



Above Ground Installation Integrity Support Tool

Value Tracking Case Study



Above Ground Installation Integrity Decision Support Tool

Background

The project scope is designed to develop a risk based model for prioritisation of high pressure gas above ground installation integrity management and maintenance activities. Taking into account the threats posed by different damage mechanisms such as corrosion, vibration, over pressure, low temperature, fatigue assessments on individual installations, this type of prioritisation system is a new concept and will better enable the prioritisation of resources to the highest risk installations. This work will determine how National Grid can best make decisions for prioritising maintenance and inspection for high pressure gas installations to maintain their availability for use by customers whilst meeting our safety obligations.

The project will use information from around the world including Europe, US and Asia from research bodies such as EPRG and PRCI to define the appropriate risk profile and consider the various options for above ground installation inspection and management. The work will consider the location, the failure mechanism likelihoods for installation assets and the prevention and mitigation measures in place for individual assets and the entire installation.

National Grid's expenditure on the inspection and maintenance of its National Transmission System above ground assets is in the region of £4M per annum. The tool will be able to rank installations against each other for their propensity for failure and will help National Grid make informed choices for investing funds in maintenance and/or inspection activities for higher risk installations and

ensure that we can continue to meet our customer and safety obligations in the most efficient way.

What's new?

The project team developed a model firstly completing a document review to develop the initial qualitative risk scoring system and worked with key stakeholders to refine and improve the solution. This has provided a model that would assess above ground installations and improve on existing practises.

The benefits

Risk scoring tool created to support asset management/ maintenance decisions. Due to the complexities of this work decisions can often be difficult to make but the support tool will improve this by considering these factors to make a correct overall decision.

Financial savings

It is estimated that approx. £150,000 per year can be saved via deferring approx. 20 sites as part of annual reviews and maintenance not required.

Implementation

Following implementation, it was identified further development was required to the tool to ensure usage was effective. Development to be scoped with stakeholder input/ feedback to finalise the tool.

