



Building a framework for integrated risk management of complex projects: The NINES case

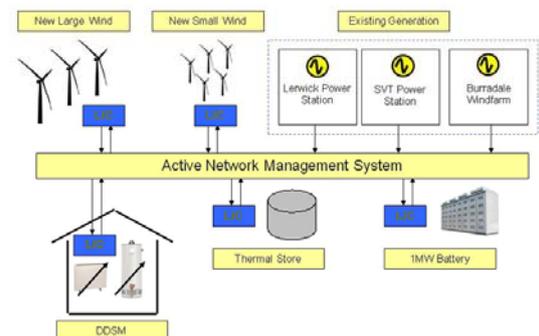
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Project Overview

With the introduction of intermittent renewable generation, distributed energy storage and demand side management, distribution network developments are becoming ever more complex. Northern Isles New Energy Solutions (NINES), led by Scottish and Southern Energy Power Distribution (SSEPD) and supported by Ofgem, aims to incorporate all of these elements into a combined active network management (ANM) scheme. Our research sought to develop a risk management framework to assist the managers of the NINES project deal with the multi-faceted challenges presented by large and complex projects. The process combines two parallel but interwoven activities; the first engages a range of stakeholders, using a group decision support system to facilitate the surfacing of risks and their ramifications, in a casual risk mapping process, while the second engages with the SSEPD team to elicit expert judgement regarding specific uncertainties so as to understand the likelihood of particular risks occurring. This in turn allows the consequences of the risks to be evaluated quantitatively and the implications to be more fully assessed by the project management team through a decision tree (DT) approach. While developed here specifically for NINES, the framework has potential across a range of complex project management situations.



Outcomes

- Contribution to decisions – included engaging the widest possible group of stakeholder in the surfacing and analysis of risks in order to arrive at a more complete picture of the uncertainties facing the project as well as a preferred decision set and quantitative measures of expected outcomes.
- Process – the integrated process which combined workshops, multi-criteria decision analysis and expert elicitation represented a framework that could be employed by the client to address the aleatory and epistemic risks associated with any major investment project of this nature.