

## **801 – Risk management of electric vehicle charging on fuel forecourts and basements.**

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Abstract: Recent experience in EV charging installations have highlighted risks initially unanticipated by the business. The paper will introduce the risks of charging EV's on forecourts and in building basement by means of a bowtie and barrier model.

Each significant barrier will be detailed with emphasis on initial site selection, electrical and general engineering design considerations, construction safety concerns and operational implications. Special attention will be offered to the charging of EV's in building basements and the risk of a building fire from an EV battery fire. Risk ownership will be addressed as an example case.

Whilst the topics are not significantly technical, compiling the separate parts can be challenging to the industry. Recommendations on how to safely select, engineer, construct and operate EV charging sites will be offered.

References to local and international standards will be made.