Our Contribution
A framework for environmental sustainability in National Grid

For more information:
www.nationalgrid.com
Message from Steve Holliday
Chief Executive

National Grid is at the heart of one of the greatest challenges facing our society: connecting new sustainable energy solutions and developing an energy system that can support economic prosperity in the 21st century.

Our job is to connect people to the energy they use, safely and reliably. Doing this involves managing the physical infrastructure of the gas and electricity grids, and designing and building networks for the future.

We are in the middle of a multi-billion pound investment programme to meet future energy demands by modernising and extending the UK networks and connecting new, cleaner energy sources.

This change gives us a great opportunity to think about how we build and operate networks now and for the future. We need the courage to make decisions differently.

Our Contribution sets out National Grid’s ambition to transform the way we do business and provide a sustainable legacy as a result of our operations.

By making our contribution and doing the right thing, we ensure that our business delivers enduring value to customers, investors, employees and the society that we serve.

Hundreds of stakeholders accepted the challenge at National Grid’s first UK sustainability summit in September 2012 to help develop our sustainable business vision, ambition and programme. Following on from the summit, we launched a competition to challenge our UK suppliers to come up with innovative ways of implementing the principles of Circular Economy, promoted by the Ellen MacArthur Foundation, into the design of the materials, plant, processes and equipment they supply to us.

“We can’t make the transition to the Circular Economy alone and this gets our suppliers to share their ideas about how they contribute,” said Jon Carlton (pictured), Director, UK LNG and Metering.
Why make a contribution?

Environmental sustainability is an increasingly important driver for all businesses, not least those in the UK energy sector.

Our customers and energy consumers, our regulators and governments, our shareholders and investors, and our employees, all expect us to reduce greenhouse gas emissions, to manage our resource consumption and to respect biodiversity and ecosystems.

Because sustainable business is good business, we are transforming our company to excel in the face of these challenges, managing our exposure to risk, investing in options that build environmental gain and reduce our running costs to give us long-term financial strength.

Our Contribution sets us on the pathway to being a more environmentally sustainable business: a business that separates its impacts from growth and prosperity, a business that rethinks how it uses finite natural resources, and a business that makes a positive contribution to the natural world we all share.
Our Contribution

National Grid is committed to sustainability to create value, preserve resources and respect the interests of communities.

Our Contribution defines our environmental sustainability ambition and sets out specific and measurable targets that will get us there. This document summarises Our Contribution; to see the extent of our ambition, please visit our website.

Our focus is on making significant progress in three big areas:

**Climate positive**
Facilitating the transition to a low-carbon energy economy and reducing our own carbon footprint.

**Positive about resources**
Removing waste and inefficiency from everything we do, minimising our impact on the environment.

**Enhancing ecosystems**
Using our land and our natural assets for good, benefiting biodiversity, ecosystems and communities.

All our people have a role to play in our success so we are connecting them to our vision and strategy by embedding sustainability in our ‘Line of Sight’ framework and individual objectives.

**Environment to innovate**
Innovation is essential in our business. If we’re going to rethink our processes and challenge our “business as usual” mindset, we have to innovate.

Innovation comes in all shapes and sizes, from incremental developments to transformational change. And it can come from anywhere – from our employees, our supply chain and our stakeholders.

Innovation is crucial to transforming the way we do business and delivering Our Contribution.

Contaminated material from four former gas works was sent to a central treatment site in Greater Manchester in an innovative ‘hub and cluster’ project. The soil was cleaned and returned for reuse on the donor sites. Naomi Regan, Portfolio Programme Manager, said: “This approach to land remediation has saved nearly 100,000 lorry miles, avoiding 109 tonnes of carbon emissions. A cost saving of more than 30 per cent has been achieved from the use of the hub and cluster combined with the contractual approach adopted. We won the 2012 Ground Engineering Sustainability Award and also the CL:AIRE Constructing Excellence Award for Best Use of the Definition of Waste – the first of its kind and great recognition for National Grid.”
Our stakeholders have told us that helping reduce society's carbon emissions is the biggest contribution we can make to the environment. So we are connecting low-carbon energy sources, supporting technologies to reduce the impact of energy generation and transmission, and working to secure adequate energy for current and future demand. Through great design and engineering solutions, we are refurbishing and building infrastructure to deliver tomorrow’s smart, sustainable energy – a positive step to reducing everyone’s climate change impacts.

We need to make our contribution as well, to reduce our own impact. We have already set ourselves challenging targets to reduce the greenhouse gas emissions that are a direct result of our operational activities – 80 per cent by 2050 with an interim target of 45 per cent by 2020. We are investing in our own UK networks to reduce greenhouse gas emissions from burning fossil fuels and from the release of sulphur hexafluoride and natural gas.

To support our network investment we will buy more goods and services, more resources and materials. This will inevitably increase our environmental impact and the emissions in our supply chain. We are taking up the challenge of understanding and reducing these embedded impacts.

On the Isle of Grain in Kent, our liquefied natural gas (LNG) terminal uses surplus heat from the adjacent E.ON power station to reduce its demand for fuel gas. This results in savings of up to 300,000 tonnes of greenhouse gas emissions a year – the equivalent of taking 60,000 cars off the road. Simon Fairman (pictured), Head of UK LNG Development, says: “We installed twin 1,200mm pipelines to run the 4.5km to the power station. They carry surplus hot water from the power station’s cooling plant to the Grain LNG terminal, and return cold water. It makes a big reduction in our demand for fuel gas.”
Positive about resources

To build and maintain our networks and deliver energy, we use finite natural resources for which there is increasing demand.

This presents real business risks, from resource scarcity to rising costs, that we need to manage. Getting the maximum value for all the materials we buy and own calls for a rethink of how we manage our assets through their full life cycle.

We want to develop systems for refurbishing and recommissioning assets. Ultimately, we want to work with our supply chain to retrieve and reuse good working parts by designing assets for disassembly, reuse and remanufacture. This way we keep the value of the asset as it is, saving on the raw materials, energy and other valuable resources used in production. We’re establishing pilot projects with our suppliers to look at the benefits and costs of reusing redundant metallic assets, reducing the amount of new material we need. In the future, we’ll extend these pilots to look at all our major asset types.

Positive about resources is not just about our assets; it’s about the resources, energy and water we use directly or through our supply chain. Understanding the water and energy embedded in the goods and services we buy will help us manage these impacts and any risks, efficiently and responsibly.

Construction of our London Power Tunnels will result in the excavation of 400,000 cubic metres of London clay. Paul de Jong (pictured) of Cable Tunnels, Capital Delivery, said: “London clay is an excellent engineering material that can be reused on other construction projects. So far we’ve reused 100 per cent of the clay produced in the tunnel boring process, the majority of it as an infill material on our gas holder decommissioning projects in the London area. This is cutting down the haulage distances of the material dug out, which reduces the project’s carbon footprint.”
Enhancing ecosystems

As individuals and as a business, we rely on ecosystems – the natural, living environment that surrounds us all.

Ecosystems provide us with essential services: they regulate the climate and absorb CO₂, purify air and water, pollinate plants, provide food and resources, and protect us from floods. Access to green space and the natural wildlife it supports also has real value to people’s wellbeing. At National Grid, we routinely rely on ecosystems to provide valuable services to us, including visual screening, noise abatement and security areas around our sites.

Society is only now starting to understand the long-term impact that disturbing the balance of nature can have on our lives and our businesses. Nature cannot sustain the current demands that we place on it. Our business has an important role to play, working with others to help in restoring the balance of nature through positive actions.

The Natural Grid
Our assets, operations and infrastructure have an impact on the natural environment. Regulations require us to mitigate this impact but through innovative approaches we have a real opportunity to create something special for our business, communities and society as a whole – the Natural Grid.

As a landowner, we will work and partner with others to use our land and our natural assets for good, benefiting biodiversity, ecosystems and communities. We will engage with communities and our people to make sure we respect and preserve what we all value, and enhance what we have for future generations.

Our aim is to provide a natural grid of better and bigger habitats, connecting them to create wildlife corridors and biodiversity stepping stones alongside our network of energy assets. The Natural Grid adds ecological value, connects habitats, species and ecosystems and makes our contribution to the preservation, restoration and enhancement of the natural environment.
Our 2020 targets

Challenging targets make us rethink how we do things: achieving our ambitions, building profitability and making a positive contribution to the environment and society.

Greenhouse gas emissions: 45 per cent reduction by 2020 and 80 per cent reduction to 2050
Our ongoing investment supports improving the efficiency of our operations, reducing natural gas emissions and researching alternatives to sulphur hexafluoride.

80 per cent of top 250 suppliers to report greenhouse gas emissions by 2020
We are working with our supply chain to reduce the greenhouse gas emissions associated with everything they supply to us, and encouraging them to adopt responsible practices in sourcing and manufacturing.

Reuse or recycle 100 per cent of recovered assets by 2020
We are examining how we can reuse resources in our supply chain, making new or refurbished assets from old. With our supply chain, we will design equipment and ways of working that use fewer new or more recycled resources.

Deliver sustainability action plans at 50 sites by 2020
We will use our landholdings throughout the UK to establish the Natural Grid as a distinctive contribution to the preservation and restoration of habitats and biodiversity.

RIIO, the UK price control framework, sets Revenue using Incentives to deliver Innovation and Outputs.
Our transformation to a sustainable business fits well with the significant challenges presented by RIIO and its underlying concepts of sustainability in the energy sector and network services.

In line with RIIO, being a more sustainable business means that we provide cost efficiencies by:
- making decisions for the long term
- having better resource efficiency through supply chain development
- improving energy efficiency which lowers carbon emissions.