

## Best Practices for Operation and Maintenance Services of Electrical Installation

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**Abstract** - In 2018, the Electrical and Mechanical Services Department (EMSD) began to work with the trade to develop the best operation and maintenance (O&M) practices for electrical installations with the aim of promoting collaborations with the trades to adopt the best practices and innovative technologies throughout the life cycle of the electrical systems. After nearly three years of preparation, information collection and engagement with the trade, the booklet regarding best practices for the operation and maintenance service of electrical installation was finally released in 2021. It is designed for those users who are currently engaged in asset management of electrical installations in existing buildings or those who plan for new design and fitting-out works with these installations in new buildings.

The target audiences of the booklet are primarily for trade stakeholders including building owners, building occupants, facility management professionals, maintenance agents or relevant trade operators. The booklet contains 15 key attributes that cover the whole life cycle of the electrical installations from design, construction, operation, maintenance, alternation, addition and replacement of electrical installations in buildings for continual improvement and upraise the efficiency of electrical asset management. Three levels of guiding principles, namely general, good and best practices, with associated examples of trade practices have been defined in each key attribute as reference.

This paper illustrates the key attributes of the booklet in achieving the best practice on electrical installation with the support and demonstration of real-life examples. Moreover, EMSD, as an innovation and technology facilitator and promoter, takes this opportunity to share the application of advanced technology in different O&M attributes. For instance, power quality and energy management system (PQEMS) has been applied under the maintenance strategy of condition based maintenance, which optimizes the interval between maintenance and minimizes system downtime by the actual condition of the electrical systems to decide what and how frequent maintenance needs to be carried out, achieving several best practice requirements of the attributes such as application of technology, preventive and corrective maintenance in the booklet. To strengthen the collaboration with the trade and public on best practices, an e-booklet platform is launched for accessing the booklet, exchanging knowledge through showcase and videos, and gathering suggestions and feedback.

**Keywords:** Best O&M practices, electrical installation, asset management, application of technology, maintenance strategies

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