

5.12.2 Note that ABB does not review, modify, or make exceptions to these dates "after the fact." It is your responsibility to have adequate PO acceptance and monitoring system in place to constantly respect the PO parameters, and to communicate with your ABB Supply representative as early as possible when exceptions occur. In all cases this must be done before actual delivery.

5.12.3 On-time delivery performance will be calculated as delivery promise date VS. Receipt date. The supplier must maintain a 95% or higher to avoid Supplier Corrective Action requests and or other financial penalties.

5.13 As Received Quality

5.13.1 ABB considers each lot delivered to have one (1) opportunity for defect. If a part cannot be immediately used for its intended application, it is considered to be a defect.

5.13.2 Delivering the wrong "off-the-shelf" unit(s) will be considered one (1) defect per lot received. Missing units will also be considered "defective."

5.13.3 Individual units received with more than one defect (for example, a part with a rusted surface and a welding defect) will be considered as one (1) defect.

5.13.4 As-Received Quality is based on the number of defects divided by the number of lots measured

5.13.5 The supplier must maintain a 98% or higher to avoid Supplier Corrective Action requests and or other financial penalties.

- 6 COMMERCIAL REQUIREMENTS.....**
- 6.1 Collaborative Kaizen Events.....**
- 6.1.1 Periodically supplier/s and local ABB site will get together and hold a Kaizen event. This is expected to occur at least once per calendar year.
- 6.2 Supplier Audit Schedule.....**
- 6.2.1 Approved Suppliers will have their quality systems reviewed whenever significant changes take place in their processes, or if significant defects are noted.
- 6.2.2 Suppliers providing parts used in Safety Related applications in Nuclear Power Plants will be audited a minimum of every three years.
- 6.3 Product Packaging.....**
- 6.3.1 Parts must be packaged and shipped in a manner as to be protected from all reasonably expected hazards (including from weather) from the supplier's shipping dock through final receipt at ABB's receiving dock.
- 6.3.2 If there is more than one part per container, the parts must be protected from one another (the protection must withstand any harsh road/driving conditions normally encountered).
- 6.3.3 ABB reserves the right to reject parts based on any dimension, note, or aesthetic appearance, whether the feature requires physical inspection or not.
- 6.4 Communication.....**
- 6.4.1 We expect all communication to be prompt, proactive, open and professional.
- 6.4.2 Any changes to schedule, deliverables and/or cost must be communicated immediately to the ABB Supply Chain representative. Any informal / verbal communications need to be confirmed in writing within three (3) business days from your becoming aware of any such change.
- 6.5 Responsiveness.....**
- 6.5.1 Any requests for information or action items received from ABB shall be completed in a timely manner against the schedule provided by ABB.
- 6.5.2 If deadlines cannot be met, the ABB Supply Chain Representative shall be advised immediately with an expected date for completion. Your responsiveness is of great importance.
- 6.6 Consequences.....**
- 6.6.1 NCM (Nonconforming Material) & Supplier Corrective Action Request**
- 6.6.2 A Nonconforming Material Report (NCM) will be issued when defective materials are provided by a supplier. An initial response to an NCM is required within 24 hours of notification. A final response is required within 20 business days.
- 6.6.3 In some cases a Supplier Corrective Action Request (SCAR) will be part of closing an NCM, or if nonconformities are identified during the course of a site visit. Suppliers must adhere to our requirements with regard to communicating progress on SCAR. The SCAR isn't deemed closed until written approval is provided.
- 6.6.4 ***Note that the original NCM tag MUST be attached to the new shipper when returning material to ABB!***
- 6.7 Standard Charge-Back Policy for Non-Conformance and On Time Delivery**
- 6.7.1 ABB expects all materials and equipment to arrive at our facility built according to the drawings and/or specifications and inspected prior to shipment. If it is confirmed by SCM that a non-conformance is attributable to a supplier, then ABB expects that supplier to take financial responsibility for its resolution.

6.7.2 In all cases the supplier will be notified of the non-conformance, and whenever possible will be given the opportunity to resolve the defect itself. In cases where this is not possible, ABB will back charge suppliers for our direct costs to resolve the non-conformance plus any related indirect costs that may occur.

6.7.3 In addition to the standard charge back policy, your non-performance in one or more of the categories outlined above may result in one or more of the following consequences:

6.7.3.1 Delay of payment / retention

6.7.3.2 Liquidated damages for late delivery

6.7.3.3 Back-charges for re-work, overtime, repair etc.

6.7.3.4 Additional stipulations in future purchase orders

6.7.3.5 Formal ABB quality audit as a pre-condition for maintaining approved-supplier status

6.7.3.6 Temporary or permanent loss of approved-supplier status

6.7.3.7 For internal ABB suppliers – escalation of the re-occurring issues to senior ABB management

6.8 Deviation Delivery

6.8.1 ABB reserves the right to receive at any time material that does not meet specifications. Under these circumstances, this material will not be counted as NCM with presented written approval.

6.9 Termination

6.9.1 ABB reserves the right to terminate the relationship at any given time if Non-Conformities and on-time delivery fail to meet ABB expectations over a given period of time.

7 ABB SUPPLIER CODE OF CONDUCT

7.1 ABB is committed to high standards of business ethics and integrity as reflected in ABB's Code of Conduct. ABB expects all of its suppliers ("Suppliers") to adhere to similar good working standards and business ethics. The Supplier is expected to comply with the requirements set out in this ABB Supplier Code of Conduct. In addition, ABB and the Supplier may agree on further standards in supply agreements.

7.2 Human Rights

7.2.1 In accordance with the aforementioned ethics and standards, ABB requests the following business practices from Suppliers:

7.2.2 • to respect the personal dignity, privacy and rights of each individual;

7.2.3 • to refuse to employ or make anyone work against his or her will; and

7.2.4 • to prohibit behavior including gestures, language and physical contact,

7.2.5 that is sexual, coercive, threatening, abusive or exploitative behavior.

7.3 Fair Labor Conditions and Child Labor

7.3.1 The Supplier will ensure fair labor conditions. In particular, it will

7.3.1.1 refrain from employment discrimination based on gender, color, ethnicity, religion, disability, union membership, political affiliation or sexual orientation and furthermore comply with all applicable laws on employment discrimination;

7.3.1.2 respect the rights of employees to freely associate and bargain collectively;

7.3.1.3 not use any forced or compulsory labor or involuntary prison labor and give all employees the choice to leave their employment freely upon reasonable notice;

7.3.1.4 compensate employees fairly and follow local wage regulations and / or collective agreements and where these do not exist, compensate employees so they can at the least meet their basic needs; and

7.3.1.5 recommends that working hours should not exceed sixty (60) hours per week including overtime, except for grave emergencies; employees should be allowed at least one (1) uninterrupted day off per week.

7.3.2 The Supplier will not tolerate or use child labor in any stage of its general activities other than in accordance with all applicable laws and regulations.

7.4 Occupational Health and Safety

7.4.1 The Supplier will provide a safe and healthy workplace for all of its employees.

7.5 Environmental Responsibility

7.5.1 The Supplier is committed to environmental protection and will conduct its business in an environmentally sensitive way.

7.6 Business Ethics

7.6.1 The Supplier will conduct its business in an ethical manner in accordance with all applicable rules and regulations. In particular, the Supplier will

7.6.1.1 refrain from any and all forms of extortion and bribery;

7.6.1.2 adhere to anti-trust and other competition laws, e.g. not participating in price fixing or bid-rigging; and

7.6.1.3 disclose to ABB available information about conflict of interest including disclosure any of financial interest of an ABB employee in any of the Supplier's business.

7.6.2 The Supplier will protect all confidential information provided by ABB and its respective business partners.

7.7 Business Continuity Planning

7.7.1 The Supplier shall maintain policies to mitigate exposures to terrorism, crime, business threats, pandemics, natural disasters and related major accident exposures.

7.8 Procurement by Supplier

7.8.1 ABB expects the Supplier to obtain confirmation from each of its sub-suppliers providing goods or services directly or indirectly to ABB that the sub-supplier acts in compliance with this ABB Supplier Code of Conduct.

Revision History

REV.	DATE	DESCRIPTION
0	1/21/11	Original Issue.