

## **RISK ASSESSMENT IN THE E-LAND PROJECT**

XUELI GAO and CORALIE ESNOUL and PER-ARNE JØRGENSEN and SILJE  
ARENDRT OLSEN and BJØRN AXEL GRAN

*Institute for Energy Technology, Os Alle, 1777 Halden, Norway.  
E-mail: xueli.gao@ife.no*

The E-land concept (elandh2020), which also can be called a smart grid concept have great potential for the management of energy consumption. However, applying new modernization introduces new risks to relevant stakeholders from energy producers to energy users. Hence, it is therefore important to protect all the stakeholders by providing effective controls to the risk in smart grid system. This highlights the necessity to conduct a risk analysis to evaluate the hazard, threats and vulnerabilities that are introduced into this critical infrastructure by modernization. Among the large variety of risk analysis methods available (CCPS, 2008) (MIL-STD-882E, 2012), spotting the appropriate methodology to assess the concept and product risks in the ELAND project is not obvious considering the number of Business Uses cases and Technical requirements. In this article, we present the risk assessment approach applied in E-LAND, which can be used to determine the risks associated with an architectural concept of e-land smart grid that includes both traditional systems and novel ICT concepts. Risks and vulnerabilities are identified at a level sufficiently detailed to provide mitigation input to the current stage of architecture design, starting at the use case level. The resulting mitigations and recommendations are based on a sound understanding of cybersecurity risks and have been given to design for implementing. This paper also addresses the challenges in applying risk analysis methods and work process in a project as E-LAND and how these challenges were met.

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