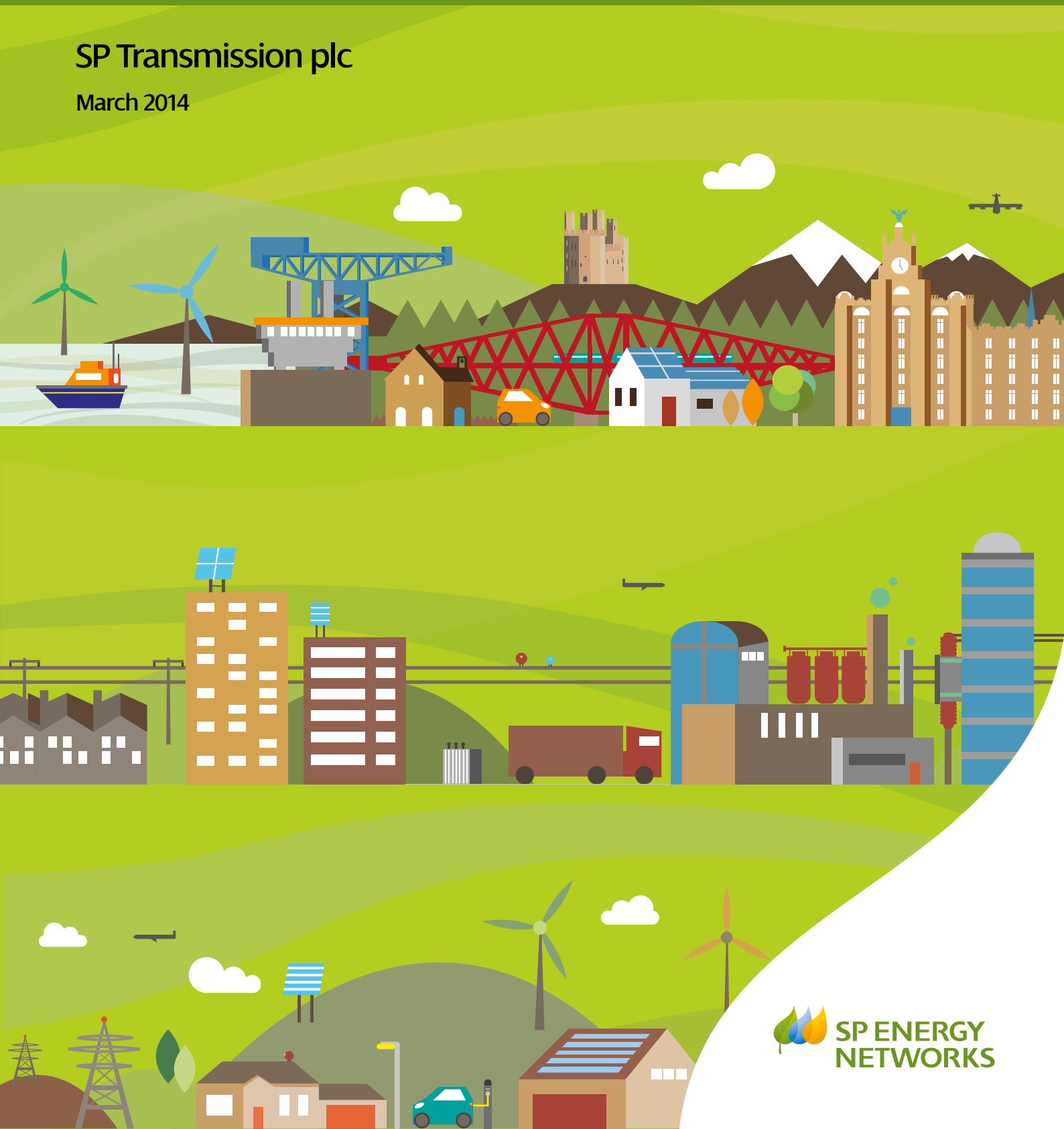


Sustainability Strategy

Annual Statement

SP Transmission plc

March 2014





We intend to deliver our investments and operate our assets in a sustainable way, through engagement of stakeholders, setting our sustainability drivers and delivering our initiatives.



Scope

Our RIIO-T1 business plan includes up to £3 billion of investments that are essential to deliver a low carbon energy system for Britain.

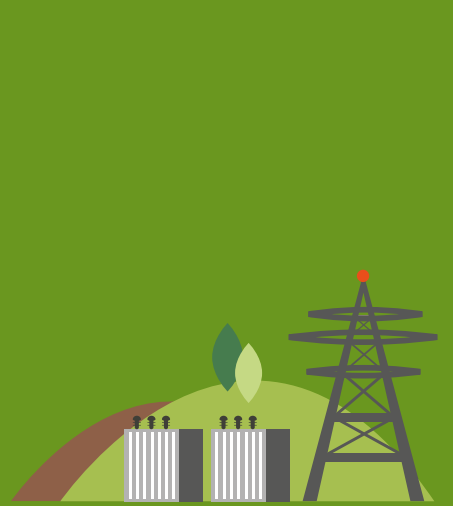
The Environmental Discretionary Reward (EDR) Scheme is a key incentive under Ofgem's Price Control Process for Electricity Transmission 2013-21 (RIIO-T1).

We fully support the objectives of the EDR Scheme and have chosen to make a submission for the 2013-14 period. We welcome the opportunity to demonstrate the progress we are making towards delivering a low carbon energy system and the high standards of environmental management we are seeking to achieve.

This report is SP Transmission plc annual executive statement for the EDR Scheme.

Its scope is to explain our sustainability strategy, introduce our 8 sustainability drivers and explain some of the key initiatives that we are delivering to provide a carbon energy system.





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Who we are

SP Transmission plc (SPT) are a wholly owned subsidiary of Scottish Power Energy Networks (SPEN), who are part of the IBERDROLA Group. We are responsible for the transmission of electricity in central and southern Scotland. Our role is to maintain, operate and invest in our network to secure a safe, reliable, and economic service for current and future consumers.

The SPT Transmission System comprises 4,024 circuit kilometres of overhead line and cable and 132 substations operating at 400, 275 and 132kV supplying 1.99 million customers and covering an area of 22,950 square kilometres. It is connected to the SHE Transmission System to the north, the NGET Transmission System to the south and the Northern Ireland Transmission System via an HVDC interconnector.

The SPT area is crucial to the delivery of the Government's renewable energy objectives due to its location in an area of outstanding renewable resource and its position between the Scottish Hydro Electric (SHE) Transmission plc and National Grid areas. We therefore have a unique role in connecting renewable generation and bulk transfer of renewable energy from the SHE Transmission and SPT areas into England & Wales. Our activities therefore benefit stakeholders well beyond our licence area.

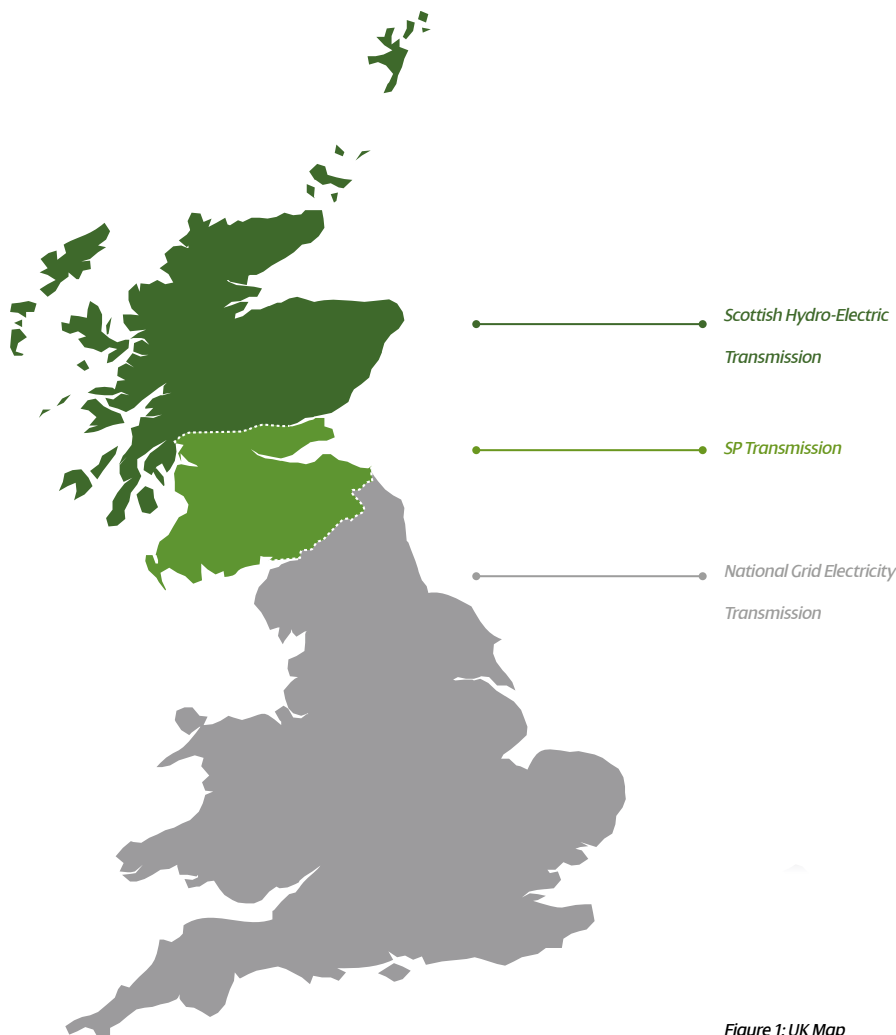


Figure 1: UK Map with SPT area



Background

SP Energy Network values based on:-

- *Serving our customers*
- *Managing our assets*
- *Developing our people*

As part of our engagement with stakeholders we undertake regular surveys to help us understand if we have the right priorities for our transmission network.

The latest stakeholder engagement we undertook, showed increased concern about climate change and flooding. In addition, environmental impacts rated high on our stakeholders list of concerns. Our sustainability strategy has been established to reflect these priorities.

We have a broad range of stakeholders including, regulators, customers, Statutory Authorities, our own staff and interested parties. As part of the feedback from our engagement events, we identified the key themes and formed from this our eight drivers for change, within a Sustainability Strategy. The eight drivers incorporate regulatory requirements, legal compliance and well as commitments in our Transmission and Distribution Business Plans.

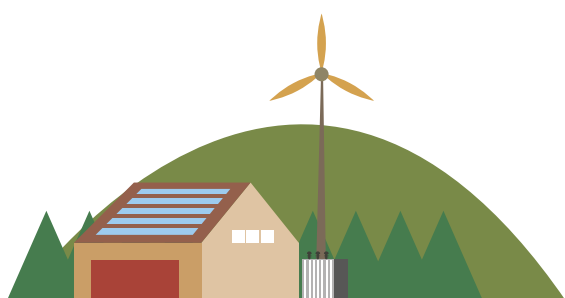
This Strategy will enable us to:

- *Better serve our customers*
- *Improve our asset management*
- *Develop our staff*

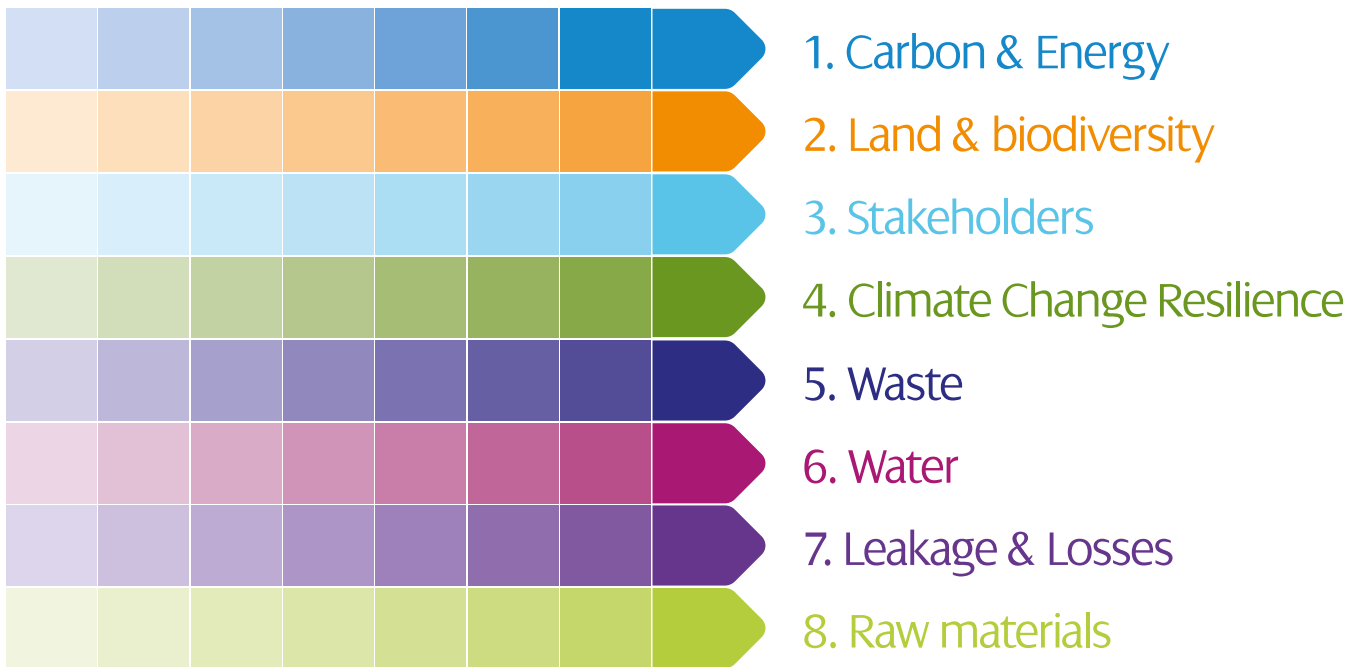
With Sustainability as the core, our strategy will enable us to deliver our regulatory, legal and business plan commitments, and assist us in transition to a low carbon future.

The Sustainability Strategy has a number of initiatives within each of the eight drivers. As part of this Annual Statement we have highlighted one initiative for each driver. A number of the initiatives are already in delivery and some are in development.

Over the next eight years, in line with our business plan timeframe, we will continue to develop these initiatives and report annually on our progress.



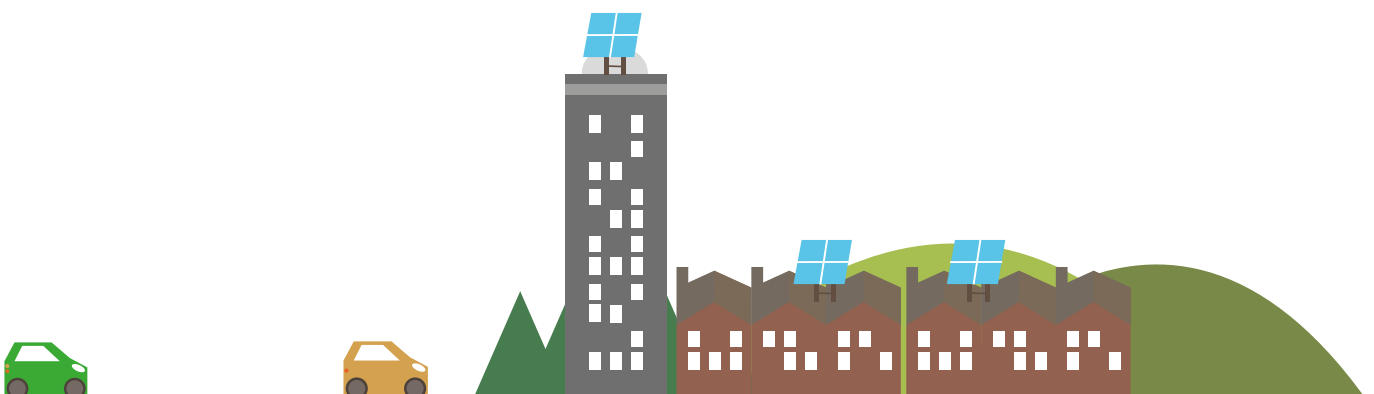
Eight Sustainability Drivers



Our eight drivers and associated initiatives have been assessed against the following criteria:

- *Cost effectiveness*
- *Timing of initiatives*
- *Incorporation of Lessons learnt*
- *Technical and innovative best practice*

Under each Sustainability Driver we have highlighted one key initiative to give an example of the type of projects we are undertaking.



Sustainability Driver 1

Carbon and Energy

- Carbon & Energy**
- Projects
- Operations
- Assets



The Scottish Government has significant CO2 emission reduction targets (80% by 2050 with an interim target of 42% by 2020) to achieve under the Climate Change (Scotland) Act 2009.

To meet these targets decarbonising electricity generation is essential. Our contribution is to connect new generation to our transmission system and provide increased north to south transmission boundary capacity to transport the energy from renewable generation in the North to the major demand centres in England and Wales.

Our investment will support the delivery of over £2 Billion in reduced carbon emissions (equivalent to over 45 million tonnes of CO₂) from the Renewable Generation sector over the RII0-T1 period.

Key Initiative: The Western HVDC link

Background

This joint venture project with National Grid increases boundary capacity between Scotland and England up to a potential 6.6 GW. It will transfer around 2000MW of power across several hundred kilometers using a subsea marine HVDC cable. The development of our 'Load' Investment plan (connecting new generation and upgrading our system capability) has been informed by using the output of the generation planning scenario analysis conducted by NGET involving multiple industry stakeholders. We based our investment plan on the 'gone green' scenario which achieves 2020 targets, and are developing strategic wider works projects in line with current scenarios. The WHVDC link is a key project in the plan to deliver the 2020 targets amongst others because:

- DC circuits can transmit power with much lower energy losses over long distances, on fewer cables than equivalent AC circuits.
- The flow can be reversed so that if there is shortage of power in Scotland, energy from English based generation can be sent northwards.

Current Status

- The Principal Contractor contract has been let;
- Land acquisition at Hunterston has been concluded
- Civil works in progress at the Converter/substation

Timescales

- Anticipated completion in 2016

Sustainability Driver 2

Land and Biodiversity

Land & biodiversity

Projects

Operations

Assets



Key Initiative:

Beaully-Denny Peat Management at Denny Substation

The 400kV overhead transmission line from Beaully to Denny has been consented and is under construction.

Whilst the site for the Denny North Substation forms a strategic junction in the existing electrical transmission network where five major transmission overhead lines converge it is also a sensitive environmental site, in the form of a raised bog.

Recognising the potential significant adverse ecological effects on the existing raised bog, and because there was no alternative feasible site, SPT in consultation with the Scottish Environment Protection Agency (SEPA) and Scottish Natural Heritage (SNH) has placed an emphasis on minimising the potential impacts and defining mitigation and offset measures.

SPT has developed both Peat and Habitat Management Plans to assist in the development of the substation. These plans set out the approach to restoring the remaining part of Torwood Mire planted with commercial forestry, minimising the amount of peat to be removed from site, detail how peat retained on site can be used to add ecological value to areas surrounding the site and set out the overall restoration aim of the site to fit the new development into its surroundings.

Current status

- *The peat has been reused, within the site boundary.*

Timescales for completion

- *There will be an ongoing habitat management plan to monitor ecological improvement.*

Sustainability Driver 3

Stakeholders



Our Stakeholder Engagement Strategy is to improve the performance of the organisation by seeking out stakeholder input, listening to and acting on stakeholder feedback. Stakeholder engagement is used to support both operational and strategic improvements in performance.

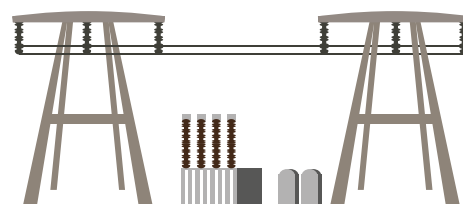
88% of respondents to our Annual Transmission stakeholder survey, agreed these should be our key stakeholder priorities:

1. *Service – improved processes for maintaining security of supply*
2. *Connecting to the network – improved process for new connections and more accessible process for new connection.*
3. *Investment – mitigation consenting and planning challenges.*
4. *Environment – minimising environmental impact*
5. *Supply chain – improved relationship with supply chain*

Key Initiative: ARC Project

Our Accelerating Renewable Connections (ARC) will significantly improve the process for new connections, bringing benefits to both embedded and transmission connected generation developers. The project aims to establish a new process for connecting conventional and community driven renewable energy schemes using new commercial arrangements and new energy management technology. The network in some areas is fast approaching saturation point. Within some DNO areas, relatively small generation projects are unable to connect ahead of major reinforcement works being completed on the transmission system.

Working in partnership with Community Energy Scotland, Smarter Grid Solutions and the University of Strathclyde, this project aims to help accelerate the time taken and reduce the costs of connecting small-scale projects to the grid. For example, this project will deliver one customer a saving of £20m on connection cost and be connected 8 years earlier.



Current status

- *There has been a trial area chosen as East Lothian and the Borders region of Scotland.*
- *We have installed the first of three Area Network Management machines and are in discussions with National Grid on actively managing the power flow at a congested Grid Supply Point in Dunbar.*

Timescales for completion

- *Completion for the pilot is 2016 and if successful integration into our business process will follow rapidly.*

Sustainability Driver 4

Climate Change Resilience

Climate Change Resilience

Projects

Operations

Assets



We have identified the need for over £31m of investment at 3 key substations (Kincardine, Longannet & Glenlee) for protection against increased flood risk. The first of these coming forward in our plan is at Glenlee substation and is explained as follows:

Key Initiative:

Protection of Glenlee substation

Glenlee 132/11kV Substation is located immediately beside Glenlee Power Station which forms part of the Galloway Hydro-Electric Power Scheme. The Power Station was commissioned in the mid 1930s. However, recent flood mapping from SEPA indicates that the relative elevation of the substation site is now considered to be located within a flood zone and is susceptible to flooding for certain return period events. A detailed hydrological model of the catchment area in which the substation compound lies was commissioned including a Flood Risk Assessment (FRA) and concluded that as a result of the 1:1000 year return period flood event, with an allowance for the effects of climate change, the Water of Ken, the Coom Burn, Craigshinnie/Park Burn and the Glenlee Power Station tailrace all have potential for collectively increasing the risk of flooding within the substation compound. The FRA identified that the substation would be inundated by around 600mm as a result of pluvial effects.

It is proposed to take the maximum flood water level as 55.072m (55.203m – 0.131m) and design all flood protection measures based on this level, with an additional allowance for freeboard.

Current status

The proposed works have been identified and are currently progressing towards formal authorisation:

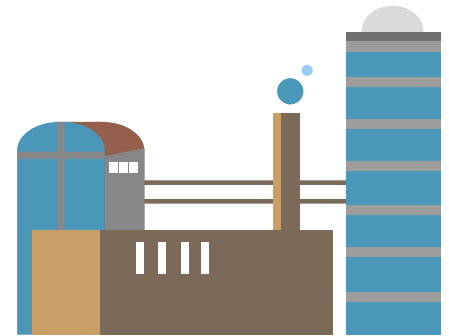
- *upgrade a section of the culvert out with the substation compound.*
- *install measures to protect the LVAC/Battery room within the lower control building, including sealing all trenches incoming to the building and effectively waterproofing the building including protecting the doorway(s).*
- *protect other below ground equipment, such as the septic tank and oil water separator to prevent any back-flooding.*

Timescales for Completion

- *Detailed design, procurement and tendering will continue through 2014 with construction planned to start in November and final commissioning in 2015*

Sustainability Driver 5

Waste



Key Initiative: increase in waste reduction and management

As part of our project portfolio of work, we recognise and monitor waste to landfill. We have assessed that waste will be a significant environmental impact as a result of our planned projects.

Good waste management on projects and the use of the waste hierarchy to reduce, reuse and recycle, will help us comply with legislation, reduce costs and help the environment.

Through our design, planning and construction of projects we already promote appropriate waste management practices. Waste from our projects could be metals, wood, food, packaging, electrical and liquid waste. Good segregation of different types of waste is essential including how the waste is stored prior to disposal or recycle.

Even though there is no legal requirement in our Transmission area for projects to have a Site Waste Management Plan, we promote the use of these on our larger projects specifically.

Current status

- We audit our waste suppliers and promote appropriate waste management on our projects.

Timescales for completion

- We plan to set a more progressive target on projects to increase the levels of waste to be recycled, and increase the use of site waste management plans on our projects.

Sustainability Driver 6 Water

Water
Projects
Operations
Assets



Key Initiative: water discharge reduction

We have a large project portfolio to deliver over the R110-T1 period. Consequently there will be a large number of construction projects which have the potential to cause discharges to water. SEPA states 'Although the construction phase of any project is short term compared with the permanent works that are being built, the risk of pollution and damage to the water environment during this phase is very high'. Risks are from run-off which can transport sediment, oils, chemicals, concrete into the water environment. In addition heavy rainfall, and particular flooding of works can require draining or pumping to water.

Impacts can be sediment pollution which can smother important river habitats such as fish spawning. Pollution from fuels on freshwater and marine ecology, discharge from cement with results in high alkalinity and raises the pH, which can be toxic to aquatic life.

For example, five litres of oil can disperse to cover an area of water the size of four football pitches.

Current status

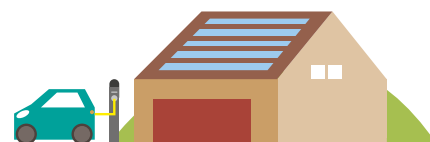
- *We are monitoring water discharges and incidents on our projects.*

Timescales for completion

- *We plan to set a more progressive target on projects to reduce water discharges..*

Sustainability Driver 7

Leakage and Losses



Key Initiative: Sf₆ leakage reduction

Transmission assets make use of equipment containing Sf₆ because it provides a safe and cost efficient electrical insulation medium, while also helping to minimize a substations carbon footprint. However, (Sf₆) is a greenhouse gas and leaks into the atmosphere. Leakage and as such waste of product can occur through aging assets and as a result of maintenance and commissioning activities. We have been reducing our leakage year on year from a level of 930kg in 2007/08 to 520kg in 2012/13, even though our inventory of Sf₆ assets have increased.

Over the RII0-T1 price control period from 2013- 2021, we will install new Sf₆ equipment as part of our load and non-load capital expenditure programmes and in so doing significantly increase our inventory of the Sf₆ mass used in transmission equipment and potentially increase our emissions.

Accordingly, we have developed a statement approved by Ofgem that sets out the methodology we use for determining the actual and expected leakage of Sf₆ gas from the assets forming our Transmission System. We record the changes to our inventory, calculate the target emissions and measure the actual Sf₆ leakage according to the process defined in this document which is available on our website.

Current status

- Sf₆ emissions are dependent on the timing of adding new and disposing of old switchgear in line with business plan. We are currently ahead of schedule having commissioned 10% of our overall RII0_T1 switchgear volumes and have a further 25% in delivery. We are tendering 15% and the remaining 50% is in development. So far we have completed works at Bonnybridge and started on site at Windy Hill to renew equipment. We are due to report on our 2013/14 levels of Sf₆ emission to Ofgem in July and will include this in our annual statement accordingly.

Timescales for completion

- We are ahead of target to deliver a full plan of replacing 15% of our substation assets by 2021.

Sustainability Driver 8

Raw Materials

Raw materials
Projects
Operations
Assets



Key Initiative:

Reduction of Raw materials used

We recognise that we have a large and diverse supply chain to support our business. In the future, there may be more competition for raw materials from natural resources, increasing cost due to availability. There are opportunities, we believe, to be innovative with our raw materials but this requires engaging fully with our suppliers.

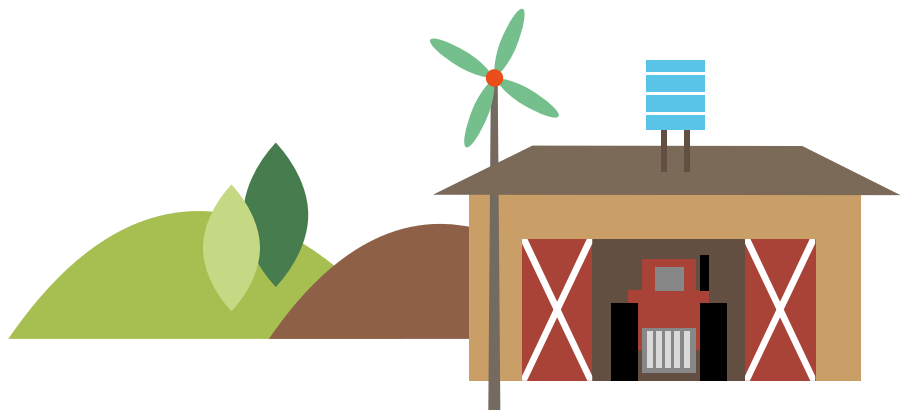
We use an extensive amount of raw materials from our supply chain from steel in our towers in projects, to bread used in our canteen facilities. Our initiative is to review our supply chain in the first year, and obtain baseline information. We will then set a sustainability assessment as part of our procurement of materials including key performance indicators as part of a Sustainability Index. The Index will give a sustainability value to materials to enable effective procurement including agreed KPI on the percentage use of those materials for our business.

Current status

- *We have identified this as a new initiative, and will gather baseline information to set clear KPIs for our suppliers.*

Timescales for completion

- *As we progress through to baseline data, setting KPIs, developing and delivering supply chain engagement events as part of sustainability stakeholder engagement plan.*
- *Technical and innovative best practice*



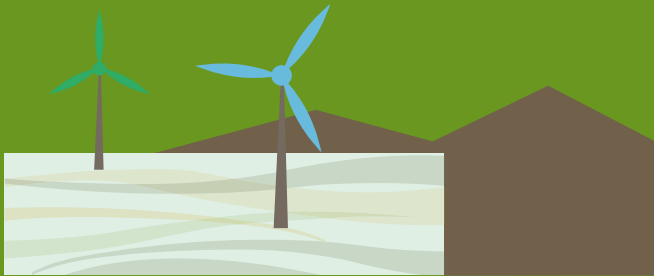
Consultation and Feedback



We would be delighted to receive any comments, suggestions or questions on our Sustainability Strategy and the content of this annual statement.

Please email as at
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spenergynetworks.com](mailto:stakeholderengagement@spenergynetworks.com)





Our Sustainability Strategy will apply to every aspect of our business. Each department is interconnected, to deliver our initiatives, for environmental improvements, stakeholders and business efficiency.



SP TRANSMISSION

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