

All Consultation response on the National Grid's Approach to Undergrounding

Consultation document at:

<http://www.nationalgridundergrounding.com/assets/downloads/Undergrounding%20Approach.pdf>

Other background documents at:

<http://www.nationalgrid.com/uk/Electricity/UndergroundingConsultation/Documents/>

1. To what extent do you agree with National Grid's proposed Approach to Undergrounding?

- Strongly agree
- Slightly agree
- Neither agree nor disagree
- Slightly disagree
- Strongly disagree

2a. If you agree with part(s) of our proposed Approach, can you please explain which parts below

The approach is commended for taking a more balanced and transparent stance on the merits and problems of undergrounding than has previously been expressed and seeking to find a balance between economic and environmental obligations.

The stages of the process are supported as these follow a logical progression starting with minimisation of impacts by broad route selection in the first instance, followed by minimising impacts through the detailed route selection and potential mitigation.

2b. If you do not agree, please explain what aspect(s) you do not agree with

The guidance should be explicit that the balance should be viewed in the light of the urgent need for energy infrastructure as set out by the government in the Revised Draft Overarching National Policy Statement for Energy (EN-1) (DECC, October 2010). This states that there is an over-riding and urgent need for all types of energy infrastructure. As a result, to ensure prohibitive costs do not delay delivery, appropriate weight should be given to the economics. The guidance should clarify that these costs will be made public to enable the approach to be transparent and validated in an independent manner.

Due to the high cost of overgrounding and the potential environmental impacts of undergrounding (ecology, cultural heritage, land sterilisation etc), there should be compelling evidence (including costing examples) to weigh in the balance to suggest that cables should be undergrounded.

No mention is made in the introduction to the higher risk of damage to overhead lines, which must be a factor to be considered in the balance. In addition, when referring to 'appropriate stakeholders' the document should be explicit that this always includes the local community.

We also feel that the proposed approach does not clearly set out how a balance will be made where there is conflict between technical, economic, social and environmental effects, either in the selection of broad corridors or the more detailed route within this.

The guidance should stress that the scope for adopting undergrounding needs must be assessed on a scheme by scheme basis, albeit in line with the criteria set out within the guidance.

We also want to highlight that no recognition is given to the manner in which impacts upon European sites and species are to be addressed.

There is no mention given to the effects of climate change on the resilience of the transmission network. For example, in exposed areas might undergrounding produce a more resilient system to the impact of snow and high winds?

There is also no mention of the impact of new power transmission technologies and the extent of surface or undergrounding opportunities.

3. Do you think National Grid's proposed Approach to Undergrounding balances visual amenity, cost, environmental and social considerations appropriately?

- Balanced
- Not balanced
- Undecided

Further comments:

Although the document states that these issues will be balanced, there is no detail on how such a balancing exercise will be carried out, and the weight to be afforded to each consideration. As cost is likely to be the key factor in deciding whether schemes are able to proceed, it is likely this will be given significant weight when balanced against the other factors, so the weighting given to this should be explicit.

Any adverse impacts can be identified through the input of expert consultants, but ultimately a balancing exercise must be undertaken by National Grid keeping in mind the cost implications for end consumers. Such a balancing exercise should be clear that the landscape, visual, ecology and cultural heritage issues only outweigh costs in exceptional circumstances to ensure the continued delivery of energy infrastructure in line with government objectives. It is appreciated that the balancing exercise will be different between projects, but the guidance should provide some indication to show how this will be carried out and by whom, as well as how precedents are to be addressed in future projects. It would be useful if some worked examples are provided that demonstrate how decisions are made in favour of one or the other option. What are the methodologies used, what are the exact costs involved, and whether the approach is equal and fair across the UK as a whole.

The requirement to take account of expert consultants is appropriate as this will provide specialist input which is necessary to identify the issues and constraints. However, a balance still needs to be struck between these constraints which will require taking an overview of all costs and impacts.

The statement seems to suggest that the only environmental advantages of underground cabling are visual / landscape. Whilst cabling can affect terrestrial ecology, it can also avoid the risks of bird strikes and threats to outdoor recreation that arise from overhead lines.

In addition, greater weight should also be given to the use of the latest (most cost effective) technology for undergrounding and to meeting industry standards.

4. Please state how important you consider the following issues to be in deciding whether electricity cables should be overhead or underground (where 1 is 'not at all important' and 10 is 'extremely important')

- Effects on the character of the landscape:
- Effects on views from people's property:
- Energy cost to private consumers:
- Energy cost to business:
- Protection of flora and fauna:
- Protection of our cultural heritage:
- The amount of waste sent to landfill in construction:
- Disruption to local people / business during construction:
- Disruption to electricity supplies during repairs or maintenance work:
- The opinions of local people:
- Other (please specify): Cumulative impacts, equipment design,

We believe that each of these factors are important and the level of impact will be dependent on individual sites. For example, the character of the landscape should be given greater consideration where there is a landscape designation.

The opinions of local people should remain a key consideration in decision making. Some RTPI members also queried whether in the spirit of Localism - local people will have a greater say in decision making for overhead / undergrounding in future schemes?

5. Which of the following best describes your opinion on the approach to undergrounding?

Select one option.

- New electricity lines should be overhead to minimise the cost of transmission to the consumer.
- New electricity lines should be overhead provided any impacts on people's views can be mitigated through routing or design. Where this isn't possible lines should be underground.
- A combination of overhead lines, modified routes and designs, and selective undergrounding will be appropriate in different situations depending on local constraints and the opinions of local people.
- New electricity lines should be underground, unless there are significant constraints (such as rare species or important archaeological sites). The additional costs of this approach are justified by the importance of visual amenity.
- New electricity lines should always be underground. Visual impacts are more important than other constraints and the increased cost is fully justified.

You may also want to consider constrains such as heritage, coast, sites of special scientific interest (SSSIs) and other areas of nature conservation significance.

6. *When faced with a very important constraint, such as a National Park or AONB, do you think new overhead electricity transmission lines should ideally:*

Select one option.

- be re-routed altogether - achieve the connection different way
- go around the constraint even if it is much further
- go underground through the sensitive area (accepting that there will be a need for some above-ground infrastructure)
- go through the sensitive area on overhead line by the shortest / least sensitive route

Further comments:

7. *Please make any suggestions as to how you think the policy could be improved.*

It would be useful to have some examples and case studies of how various factors have been taken into account and the weight given to cost versus other factors to see how the policy would work in practice. This could show the threshold for the exceptional circumstances which could potentially necessitate undergrounding.

Although it is a reasonable generalisation to say that underground cables are ‘a lot more expensive than overhead lines’, the extent to which they are more expensive has been found to vary considerably with terrain and dependant on the method of undergrounding. There are also issues surrounding the balance between installation / capital costs and running costs as cables can require less routine maintenance. This point should be acknowledged within the position statement by stating that, as the relative costs of underground and overhead systems can vary significantly they do need to be balanced and assessed on a scheme by scheme basis.

The policy criteria could also include the impacts of high-voltage overhead cables on significant views and sensitive landscapes (as mentioned in the support / background material).

8. *Do you think National Grid puts too much or too little emphasis on any particular aspect of undergrounding?*

- Too much emphasis given to (specify below)
- Too little emphasis given to (specify below)
- Good balance across all elements

This question cannot be answered without some evidence from case studies or detail on how the balancing exercise would be weighted.

9. Any further comments?

The status of the final document must be clear, i.e. whether it is to be a policy document or simply guidance. National Grid should also outline their key priorities within the document.

Some RTPI members also felt that the document although logical, was a largely commercial document and needs to set out a strategic planning process. A decision matrix could be included to select routes for new lines.

The final document should not rank issues according to importance, but should instead address levels of acceptable harm in the light of the need for energy infrastructure. The starting point should be that overgrounding lines are progressed unless there is likely to be unacceptable harm in relation to any of the environmental and social issues raised which outweighs the costs involved.

The guidance only applies to new systems, but there are many existing grid lines in prominent locations. Given National Grid's environmental duties the guidance could be expanded to state the position on the scope for undergrounding in conjunction with line refurbishment, where such measures may assist with landscape enhancement and regeneration.

Comparable costs between undergrounding and overhead cabling should also include performance, a difference in transmission losses and the impacts of 132V overhead transmission lines should be considered.

Finally, lighter / alternative pylon designs to undergrounding should also be given consideration.