



## ABB Factory takes Full Service approach to maintenance performance improvement

### Maintenance Services for ABB Electrical Machine Factory

ABB's Electrical Machine (EM) Factory in Juri, Estonia, manufactures wind power generator components that are delivered to major wind power generation companies around the globe.

### ABB's Full Service® Agreement as a Competitive Edge

After initially struggling to ensure maximum equipment availability at the lowest possible cost, while also encouraging ongoing efficiency improvements, ABB EM Factory made a radical decision – it decided to outsource the entire maintenance operation base on ABB's Full Service® agreement. This way ABB EM Factory's stated objectives could be reached.

With the Full Service agreement, the ABB Service organization committed to maintain and improve production equipment by taking over responsibility for the complete scope of an entire plant's maintenance activities, including engineering, planning, execution, and management. According to the agreement, if performance goals are achieved, financial incentives are awarded and if goals are missed, ABB incurs penalties.

### Choosing ABB Service

Outsourcing ABB EM Factory's service operation brings it a real competitive edge. For instance, by improving the efficiency of its major production equipment, ABB EM Factory avoids unnecessary capital investments. Moreover, ABB Service's extensive experience with Maximo (a computerized maintenance management system CMMS) resulted in the system being implemented in less than two weeks.

### Commitment Based on Common Maintenance Strategy

- Improve performance
- Increase reliability and the equipment lifecycle
- Manage maintenance as a business
- Manage change by creating a service culture
- Leverage the resources and knowledge by using ABB's global network
- Leverage ABB's technology and industry best practices

When the partnership agreement commenced, the EM Factory and Service organizations jointly developed a Maintenance Management Master Plan (MMMP), which laid the foundation for a common maintenance strategy with measurable performance goals.

**' The decision to outsource maintenance benefits not only the factory but also their customers. '**

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“By striving to deliver better quality products and services, we will make our customers more competitive.”  
 -Bo Henriksson, Country Manager for ABB Baltic Countries

## Plant Performance Highlights

- MTBF (Mean Time Between Failure) more than doubled in a single quarter.
- From 2005 to 2006, customer satisfaction indexes increased as much as 20 %
- The preventive/corrective ratio average increased 17 %
- OEE (Overall Equipment Effectiveness) and technical availability measurements were benchmarked in the first half of 2006 and tracking began in the second half.
- The average OEE increased 5,1% from 2006 to 2007.
- During the last year average technical availability increased 1,8%.
- ABB Service has initiated the Reliability Centered Maintenance project on the key production lines. The main outcomes of the first stage:
  - ◆ Improved maintenance plans
  - ◆ Supplying stock with critical spare parts
  - ◆ Design out proposals
- For the better production planning the RTPPI measurement is implemented for the key production machines. This online measurement system helps customer to optimize the production and gives quick picture of the machine usage on present time as well as history analysis.

## New Sites Also Using ABB Full Service®

The results in Juri have been so positive that ABB’s Electrical Machine business has decided to implement Full Service at additional sites such as Ludvika, Sweden and Shanghai, China. The new EM factory in Shanghai just started electrical machines production and signed a Full Service agreement. Their Full Service start-up is supported by the same manager that launched the service agreement at Juri in order to facilitate similar results.

The preliminary results indicate that ABB Electrical Machine Factory is doing the right things and that the outsourced maintenance strategy is delivering results. ABB EM is off to an excellent start and the future improvements in OEE, technical availability, and cost effectiveness will determine long-term success.



**Matti Pekkarinen, Vice President for ABB Electrical Machines, examining a wind power generator.**

“Full Service needs to be the best service company, not only for ABB clients but also for ABB’s own factories as well. We are taking every step to provide maximum value to ABB’s Estonia factory, as we do with each site that selects our Full Service maintenance program.”

-Timo Jatila, service center manager and start-up manager for ABB Service

## CUSTOMER SATISFACTION

