

APPENDIX 1



Schedule 9

National Grid Electricity Transmission plc
Electricity Act 1989 – Schedule 9 Statement

Duty of Preservation of Amenity

Who we are and what we do

National Grid is an international energy delivery business. We are the UK's largest investor-owned utility and one of the largest worldwide utility companies.

National Grid owns and operates the high voltage electricity transmission system in England and Wales which provides electricity to the local distribution companies, who in turn provide electricity to homes and businesses. The high voltage electricity system is made up of approximately 22,000 pylons with an overhead line route length of 4,500 miles, 415 miles of underground cable and 337 substations.

In addition National Grid owns and operates the gas transmission system in Great Britain which provides gas to the local distribution companies. There are some 4,300 miles of high pressure gas transmission pipeline in England, Scotland and Wales. National Grid also owns and operates the local gas distribution network in the North West, West Midlands, East of England and North London regions this consists of some 82,000 miles of gas distribution pipeline, distributing gas to 11 million homes and business.

National Grid operates and maintains the infrastructure of overhead lines, underground cables and gas pipelines 24 hours a day, 365 days a year to ensure that the nation's energy requirement is delivered safely, reliably and efficiently.

We have a statutory duties to:

- develop and maintain an efficient, co-ordinated and economical electricity transmission system
- facilitate competition in the supply and generation of electricity
- develop and maintain an efficient, co-ordinated and economical pipeline system for the conveyance of gas
- respond to requests for new gas supplies in certain circumstances.



National Grid Electricity Transmission plc Schedule 9 Statement

Purpose and scope of this statement

This statement sets out how National Grid Electricity Transmission plc (National Grid) will meet the duty placed on it under Section 38 and Schedule 9 of the Electricity Act 1989 (see back page). This duty relates to the preservation of amenity and forms only part of National Grid's wider environmental responsibilities. Information on those environmental issues not formally covered by Schedule 9, such as pollution control, electric and magnetic fields and our role in accommodating renewable generation is available in other publications. We are committed to going beyond our statutory duty in undertaking our electricity transmission projects, and this statement, with our 10 commitments detailed overleaf, sets out how we, and our contractors, will do this.

In our statement, we interpret amenity to mean the natural environment, cultural heritage, landscape and visual quality. We also include within this interpretation the impact of our works on communities, such as the effects of noise and disturbance from construction.

This statement applies to all works on National Grid's electricity transmission system in England and Wales. By "works" we mean constructing new transmission infrastructure such as overhead lines, underground cables, sealing end compounds and substations; major refurbishment of any of these; and the dismantling of any parts of the system.

Our Role

Under the Electricity Act 1989 National Grid is the only company in England and Wales licensed to transmit electricity. Our transmission system operates mainly at 400,000 and 275,000 volts. As a license holder the Act places a duty on National Grid to develop and maintain an efficient and economical system of electricity transmission and to facilitate competition in the supply and generation of electricity. By providing safe, secure and reliable supplies of electricity to the distribution network operators, who in turn supply homes and businesses, National Grid helps to support a sustainable way of life for people in England and Wales. We must plan and operate our system to comply with the Transmission Security Standard referred to in our licence. To fulfil our duty to facilitate competition and meet the requirements of our transmission licence we must offer to connect customers to the transmission system. The need for our equipment is therefore determined in the first instance by the locations chosen by our customers either individually or collectively. We decide how to meet this need by utilising our existing equipment effectively, routing new electricity lines and siting new equipment. These decisions will be governed by our commitments in this statement.





Our wider environmental responsibilities

With our equipment sited across England and Wales we understand that many stakeholders and communities have an interest in our activities. We believe our long-term success is based on having a constructive and sustainable relationship with our stakeholders and those communities affected by our activities. We recognise that we can only do this by looking beyond our legal obligations.

Although there is universal acceptance of the benefits of electricity – modern life is unimaginable without it - by its very nature, our business, with its necessary pylons, overhead wires and substations, can have an impact on both the natural environment and cultural heritage. We use opportunities to protect and improve the environment, both by using technology to reduce the need for new lines, and by seeking to reduce the impact of our existing equipment.

The visual impact of overhead transmission lines is understandably an issue many people raise but there are also strong cost and operational reasons for using overhead lines rather than underground cables (which are set out in a separate booklet), so in common with other transmission utilities world-wide, our preferred method of transmission is by overhead lines. Although compared to other countries National Grid has had a higher proportion of lines placed underground for amenity reasons, undergrounding remains an exception.

As detailed on the preceding page it is a principle of National Grid's environmental policy to incorporate environmental considerations into all of our activities. We seek to avoid routeing new lines or siting new substations in close proximity to peoples' homes for reasons of general amenity. Overhead lines and certain items of substation equipment can generate noise. Where complaints about noise arise from our works, we will investigate the cause of the noise and, if our equipment or practices are at fault, do all that we reasonably can to minimise the noise level. We undertake research into lower noise alternatives that can be used when installing or refurbishing equipment. Where practicable, we will deploy new techniques or equipment which result in less noise.



In addition to our Schedule 9 duties National Grid as a statutory undertaker has a number of specific legal environmental obligations, such as those contained in the, Environment Act 1995 and Countryside and Rights of Way Act relating to National Parks, AONBs and SSSIs. Landowners and occupiers, on whose land our equipment is sited, are key National Grid stakeholders. Our "Working with You" publication sets out the standards we expect from staff and contractors when working on other people's land. Our commitments to National Parks, in response to duties under the Environment Act 1995, are contained in a statement prepared with our National Park stakeholders. We aim to make a positive impact on society at large through our support for a wide range of environmental and community initiatives and we support staff involvement in these activities. The National Grid Tree Warden Scheme and National Grid's Environmental Education Centres are two examples of our work with environmental partners.

Our Schedule 9 Commitments

We have made 10 commitments to underpin our Schedule 9 duty. The first seven commitments follow a sequence based on the themes of establishing need; avoiding; minimising; mitigating; compensating; enhancing; and monitoring. The first three of these commitments relate to new transmission infrastructure only. Commitments 4 to 7 relate to all works, while commitments 8, 9 and 10 relate to the specific topics of environmental impact assessment, consultation and reviewing this statement. We will use environmental impact assessment techniques to help us meet these commitments.

1. Establishing need

We will only seek to build lines along new routes, or substations in new locations, where the existing transmission infrastructure cannot be upgraded to meet transmission security standards, or where we foresee an increase in demand for electricity which will not be satisfied by other means, or where connections to customers are required.

2. Avoiding nationally and internationally designated areas

If new transmission infrastructure is required, we will seek to avoid the following areas which are nationally or internationally designated for their landscape, wildlife or cultural significance. National Parks; Areas of Outstanding Natural Beauty; Sites of Special Scientific Interest including Special Protection Areas, Special Areas of Conservation and Ramsar sites; National Nature Reserves; Heritage Coasts; World Heritage Sites; and scheduled ancient monuments.

3. Minimising the effects of new transmission infrastructure

We will seek to minimise the effects of new transmission infrastructure on other sites valued for their amenity such as listed buildings, conservation areas, areas of archaeological interest, local wildlife sites, historic parks and gardens and historic battlefields. We will take into account the significance of these and other areas through consultation with statutory bodies and local authorities.

4. Mitigating adverse effects of works

Where works are likely to have an adverse effect on amenity, we will carry out mitigation measures to reduce those effects as far as practicable. We will use environmental impact assessment techniques to assess possible effects and identify opportunities for mitigation measures, and in the course of this we will consult the relevant statutory and non statutory consultees together with landowners. Where the effect of our works is significant, we will consult affected residents.

5. Compensating where mitigation is not possible

Where mitigation measures cannot fully mitigate against loss of amenity, or where mitigation is not possible, we will offer to undertake practical offsetting measures. These could include landscaping and planting works or other benefits to affected communities.





6. Enhancing the environment around our works

When undertaking works, we will consider what practicable measures can be done to enhance areas in the vicinity of the works for the benefit of the local community or the natural environment.

7. Monitoring and continuous improvement

Post-construction, we will carry out a review of the environmental impact of our works and consider the effectiveness of our assessment and any mitigation we have undertaken. The results of reviews will be used to improve management practices and to foster continuous improvement in the environmental assessment and management of schemes.

8. Best practice in assessing environmental impact

In determining the environmental impact of our works, we will ensure that we utilise best practice methods, undertaking research to refine our understanding of best practice. We will undertake relevant environmental investigations and report on these in any applications for consent for new works.

9. Consultation and liaison

When planning works that will have a high impact on a residential area or a site valued for its amenity, we will consult with local interest groups and residents, with the aim of identifying key environmental issues which can be taken into account and more effectively mitigated. In order for consultation to be most effective it will be done at a stage where the results can be used to influence the design of the project. When undertaking works, which will have a less significant impact, we will liaise with and inform affected residents according to the severity of that impact. We will take into account local biodiversity action plans and other local initiatives being undertaken by local communities.

10. Reviewing this Statement

We intend to review our Schedule 9 Statement at least every five years. However, as a responsible company practising good corporate governance, we will review the relevance of this statement annually and report on our website case studies illustrating our Schedule 9 performance.

Environment Policy

National Grid is committed to the protection and enhancement of the environment, always seeking new ways to minimise the environmental impacts of our past, present and future activities.

We believe that everyone is responsible for good environmental performance as we incorporate environmental considerations into all our business activities. The following principles provide the framework to help us set goals to promote continual improvements in environmental performance and to deliver and maintain a culture that achieves the performance to which we aspire.

- We expect management to provide visible leadership that promotes good environmental performance and to commit the appropriate resources to achieve our environmental goals;
- We meet, and where appropriate, exceed the requirements of environmental legislation, policies, charters and other commitments to which we subscribe;
- We prevent pollution, including the releases of oil and hazardous materials, wherever we can, but if an incident occurs respond effectively to minimise impact on human health and the environment;
- We minimise and properly manage the waste we generate, and reuse or recycle waste materials whenever economically feasible;
- We help protect the environment for future generations by making our contribution to minimising climate change;
- We monitor electric and magnetic fields (EMF) research developments and assess continually the implications for the way in which we operate;
- We manage the risks associated with sites that have been contaminated from our past operations and improve these sites where appropriate;
- We protect and improve, where we can, the environmental status of the land on which we operate;
- We require our contractors to demonstrate the same level of commitment as National Grid in the management of the environment;
- We ensure that our employees have the skills, knowledge, and resources necessary to contribute to our environmental commitments;
- We encourage open and constructive dialogue with employees, members of the public and other stakeholders to continually challenge our performance;
- We identify and manage risks associated with our activities and deliver any improvements through effective environmental management systems;
- We monitor our environmental performance, audit the effectiveness of our management systems, and report our performance to employees, shareholders, the public and other stakeholders.



Electricity Act 1989

Extracts from Schedule 9

Preservation of amenity: England and Wales

Paragraph 1(1)

In formulating any relevant proposals, a licence holder or a person authorised by exemption to generate or supply electricity –

(a) shall have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest; and

(b) shall do what he reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects.

Paragraph 2(1)

A licence holder shall within twelve months from the grant of his licence prepare, and from time to time modify, a statement setting out the manner in which he proposes to perform his duty under paragraph 1(1) above, including in particular the consultation procedures which he intends to follow.

Preparing this statement

This statement was originally prepared following a stakeholder workshop facilitated by the Environment Council in 2001.

The statement and our performance in meeting our commitments was reviewed in 2006 and this publication is the result of that review.

In preparing this revised statement we have consulted the bodies referred to in Schedule 9 of the Act which have statutory responsibilities for amenity, namely:

Countryside Agency & English Nature. (Natural England)
Countryside Council for Wales
CADW: Welsh Historic Monuments
English Heritage

In addition, we consulted other non-statutory bodies concerned with amenity such as: Tree Council; Council for National Parks; Civic Trust; Wildlife Trusts; RSPB; CPRE; and representatives of other stakeholder groups together with our staff.

Additional copies of this statement together with other Schedule 9 information can be found on our web site: www.nationalgrid.com/uk/landanddevelopment

Land and Development Group
National Grid
National Grid House
Warwick Technology Park
Gallows Hill
Warwick
CV34 6DA

nationalgrid.com



Printed on recycled paper

nationalgrid

SPN163. July 2006. π.

APPENDIX 2

The Holford Rules

Guidelines on overhead line routeing were first formulated in 1959 by Sir William, later Lord, Holford, who was a part-time member of the CEGB. National Grid has reviewed these guidelines, known as 'the Holford Rules', and concluded that they have stood the test of time. National Grid therefore intends to continue to employ them as a basis of the company's approach to overhead line routeing.

Since the formulation of the original Rules, formal requirements for environmental assessment have been introduced. Whilst environmental assessment for overhead lines addresses wider topics than the visual amenity issue on which the Rules concentrate, they remain a valuable tool in selecting and assessing potential route options as part of the environmental assessment process. The original Rules and their added notes of clarification are set out below.

GUIDELINES FOR THE ROUTEING OF NEW HIGH VOLTAGE OVERHEAD TRANSMISSION LINES

Rule 1:

Avoid altogether, if possible, the major areas of highest amenity value, by so planning the general route of the line in the first place, even if the total mileage is somewhat increased in consequence.

Note on Rule 1

Investigate the possibility of alternative routes, avoiding if possible the areas of highest amenity value. The consideration of alternative routes must be an integral feature of environmental statements.

Areas of highest amenity value are:

Areas of Outstanding Natural Beauty
National Parks
Heritage Coasts
World Heritage Sites

Rule 2:

Avoid smaller areas of high amenity value, or scientific interests by deviation; provided that this can be done without using too many angle towers, ie the more massive structures which are used when lines change direction.

Note on Rule 2

Some areas (e.g. Sites of Special Scientific Interest) may require special consideration for potential effects on ecology (e.g. to their flora and fauna).

Where possible choose routes which minimise the effects on the settings of areas of architectural, historic and archaeological interest including Conservation Areas, Listed Buildings, Listed Parks and Gardens and Ancient Monuments.

Rule 3:

Other things being equal, choose the most direct line, with no sharp changes of direction and thus with fewer angle towers.

Note on Rule 3

Where possible choose inconspicuous locations for angle towers, terminal towers and sealing end compounds.

Rule 4:

Choose tree and hill backgrounds in preference to sky backgrounds wherever possible; and when the line has to cross a ridge, secure this opaque background as long as possible and cross obliquely when a dip in the ridge provides an opportunity. Where it does not, cross directly, preferably between belts of trees.

Rule 5:

Prefer moderately open valleys with woods where the apparent height of towers will be reduced, and views of the line will be broken by trees.

Note on Rules 4 and 5

Utilise background and foreground features to reduce the apparent height and domination of towers from pan viewpoints.

Minimise the exposure of numbers of towers on prominent ridges and skylines.

Where possible avoid cutting extensive swathes through woodland blocks and consider opportunities for skirting edges of copses and woods.

Protect existing vegetation, including woodland and hedgerows, and safeguard visual and ecological links with the surrounding landscape.

Rule 6:

In country which is flat and sparsely planted, keep the high voltage lines as far as possible independent of smaller lines, converging routes, distribution poles and other masts, wires and cables, so as to avoid a concentration or 'wirescape'.

Note on Rule 6

In all locations minimise confusing appearance.

Arrange wherever practicable that parallel or closely related routes are planned with tower types, spans and conductors forming a coherent appearance; where routes need to diverge, allow where practicable sufficient separation to limit the effects on properties and features between the lines.

Rule 7:

Approach urban areas through industrial zones, where they exist; and when pleasant residential and recreational land intervenes between the approach line and the substation, go carefully into the comparative costs of undergrounding, for lines other than those of the highest voltage.

Note on Rule 7

When a line needs to pass through a development area, route it so as to minimise as far as possible the effect on development.

Alignments should be chosen after consideration of effects on the amenity of existing development and on proposals for new development.

When siting substations take account of the effects of the terminal towers and line connections that will need to be made and take advantage of screening features such as ground form and vegetation.

SUPPLEMENTARY NOTES

Residential Areas

Avoid routeing close to residential areas as far as possible on grounds of general amenity.

Designations of County, District and Local Value

Where possible choose routes which minimise the effect on Special Landscape Areas, areas of Great Landscape Value and other similar designations of County, District or local value.

Alternative Tower Designs

In addition to adopting appropriate routeing, evaluate where appropriate the use of alternative tower designs now available where these would be advantageous visually, and where the extra cost can be justified.

APPENDIX 3

Undergrounding policy:

Approach to new connections

National Grid considers every case for using underground cables for amenity reasons instead of overhead lines on its merits, but in view of the extremely high additional costs the company reserves detailed considerations for those places where the benefits of maintenance of visual amenity can be demonstrated to:

- ◆ outweigh the adverse effects upon other environmental factors;
- ◆ justify the high additional cost; and
- ◆ where it is technically possible and will not conflict with our statutory duties.

In identifying such places, National Grid takes account of the views of professional authoritative advisors, statutory environmental bodies and other organisations as it feels appropriate.

Guidelines for consideration of undergrounding of new high voltage transmission connections

The excessive cost of high voltage underground transmission coupled with the environmental and operational disadvantages are important reasons for the limited use of underground cables at 400 kV. National Grid's approach is to seek overhead connections wherever possible.

The following guidelines set out the categories of area which National Grid believes are the highest priority and where consideration may be given to undergrounding. They indicate those exceptional circumstances where National Grid believes undergrounding might be justified.

Exceptionally constrained areas

The term "exceptionally constrained areas" has been adopted to refer to situations where physical or amenity factors related to landscape, land use and development weigh most heavily against the use of overhead lines and therefore where consideration of underground cables is warranted. In such areas, judgement on the merits of each case will be required to justify the use of underground cables.

The nature of the "exceptionally constrained areas" varies in urban, rural and estuary crossing areas and the key factors are outlined as a basis for the consideration of the potential use of underground cable.

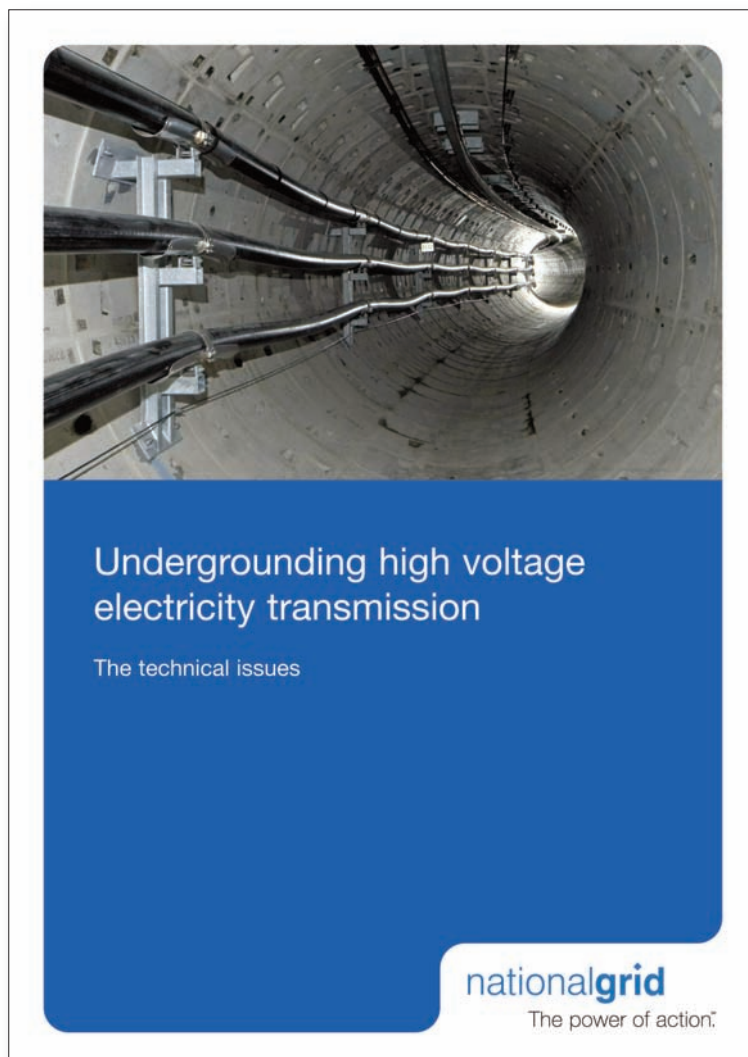
- ◆ **Exceptionally constrained urban areas:** Urban areas where there may be exceptional constraints on siting of overhead transmission lines comprise those locations where the density of residential, community and associated development and public open space is such that a reasonable direct overhead route is impracticable.
- ◆ **Exceptionally constrained rural areas:** Of special concern in the siting of overhead transmission lines in the countryside is the protection of important landscape features in nationally or internationally designated areas of amenity value. These designated areas comprise National Parks, Areas of Outstanding Natural Beauty, Heritage Coasts and World Heritage Sites. "Exceptionally Constrained Rural Areas" comprise those locations within or immediately alongside those designated areas where the scale of new high voltage transmission towers and conductors would dominate unspoilt landscape and cause serious damage to major open views of spectacular panoramas, crests of prominent ridges and skylines or attractive small scale valleys seen from important locations within or immediately alongside the designated areas.
- ◆ **Exceptionally constrained estuary and major river crossings:** These occur where the exceptional difficulty and cost of an overhead line would be comparable with or exceed those of an underground cable.

Potential use of underground cable

When planning the routing for transmission connections in exceptionally constrained areas, consideration may be given to the use of underground cables.

The potential use of underground cable in, or close to, exceptionally constrained urban, rural or estuary crossing areas would require that this is shown to be the most cost effective means of avoiding the need for high voltage overhead lines which would seriously harm the amenity of these areas. Consideration would have to be given in any case to the adverse effects on amenity of underground cables, sealing end compounds, terminal towers and ancillary equipment and to technical considerations that apply.

As a result of these considerations National Grid would expect lengths of underground cable to be short. These guidelines give a positive indication of the circumstances which National Grid believe could justify the use of high voltage underground cable. As stated previously a judgement on the merits of each case will be required.



For further information please see
'Undergrounding high voltage electricity transmission: The technical issues'.