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# Trend Intelligence for Predictive Maintenance and Operation Optimization in Hydro Power Plants

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## **Abstract:**

In the hydro industry, online data monitoring and data analytics for diagnosis of the health of machine components and trend prediction are strongly gaining in importance. This article discusses methods for diagnosis and trend prediction and presents practical use cases of monitoring and predictive maintenance of core machine components in hydropower plants. It is shown how operational costs can be reduced and how hydro power plants revenues can be optimized both by optimizing maintenance and reliability and by optimizing operation with regard to efficiency and costs.