**The benefits of implementing ISO 50001**

As Network Rail’s non-traction energy spend rises towards the £50m mark annually, the business will need to look at ways of managing the use of energy throughout its operations in order to control costs and meet its regulated energy and carbon reduction targets. The ISO 50001 standard provides the tools to guide effective energy management and the implementation of energy efficiency measures in a holistic manner.

The standard follows a continuous improvement process which involves creating a policy and setting targets based on available data prior to implementing energy saving measures. The resulting data retrieved from monitoring is then used to inform the process of continuous improvement within the system.

By implementing an Energy Management System, Network Rail could see a huge reduction in energy usage and consequently a reduction in carbon emissions and costs. The savings could therefore support other Route based activities. Achieving this standard would not only help to identify and manage the risk associated with fluctuation in future energy prices, but it would also demonstrate Network Rail’s environmental credentials to its external customers.

Sheffield Hallam University Case Studies

Sheffield Hallam University (SHU) has implemented a Carbon Management Plan in partnership with the Carbon Trust and has been on a journey from Carbon Reduction to certification at the internationally recognised standard, ISO 50001.

SHU has an established and dedicated energy team, with many of the elements required for best practice energy management already in place but just not formalised. By developing a management system in line with the requirements of ISO 50001, SHU was able to formalise its approach, maximise opportunities and continue to raise awareness of energy issues.

First SHU expanded its in-house energy team in order to provide additional resource to develop the project strategically. The facilities directorate created a new post and recruited an Energy & Carbon Manager to co-ordinate and move existing energy management systems to formalised processes.

They undertook a gap analysis activity to help identify what needed to be addressed in order to transition from the requirements of the older BS EN 16001 to ISO 50001. The University also embarked upon a training programme to gain the competence to undertake internal energy management audits.

Board level backing plus the responsiveness of the whole SHU team played an important role in not only raising the importance and profile of the project but also helped the University to achieve impressive energy savings as a result of behavioural change.

SHU have now embedded additional requirements for design, operation and procurement within its processes. The University continues to reap a wealth of benefits from the implementation of its ISO 50001 energy management system including.

* Achievement of its carbon targets and access to external funding
* Saving in energy to reinvest in its facilities and teaching
* Ability to demonstrate transparency and accountability for energy management
* Reduced impacts of scarcity and cost of energy supply
* Enhanced reputation for the University

Some achievements so far have been:

* An 11 percent reduction in annual carbon emissions from total energy use from baseline
* Annual savings of 5 percent CO2 for electricity even though the estate has increased in size by 2 per cent.
* Savings of carbon by floor area of 6.5 per cent
* Savings across projects of £50,000 and over £100,000 annually
* Enhanced reputation and best practice example for energy management with different League Table and Climate Champion awards

Case study adopted from BSI <https://www.bsigroup.com/en-GB/iso-50001-energy-management/case-studies> .