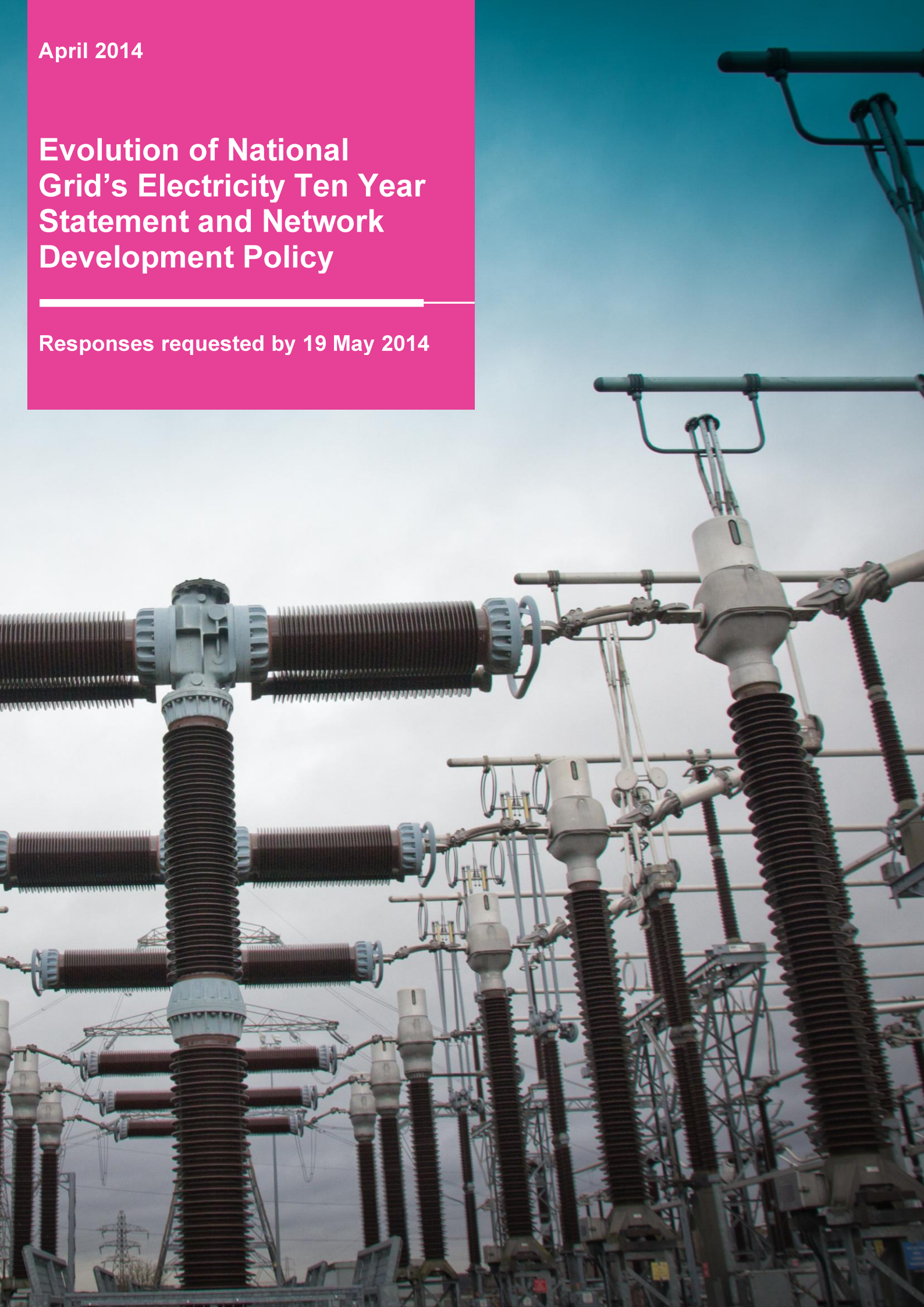
April 2014

Evolution of National Grid's Electricity Ten Year Statement and Network Development Policy

Responses requested by 19 May 2014



Executive Summary

Following discussions with stakeholders on the future of the information provision relating to network development, we published the Electricity Ten Year Statement for the second time in November 2013. This document brings together elements that were previously published within the Seven Year Statement and the Offshore Development Information Statement.

The Electricity Ten Year Statement is produced by National Grid in our role as National Electricity Transmission System Operator and aims to provide clarity and transparency on the potential development of the GB Transmission system for a range of scenarios. The document considers this development through strategic network modelling and design capability, while trying to capture future uncertainty with regards to the generation mix, operation of the network and technology development. This document builds on the UK Future Energy Scenarios developed with stakeholders.

The 2013 Electricity Ten Year Statement also included our proposed Network Development Policy which defines how we assess the need to progress wider system reinforcements onshore in England and Wales to meet the requirements of our customers in an economic and efficient manner.

We welcome your views on how the Electricity Ten Year Statement could evolve to better meet your needs. We would also appreciate your feedback on our approach to Network Development Policy. Please take the opportunity to comment on this consultation. We will combine the feedback to this consultation and that which we have received at the customer seminars to date.

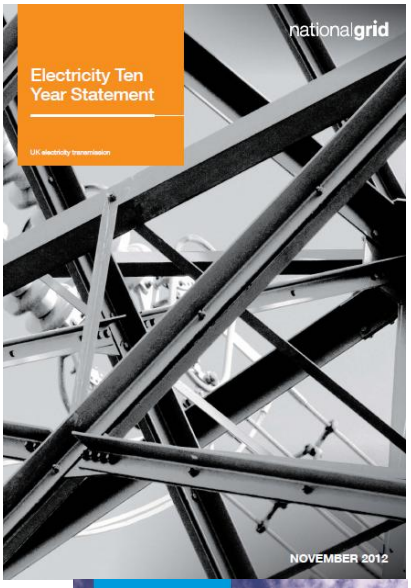
Responses to this consultation should be sent to

transmission.etys@nationalgrid.com

by 5pm on Monday 19 May 2014

The Current Ten Year Statement

Background



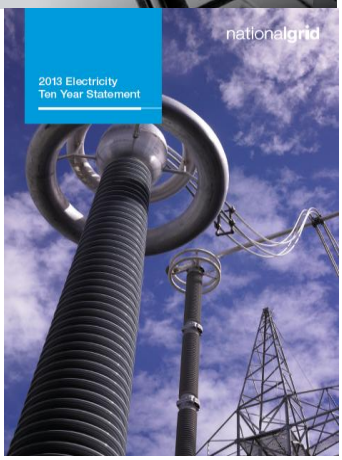
We published the Electricity Ten Year Statement (ETYS) for the first time in November 2012 bringing together elements that were previously published within the Seven Year Statement (SYS) and the Offshore Development Information Statement (ODIS).

The ETYS is produced by National Grid in our role as National Electricity Transmission System Operator (NETSO) and aims to provide clarity and transparency on the potential development of the GB transmission system for a range of scenarios. The document covers a range of information described below that we aim to develop further to meet your needs.

Future Energy Scenarios

How would you score the ETYS on a range from 1 to 5 and why?

What is the one thing you really want us to change or improve?



The ETYS builds on the UK Future Energy Scenarios[1] developed with stakeholders for use in our gas and electricity annual planning processes. These scenarios describe a range of scenarios considering, for example, developments in electricity generation onshore and offshore, electricity and gas use, progress against environmental targets and interconnection. The document provides a quick summary of the scenarios used in the ETYS.

Development of the National Electricity Transmission System

The ETYS document describes the potential development of the National Electricity Transmission System (NETS) (onshore and offshore) under the different scenarios at a local, regional and national level. This includes a description of the drivers in each region, potential reinforcement requirements and any impacts on boundary capability.

Would sensitivities around the base scenarios be helpful? If so, what type?

This information aims to allow readers to identify connection and usage opportunities of the NETS on under a range of different base

[1] For more information or to get involved, please take a look at the UK Future Energy Scenarios site at http://www.nationalgrid.com/uk/Gas/OperationalInfo/TBE/Future+Energy+Scenarios/

scenarios. (e.g. Gone Green and Slow Progression) but could include appropriate variations known as sensitivities. Some examples under consideration are given below:

- High Offshore wind, low onshore wind, nuclear & carbon capture and storage (CCS) and more open cycle gas turbines (OCGTs)
- High onshore wind, lower offshore wind, nuclear & CCS
- High combined cycle gas turbines (CCGTs) with low levels of coal power stations
- Less CCGTs with Coal power stations on for longer

How would you like to see potential connection opportunities highlighted?

The 2012 ETYS also included our proposed Network Development Policy which defines how we assess the need to progress wider system reinforcements in England and Wales to meet the requirements of our customers in an economic and efficient manner.

System Operation

The ETYS describes the potential impact of the energy scenarios on system operation at a high level including the dynamics of the NETS and impacts identified through the Grid Operations 2020 work stream (GO 2020), which is examining the effect of potential future generation mixes and demand patterns.

What would you like explained for each region?

What role should the ETYS play as one of the documents considering the impact of energy scenarios and European interconnection?

Evolving ETYS from your feedback

Aims of the Network Development Policy

Should third party projects be included in the ETYS?

Network Development Policy (NDP) which defines how we will assess the need to progress wider transmission system reinforcements to meet the requirements of our customers in an economic and efficient manner. The NDP is a National Grid policy that applies to the electricity transmission system in England & Wales only.

The NDP considers the balance between the risks of investing too early in wider transmission reinforcements, which include the risk of inefficient financing costs and an increased stranding risk, with the risks of investing too late, which include inefficient congestion costs.

Will it be suitable to use sensitivities as alternative scenarios for NDP assessment?

The key output of the NDP is the identification of the best course of action to take in the current year, selected through minimising investment regrets against a range of credible scenarios and sensitivities. Given the uncertainty that we face, the decision process with which the preferred combination of transmission solutions will be chosen needs to be well-structured and transparent. This will allow stakeholders to understand why decisions to build, and not to build, have been taken.

NDP in the ETYS

Are we providing appropriate information for your needs on our wider works investment plans?

In the 2013 ETYS we included a summary of the output from all NDP analysis for all regions in England and Wales and provide better integration and clarity of outputs into the document.

This annual process will be used to review and update decisions as additional information is gained, for example in response to changing customer requirements or via the feedback from stakeholder engagement.

Wider Works solutions

A key component of the success of the NDP analysis is the use of a wide range of practical transmission solutions that are fit for purpose, economic and efficient. The analysis is underpinned by assessment of key metrics from the solutions including cost, system access, development timescales and system benefit.

What additional information you would like to see with regards to transmission solutions?

Impact of NDP

What are your views on our NDP approach?

Does the NDP represent the appropriate balance between investment and alternative options?

As part of the Connect and Manage regime, generators will be able to connect as soon as the identified minimum connection infrastructure (also known as enabling works) are completed. The delivery of other infrastructure required on the electricity transmission system (known as wider works) is managed by National Grid. The NDP identifies a suite of wider works that best meet the overall portfolio generation connections going forward and hence allow investments to be programmed and delivered efficiently and economically. The NDP should therefore not unduly delay any generation connection, both onshore and offshore whilst endeavouring to deliver an optimised programme of wider works.

Evolving ETYS from your feedback

We received your feedback:

The ETYS 2013 consultation took place through a variety of channels; the majority of feedback was received at National Grid Future Energy Scenarios and Customer Seminar workshops. We also undertook a formal consultation via the National Grid ETYS website which was sent to key stakeholders.

Focus more on opportunities e.g. demand side response

You told us:

ETYS has to focus more on the opportunities available to new users and technologies in solving some of the future operational challenges associated with both the development of the network and connection opportunities.

> ….We would like to understand demand's role in providing response and potential services to NGET….

Our response:

We hope the new document layout shown for this year will provide much greater clarity on the opportunities for potential new technologies, services and locational connection opportunities. A new chapter that will build upon the System Operation and Network Requirements section "Network Development and Opportunities" will be included bringing a key focus to this area.

Provide greater information on current operational issues

You told us:

Greater clarity and explanation is needed of the operational challenges facing National Grid and information of how we are solving these issues in the current environment.

> ….when looking for opportunities in the future it would be useful to understand today's challenges and the potential future challenges in different scenarios.

Our response:

The system operation chapter will introduce the key current challenges facing National Grid and provide a forecast in each area based on the scenarios for future generation backgrounds. When focusing on system operation challenges, we have highlighted the areas that are today's issue and the undergoing activities to mitigate the issues.

Detailed technical information on harmonics

You told us:

To be able to develop timely connections to the National Grid a key uncertainty has been the availability of harmonic emissions limits in different areas of the network.

> …. Need more information on harmonics & also network information to enable analysis that developers have obligations to carry out and to analyse those connections

Our response:

This is an area that we understand some of our customers have frustrations in and we will be working toward providing a solution. This is a very complex issue and one requiring high volumes of technical data, usually exchanged bilaterally. Unfortunately we will not be able to solve this issue in this year's publication. In addition, we believe that the ETYS is not the long term solution for information on harmonics and we're currently considering other ways to deliver this information to you, the customer.

Formatting leads to lots of wasted paper

You told us:

Last year's ETYS had headers that were far too large leading to much of the page being wasted.

Our response:

The formatting of our document has been discussed with NGETs branding department and this year we will look to minimise potentially wasted areas of the document.

Links to other industry information

You told us:

Supplementary information is required such as Main Interconnected Transmission Maps and information on the connection process.

> …describing the connection process could be included for both offshore & onshore in the ETYS.

Our response:

While we recognise many people use the ETYS in the industry we do not want it to become the source of all industry information. Including these documents and

guidance notes makes the document far too large and dilutes the true purpose of the document. Therefore we will not be including these documents but provide links to other suitable industry information, such as the connection process guidance documents.

Further integration and clear NDP process

You told us:

The integration of Network Development Policy (NDP) and where it is utilised needs to be clearer.

Our response:

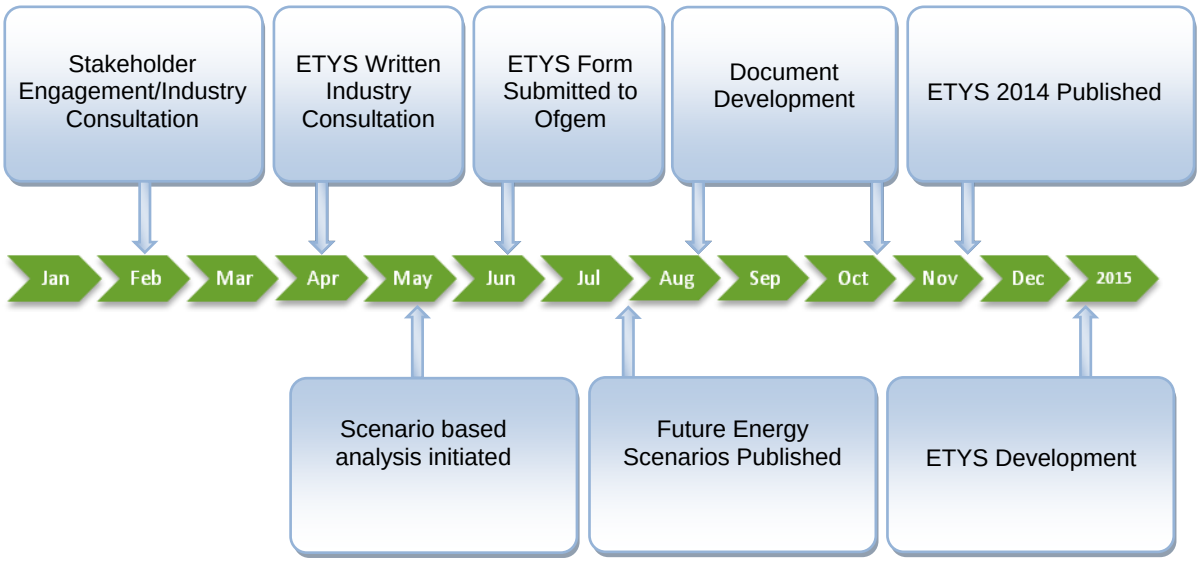
The new “Network Development and Opportunities” chapter will contain all the NDP info for England and Wales only and an appendix will contain the methodology and approach associated with the NDP. We hope that this will bring clarity of what the NDP is and how it is utilised for Network Development in England and Wales.

Following the publication of the Electricity Ten Year Statement in November, we have already received some feedback and would like to share our views on how we intend to take this forward. We welcome your thoughts on how we take this forward and any other feedback you would like us to consider.

Have we represented your views appropriately?

Next Steps

Timeline



How to respond

We welcome responses on how the ETYS and NDP should evolve and therefore hope that you take the opportunity to comment on this consultation. Please provide your response to this consultation by **5pm on Monday 19 May 2014** to transmission.etys@nationalgrid.com

When responding please provide us with your name, contact details, the organisation you represent and whether your response is confidential. If you have any queries please email transmission.etys@nationalgrid.com, or call Beth Warnock on 01926 656958.

Alternatively, please get in touch if there are any specific areas you would like to discuss bi-laterally.

Next Steps

We are already working on how best to use your feedback to date in how to evolve the ETYS and NDP. We will also work with your feedback from this consultation to further develop the ETYS which is next due to be published in November 2014.