

## **INTEGRATION OF RELIABILITY, AVAILABILITY, MAINTAINABILITY, AND SUPPORTABILITY (RAMS) IN MAINTENANCE DECISION POLICIES IN AFAM ELECTRIC POWER STATION IN RIVERS STATE NIGERIA**

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### **ABSTRACT**

*The objective of every electrical power producer is to meet its customers' supply demands at a reasonable cost. Therefore plants and equipment in these stations must have availability, reliability and predictability **life-cycle cost (LCC)**. Due to maintenance problems and poor supportive systems, Nigeria electric power generating stations are not able to meet their customers' requirements; these are the major causes of customers' dissatisfaction in power supply requirements. Often it is traced back to expected failures leading to unexpected losses and costs. However, with proper consideration of **reliability, availability, maintainability, and supportability (RAMS)** in maintenance systems decision policies, the number of failures can be reduced and their consequences minimized. Based on experiences of the industrialized countries, an approach for integration of RAMS and risks analysis in maintenance system can be developed as a guide for appropriate maintenance policies. This paper discusses the importance of **failure mode effect analysis (FMEA)**. Failure mode effect criticality analysis (FMECA), LCC analysis, use of feedback information, supportive systems risk analysis, with the integration of various information sources to facilitate easy RAMS implementation in maintenance decision policies. This approach is suggested for implementation in Afam electric power station for the maintenance decision policies as a management control to reduce risk and uncontain costs.*

**KEYWORDS:** RAMS, Management, Risk Analysis, Maintenance of AFAM Electric Power, Nigeria

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