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RIIO Electricity Transmission Workshop
23rd November

Talking Networks

Stakeholder Engagement: Round 3

- This round of workshops will focus on the areas where you have asked for more detail and the areas where we would like to explore your views further
- What's different this time?
  - We have built in more time for discussion so that we can fully explore your thoughts and opinions
  - We are asking you to provide written responses to the questions we are discussing following the workshop, to ensure we are interpreting the discussions here today correctly
- We want to ensure that our plans are delivering what you want from our network

Agenda

Time	Description
09.30 – 10.00	**Coffee and Registration**
10.00 – 10.45	**Welcome and Business Plan Q&A**
10.45 – 11.00	**Coffee**
11.00 – 12.00	**Our new approach to the design and routeing of new electricity transmission lines**
12.00 – 12.45	**Lunch**
12.45 – 13.15	**Willingness to Pay**
13.15 – 14.30	**Visual Amenity in relation to existing lines and infrastructure** *What is an appropriate fund*
14.30 – 14.45	**Coffee**
14.45 – 15.45	**Visual Amenity in relation to existing lines and infrastructure** *Developing a process*

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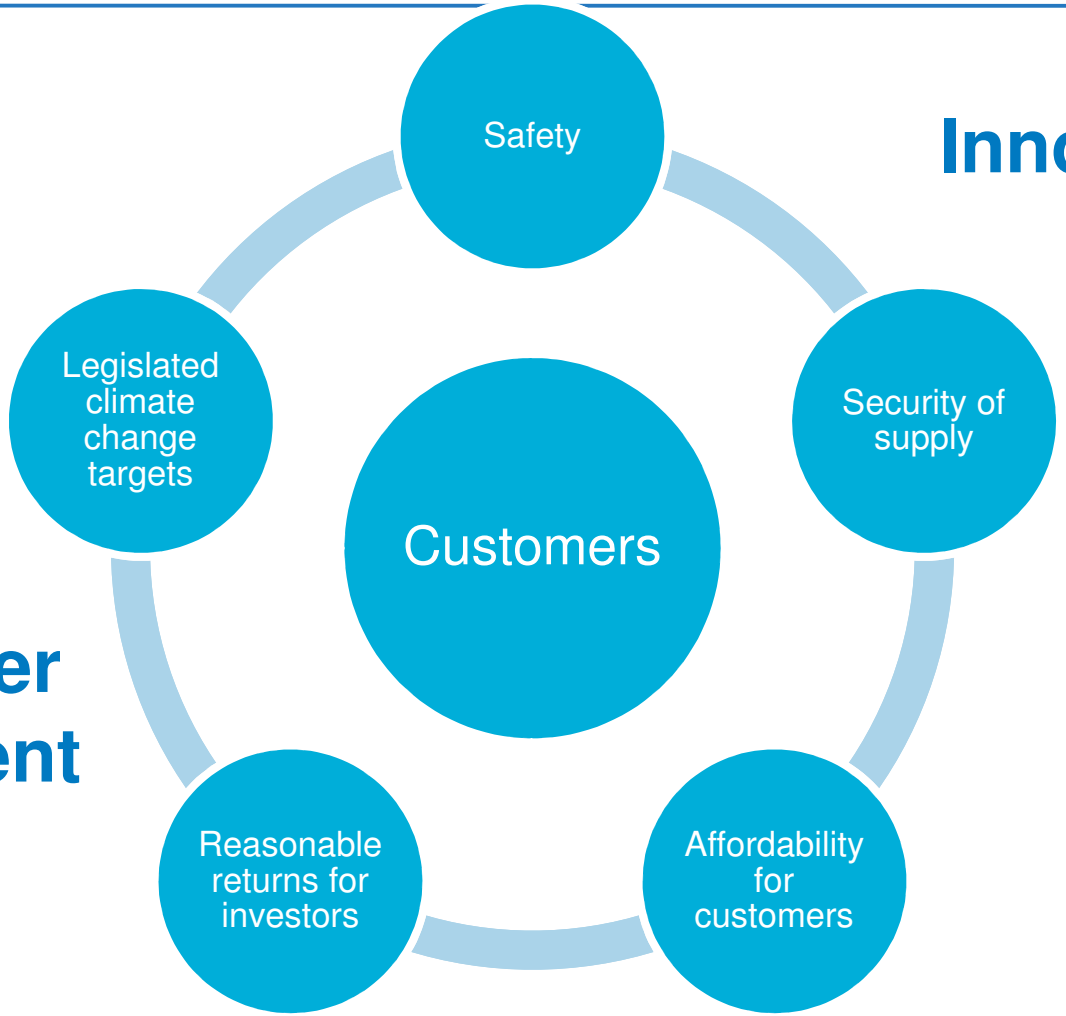
Business Plan Q&A

Talking Networks

Pauline McCracken
RIIO-T1 Price Review Manager

The business plans



Innovation

Stakeholder Engagement

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We developed our plans in conjunction with stakeholders' views

Safety	Environment	Reliability	Customer Satisfaction	Customer Connections	Innovation
"Safety is non negotiable"	"Facilitate low carbon energy"	"Reliability must be maintained"	"Improve customer service"	"Process must be improved"	"Innovation is crucial"

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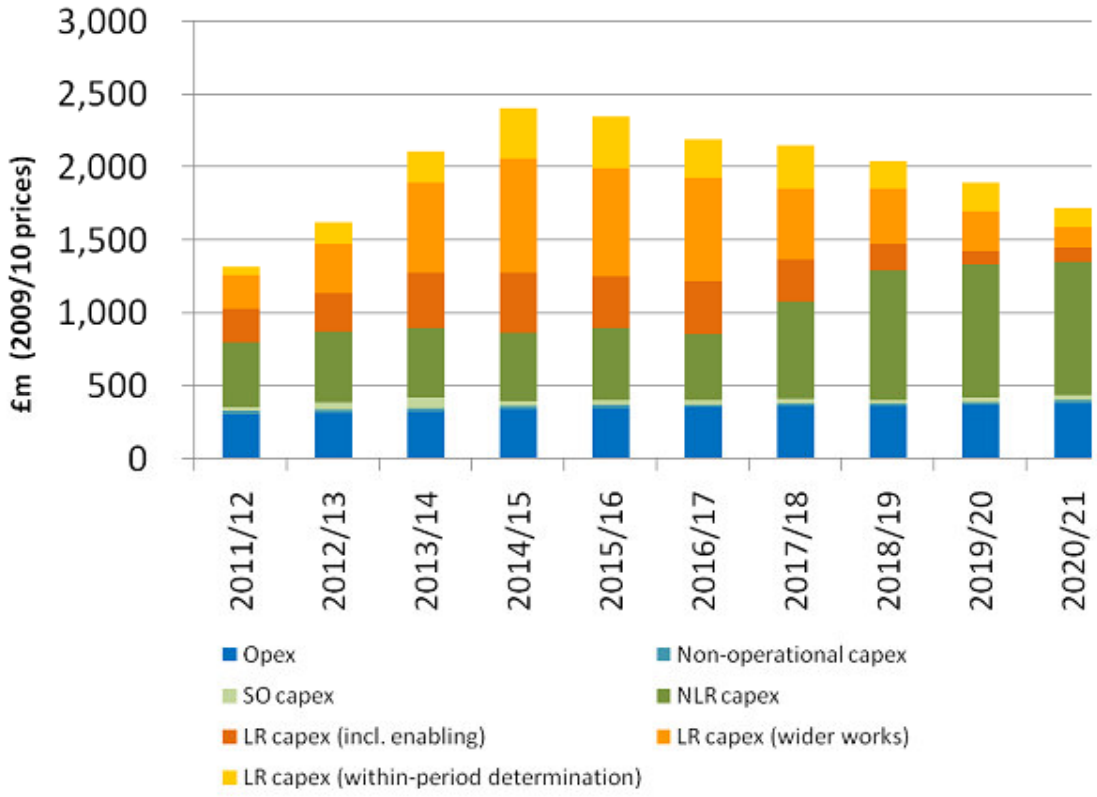
Baseline plan expenditure



Capex		Opex		'Totex'
£14bn	+	£2.8 bn	=	£16.8 bn

Our baseline plan will transform our network to meet customer's needs

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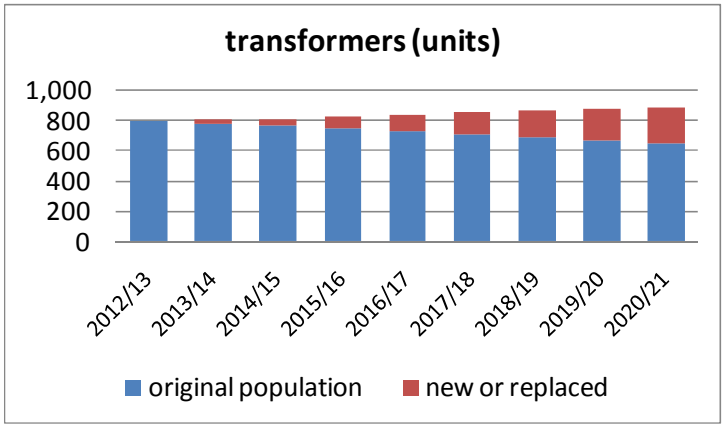
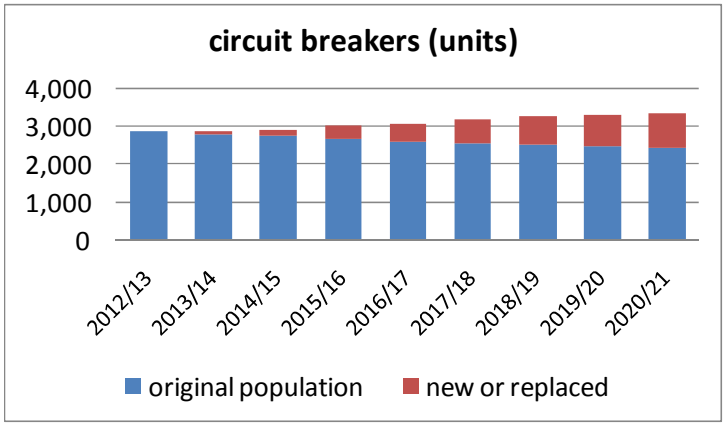
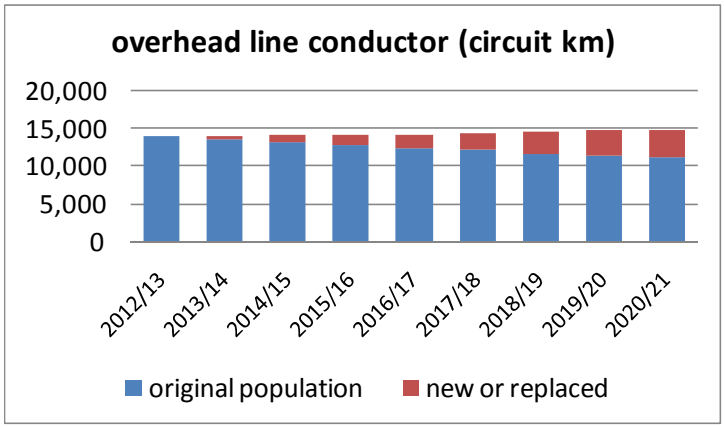
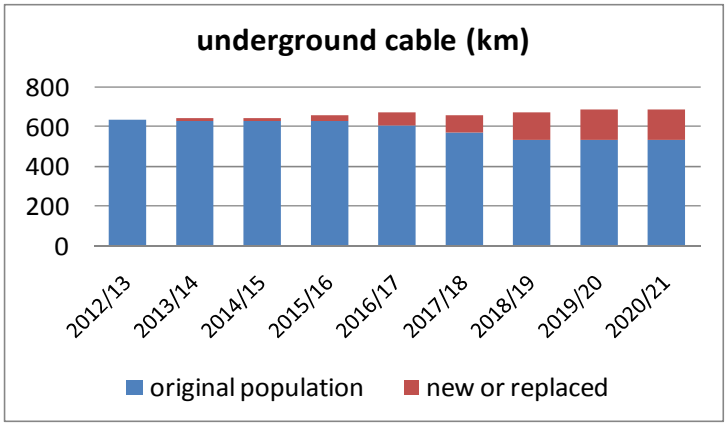


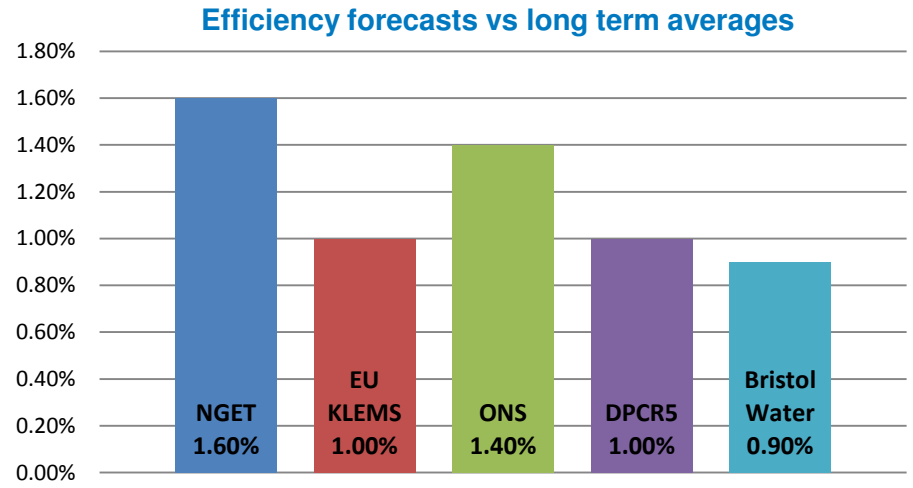


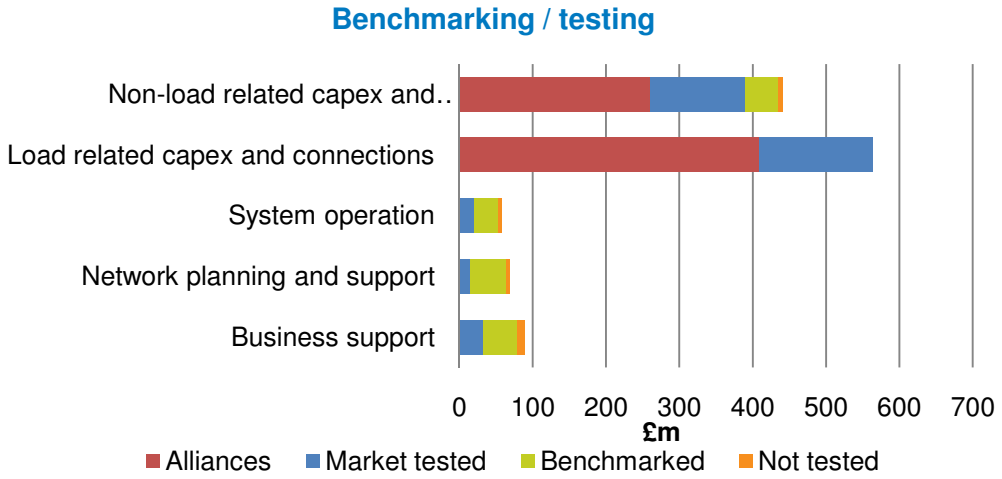
Our total load- and non-load related investment will extend, reinforce and replace our existing asset base



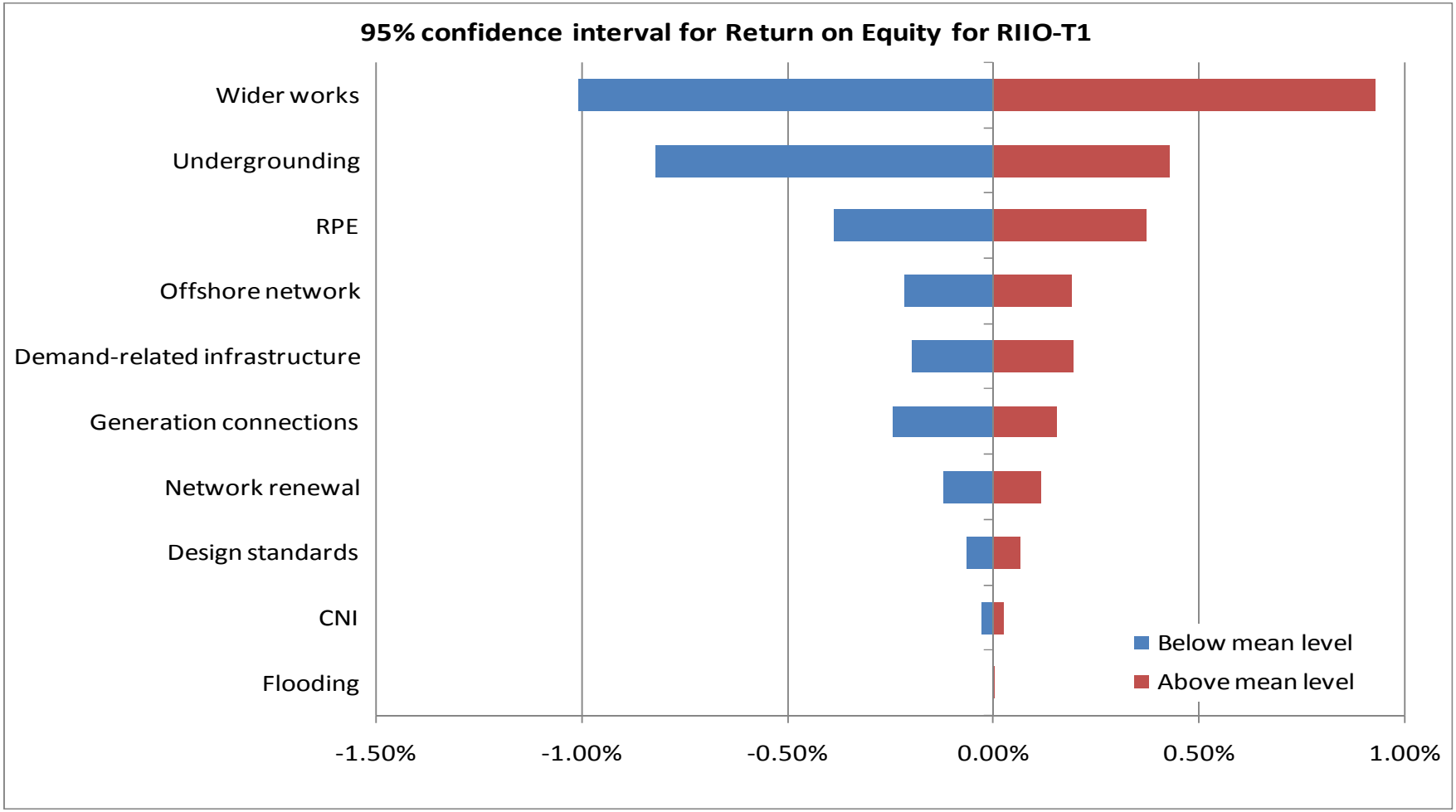


A challenging baseline plan



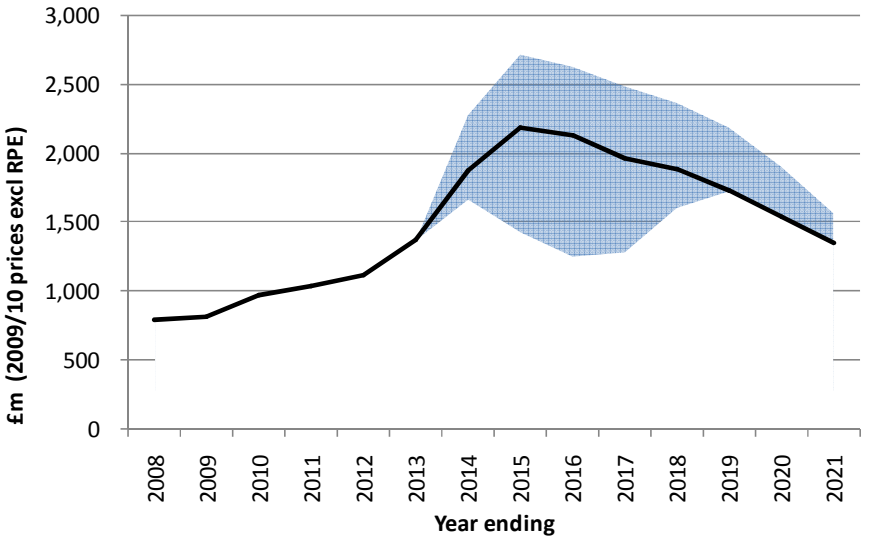


Managing risk & uncertainty



Uncertainty Mechanisms

Our baseline RIIO-T1 plan is only one view of the future…

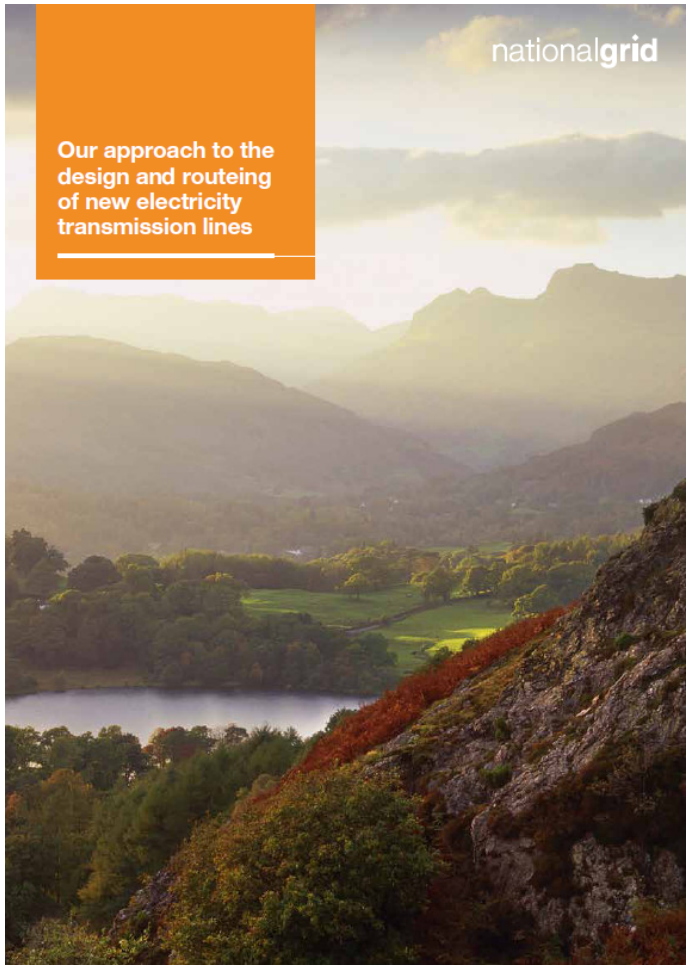


Mechanisms we proposed:

- allow the regulatory control to adapt to an uncertain future
- ensure the RIIO-T1 package remains appropriate across a wide range of potential outcomes
- allow us to deliver desired outputs in future scenarios outside what is currently considered credible through the use of specific and targeted ‘re-openers’

Visual Amenity Uncertainty Mechanism

- Our 'approach to the design and routeing of new electricity lines' sets out how we will work with stakeholders and the planning authorities to minimise the impacts of our assets on the local environment and community
- Our plan includes funding to underground 10% of the new transmission lines required
  - This is a nominal figure
  - The actual amount of funding we receive will increase or decrease depending on the outcome of the individual case by case stakeholder consultations



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Any Questions?

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Coffee….

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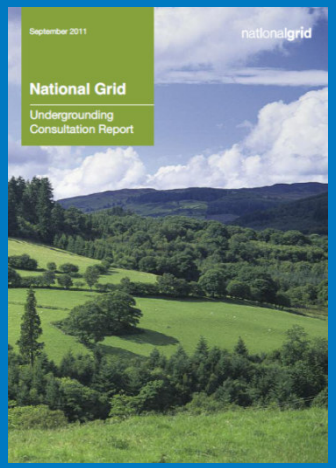
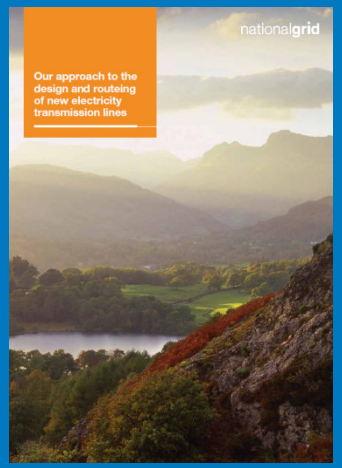
Our approach to the design and routeing of new electricity transmission lines





Talking Networks

Simon Griew and Hector Pearson
Land and Development

Introduction

- **Context**:
  - Requirement to connect new sources of energy
  - Planning Act 2008 places new duties on infrastructure promoters
  - Increased importance of 'localism'
- **National Grid's new approach:**
  - 'Undergrounding approach' consultation
  - Key principles of the new approach
  - Focus on mitigating visual impact
  - Routeing and siting process
  - How we will consult
  - Options Appraisal

Context: Major electricity transmission reinforcements

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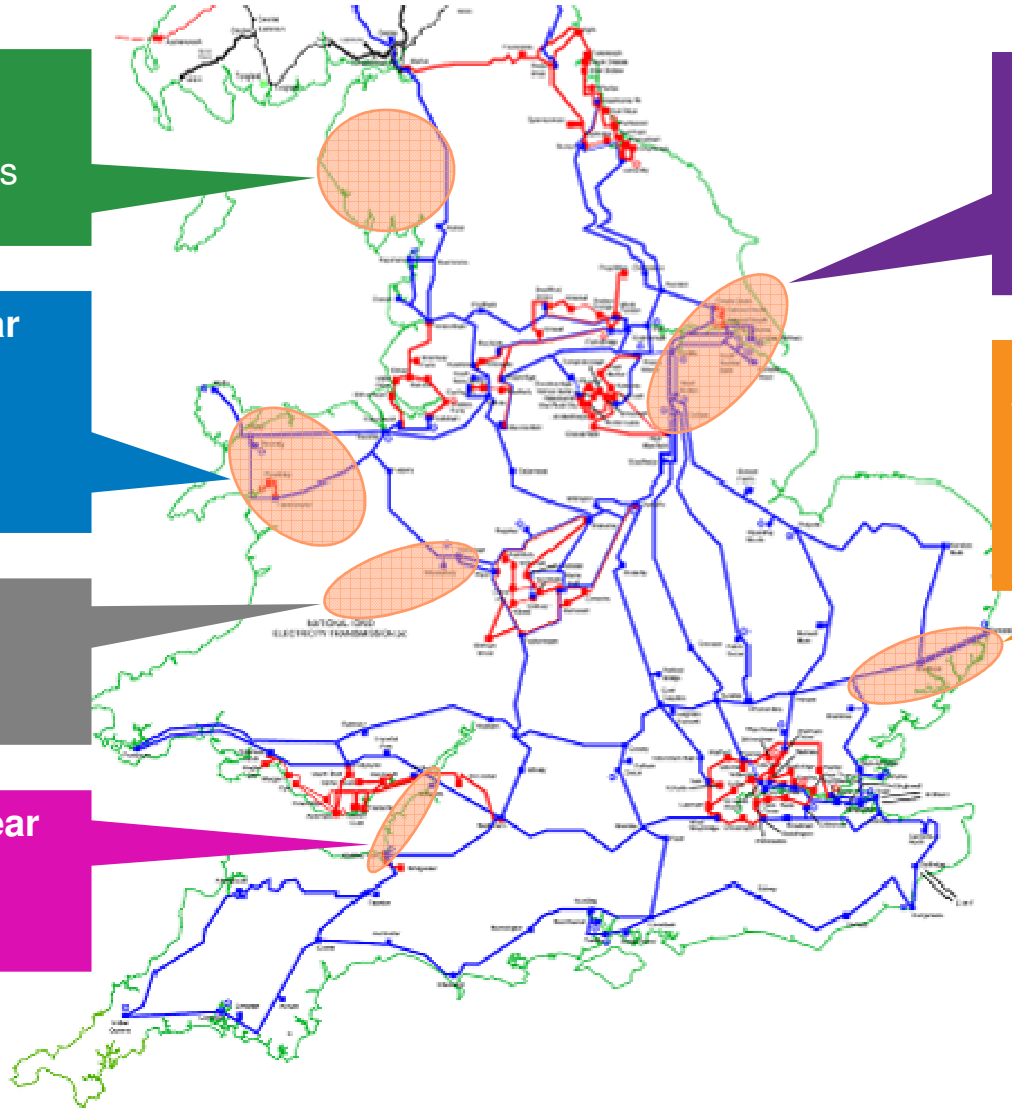
Cumbria Nuclear
- ~200km new line
- Delivery early 2020s

North Wales Nuclear and Wind
- ~30km new line
- Delivery 2017/18

Mid Wales Wind
- ~60km new line
- Delivery 2015/16

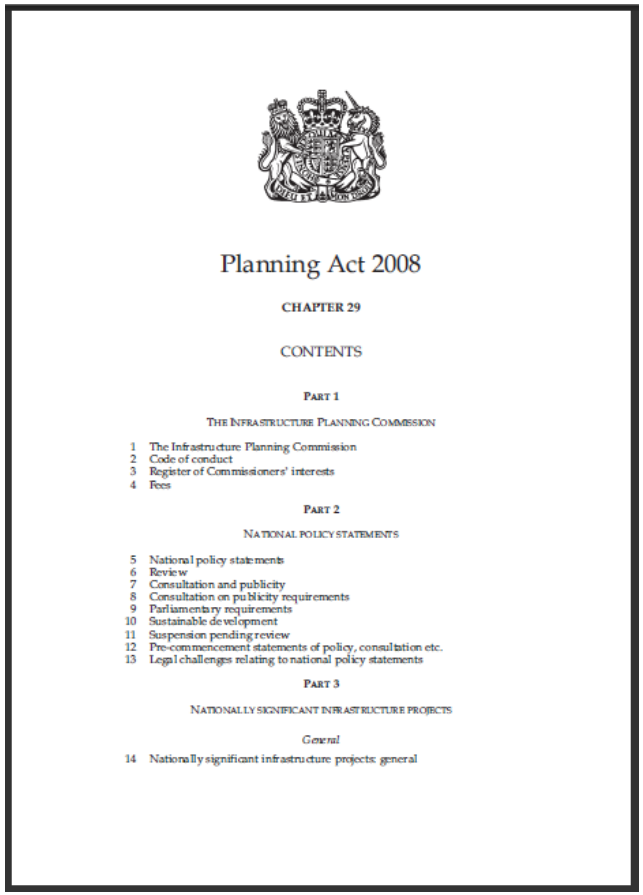
Hinkley Point Nuclear
- ~60km new line
- Delivery 2017/18



East Coast Wind
- ~60-70km new lines or equivalent
- Delivery 2017/18 onwards

East Anglia Nuclear and Wind
- ~30km new line
- Delivery 2017/18

Context: Planning Act 2008



Planning Act 2008

CHAPTER 29

CONTENTS

- **Planning Act 2008** – new consent regime for major infrastructure projects
- New duty on National Grid for **stronger community engagement** – must demonstrate how consultation has influenced proposals
- '**Frontloading**' – consultation at early stages of projects and important to get applications 'right first time'
- Significant **public interest and scrutiny** of new projects

We consulted on our new draft Approach

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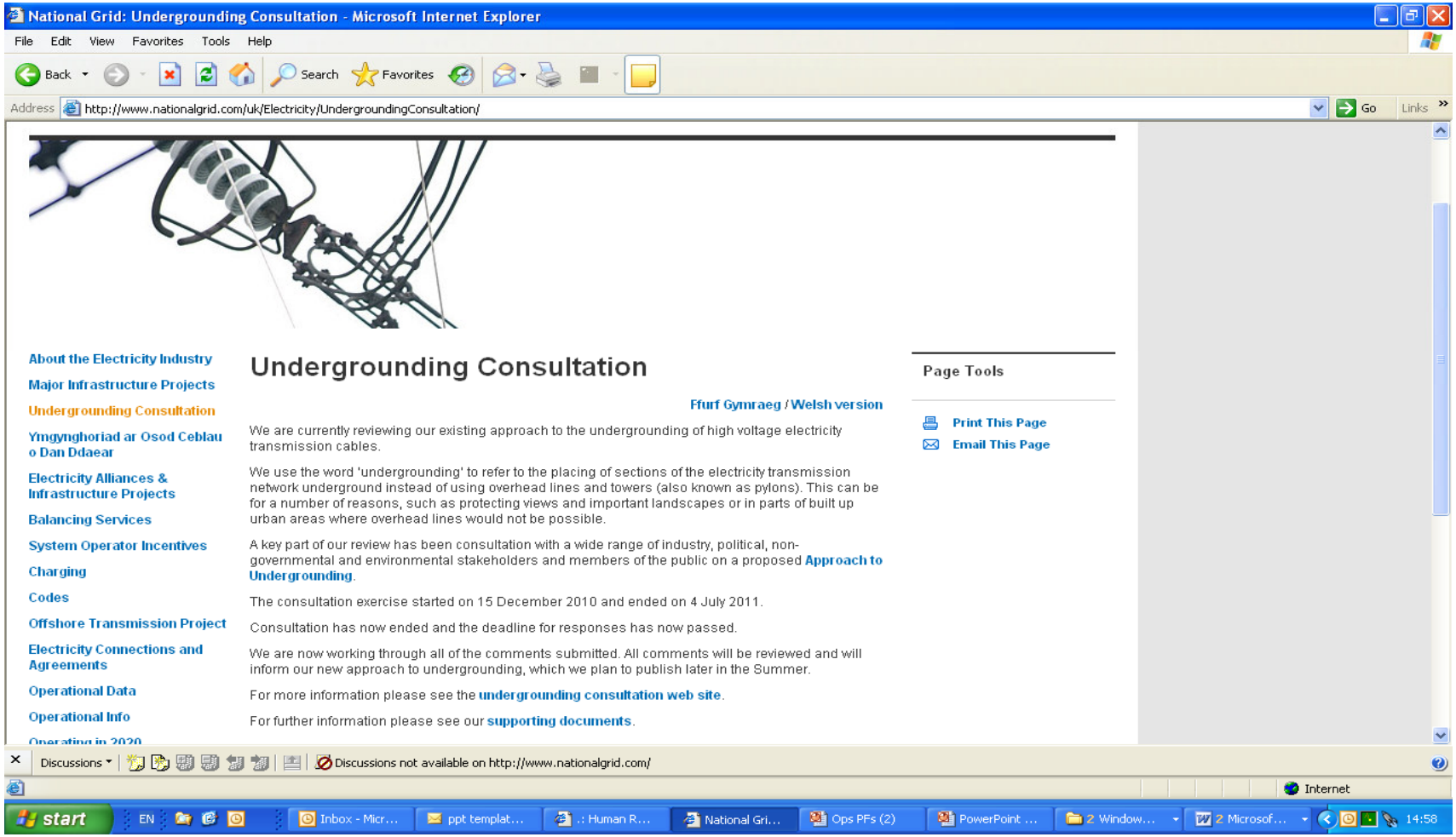

Consultation process

- **Workshop** with key statutory consultees in October helped us prepare a draft Approach for wider public consultation
- **Consultation period** from December 2010 to July 2011.
- Online **questionnaire**, or paper copy if requested
- **Emails**, **letters** and **phone calls** accepted and considered fully
- Three **regional workshops**; two for stakeholders and one specifically on landscape issues - Birmingham, London, Cardiff
- Meetings with **interested stakeholders** to explain the approach in detail – Cumbria, Somerset, Suffolk

Consultation feedback key messages

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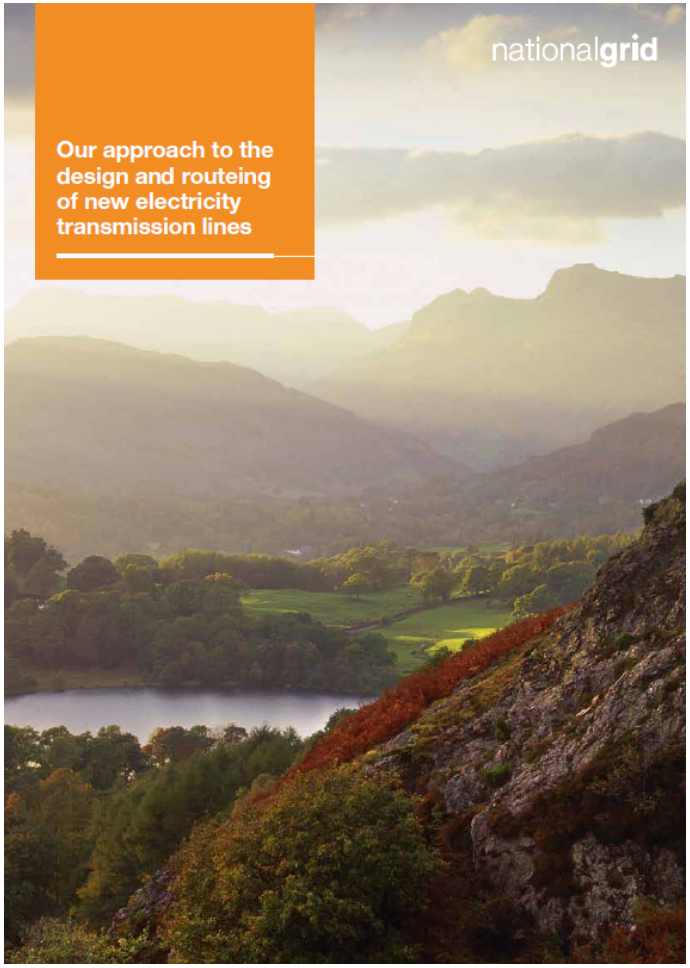
- New approach should be a **transmission routeing** process, rather than simply an undergrounding process
- Vast majority of the public in favour of **undergrounding** rather than overhead lines
- **all transmission technologies** (overhead, underground and sub-sea) should be considered and appraised throughout the route planning process
- Each project should be considered on a **case-by-case** basis
- **Designated areas** such as National Parks and Areas of Outstanding Natural Beauty must be treated as special cases
- **Valued landscapes** should be protected as far as possible, whether or not they have a specific designation
- **Cost** is one factor but not the over-riding driver for one technology to supersede another
- Early and meaningful **community consultation** and transparency is key to the success of future projects

The new approach: key principles



- An approach to **routeing lines** – wider than undergrounding
- A **process** rather than a policy
- Recognises **environmental** and **social** impacts as well as system and cost issues
- Early and meaningful **engagement** with stakeholders and communities to understand local considerations
- Options Appraisal methods to be applied on a **case-by-case** basis – no preference for overhead or underground solutions
- Greater emphasis on **mitigating visual impact** – recognise that not all sites that are valued or important are in designated areas

Greater focus on mitigating visual impact

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Sensitive routeing of overhead lines

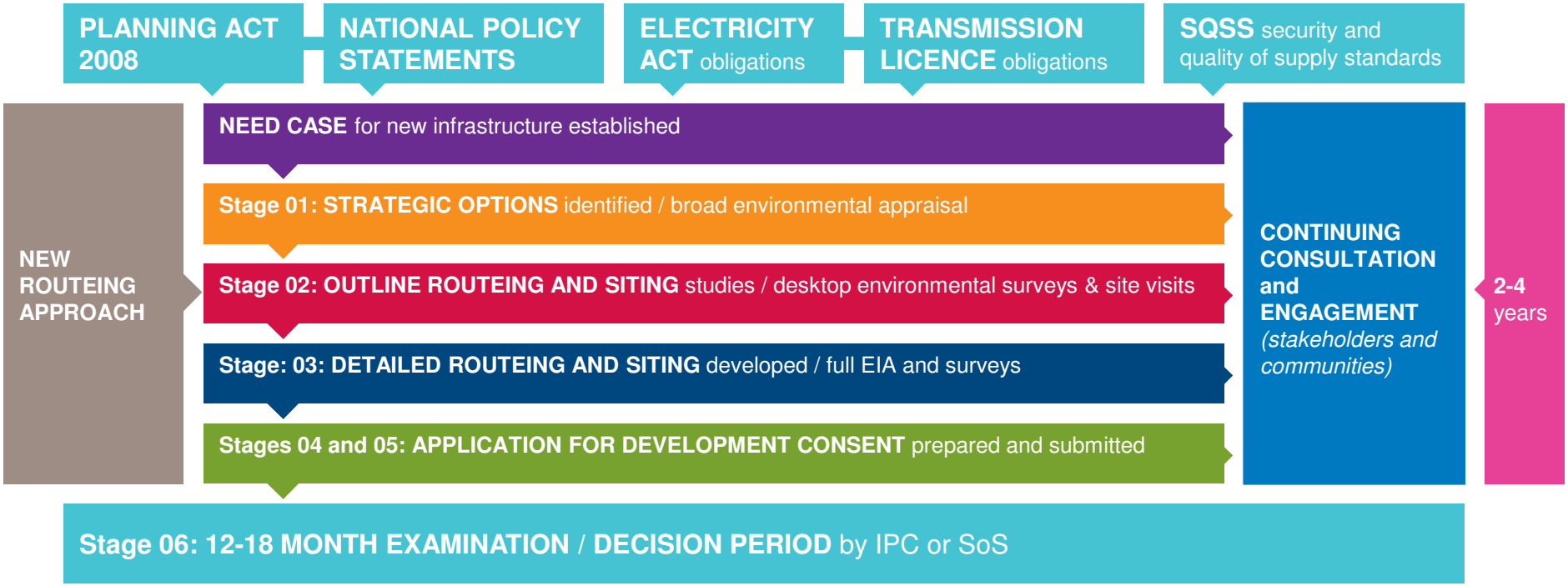
Screening and **landscaping**

Rationalisation of **existing lines**

Alternative **pylon designs**

Placing new lines **underground**

The routeing and siting process



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How we will consult

- **Transparent** process intended to inform and review judgements and make all information accessible.
- **Several stages** of consultation.
- Key stakeholders (e.g. local authorities, Environment Agency, English Heritage/Cadw, Natural England/CCW, Marine Management Organisation, WAG, Joint Nature Conservation Committee) consulted at **earliest stages** for best technical advice and local knowledge.
- Group of stakeholders **expanded and refined** as project develops – e.g. NGOs, parish councils, local interest groups.
- First **public consultation** at Stage 2 (Outline Routeing and Siting) will cover all issues – need case, strategic options etc.
- Results of all consultations **published**.

Options Appraisal process

Environment	Landscape/Visual, Ecology, Cultural Heritage, Air Quality, Noise and Vibration, Soils and Geology, Water issues, Resources and Waste, Greenhouse Gases and Energy Efficiency, Climate Change Adaptation
Socio-economic	People and Communities, Aviation and Defence, Traffic and Transport, Local Economic Impact
Technical	Technical, Safety
Cost	Capital Cost, Lifetime Cost

- Multi-Criteria Analysis (MCA) – structured and transparent approach
- Assesses environmental, socio-economic, technical and cost issues
- Compares options and analyses relative costs and benefits
- No 'hierarchy' between topics
- Projects will take into account views of stakeholders in determining the weight attributed to different sub-topics.
- Back-check and review process.

Options appraisal and consultation process

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DOCUMENTS	STAGE	CONSULTATION
Need Case document	NEED	
	MAKING BEST USE	
	IDENTIFY STRATEGIC OPTIONS	Consultation with key stakeholders
	TECHNICAL FILTER	
	BENEFIT FILTER	Consultation with key stakeholders
	Stage 01: STRATEGIC OPTIONS	
Strategic Options Report	Stage 02: OUTLINE ROUTEING AND SITING	Consultation with key stakeholders and public
Route Corridor Study	Stage: 03: DETAILED ROUTEING AND SITING	Consultation with key stakeholders and public
EIA	Stage 04: PROPOSED APPLICATION	Consultation with key stakeholders and public
Environmental Statement, Consultation Report, application documents	Stage 05: APPLICATION FOR DEVELOPMENT CONSENT	
	Stage 06: CONSIDERATION AND HEARING	Engagement with IPC and interested parties

Conclusions

- An approach to **routeing lines**
- A **process** not a policy
- Early and meaningful **engagement** and **consultation**
- Greater emphasis on **mitigating visual impact**
- Recognition of **environmental** and **social** impacts as well as system and cost issues

Campaign for National Parks
Keeping beautiful places safe

Approach to routing new transmission lines – a reaction

Campaign for National Parks
Keeping beautiful places safe

Why me?

- Member of Ofgem's Price Control Review Forum
- Worked with National Grid for 17 years on National Park issues
- Two new lines could affect National Parks – Cumbria & North Wales
- Offshore wind e.g. Rampion
- Existing lines relevant too

Distribution network

- Distribution price control review funding allowance
- From 2005 to 2010, £24 million was spent on undergrounding networks resulted in 223 km of overhead wires being replaced by underground cables in National Parks and Areas of Outstanding Natural Beauty. (average cost of around £100,000 per km)
- Direction of travel

Campaign for National Parks
Keeping beautiful places safe

A strategic approach?

- How to join a coastal LNG facility to the gas grid?
- Gas pipeline through the Brecon Beacons
- A more strategic approach was needed to avoid landscape harm
- Mitigation must be serious
- Funding must be put aside

Key landscape principles

- European Landscape Convention
- All landscapes matter…
- …but some matter more than others
- People's right to participate in decisions about landscape

The approach

- Routing not just undergrounding – more strategic
- Process not a policy – allows more flexibility (but provides less certainty)
- Engagement and consultation – crucial but earlier input on optioneering? Consultation fatigue?
- Greater emphasis on visual amenity mitigation – welcome but avoidance important too. Need a true sequential approach
- Factoring in environmental and social impacts – a sustainable development approach

Missing elements

- Some join up but not as much as we'd like
- What about replacement and refurbishment of existing lines?
- Ambition on innovation
- Hard cash

Campaign for National Parks
Keeping beautiful places safe

The ultimate test

- The lights must stay on
- The approach is theoretical and must be tested
- Continuous evaluation and improvement
- No Beauly Denny!

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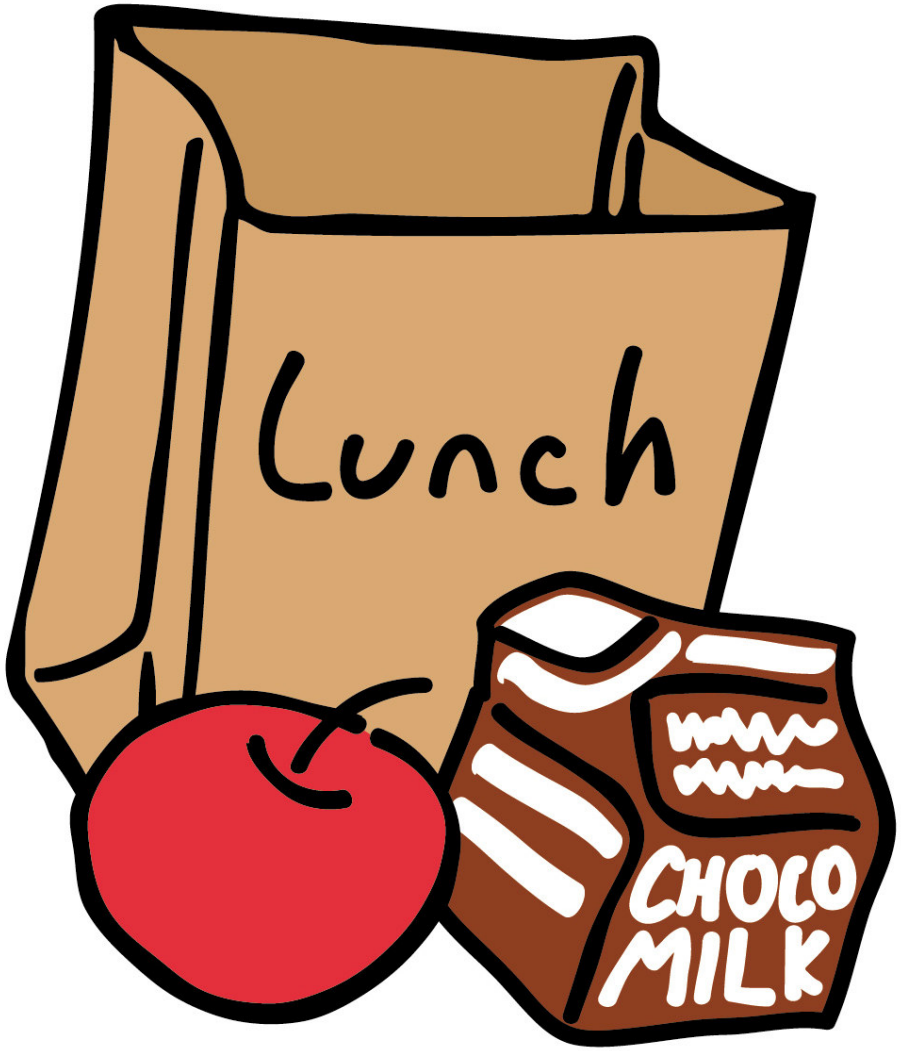
Lunch…..



BRUNSWICK RESEARCH

ATTITUDES TO ELECTRICITY TRANSMISSION

Findings from a quantitative survey of domestic energy bill payers and decision makers

November 23rd 2011
(Fieldwork conducted 27th – 31st May 2011)

Abu Dhabi
Beijing
Berlin
Brussels
Dubai
Frankfurt
Hong Kong
Johannesburg
London
Milan
New York
Paris
San Francisco
Stockholm
Vienna
Washington

CONTENTS

OBJECTIVES AND METHODOLOGY

RESEARCH OBJECTIVES

The aim of this study was to better understand the attitudes of domestic bill payers towards energy transmission, and their appetite for a number of costed options relating to current and future service provision

National Grid identified three core areas for research, and several related objectives:

- **Knowledge of energy bill composition**
  - Discovering the extent of public knowledge of the composition of both gas and electricity bills
  - Establishing whether the current cost of transmission is considered good value
- **Undergrounding**
  - A better understanding of the public's willingness to pay for the undergrounding of new and existing electricity transmission lines
- **Reliability of the electricity transmission network**
  - Exploring public appetite for current levels of reliability in the network
  - Understanding the value energy users place on loss of supply

SAMPLE AND FIELDWORK

Research was completed online, using a market research panel. Quotas were set to ensure the sample had a nationally representative profile

- Participants were selected from the online panel using stratified random sampling
- To achieve a nationally representative sample, target quotas were set on the following categories:
  - Age
  - Gender
  - Region
  - Settlement type
  - Socio economic group
- To ensure the final data accurately represented the profile of the population of England and Wales, weightings were applied to data collected
- Fieldwork was conducted between 27th and 31st May, 2011
  - The average time taken to complete the survey was 18 minutes

ABOUT THE METHODOLOGY 1

This survey was not designed as a pure 'willingness to pay' analysis, but was designed to address the three research objectives outlined above, covering attitudes to transmission more broadly

- Wide range of issues covered: e.g. gas *and* electricity; knowledge of bills *and* undergrounding
  - Decided to study only undergrounding, not other ways of mitigating visual amenity impact
- Short fieldwork period necessitated online research
  - Requirement of visual element and complexity of issues precluded telephone approach
  - Benefits and drawbacks to an online approach
- The aim of the research was not to produce an exact figure representing the additional amount the average energy bill payer/ decision maker would be willing to pay for the good
  - Chosen methodology was designed to understand participants' preferred option, from a range of costed options
- Given the chosen methodology – and it limitations – it was not felt that conducting further econometric analysis would be appropriate, or result in additional insight
- Stakeholders consulted on initial draft of the questionnaire

ABOUT THE METHODOLOGY 2

Our questionnaire included both an open-ended contingent valuation question, and a payment card method

- Version of the payment card method used to present participants with a realistic set of costed options to which they could respond
  - It also allowed people to say that they were not willing to pay any more
  - Bill payers were told what they would get for the money in terms of length of cable
  - *"The results for the prompted questions are best used as a measure of public sentiment on the options presented – not the precise amount consumers would be willing to pay for undergrounding"* p.5 Brunswick Research report

- The open-ended contingent valuation question results were given lower prominence in our initial report than the payment card question
  - This decision was taken when viewing the full set of findings
  - It was decided that while there are benefits to the open-ended question, there are also a number of drawbacks
  - E.g., for none of the open-ended questions asked does a majority provide a positive value. To derive an average amount people are WTP using the higher estimate (given that the majority don't give a monetary value) seems misleading

ABOUT THE METHODOLOGY 3

The survey was designed as a starting point for discussion on a highly complex set of issues, and we have drawn on the full range of data collected in the study

- Study is a starting point for discussion on visual amenity impact and undergrounding

- We took a holistic view of the full set of findings, given the complexity of the issue
  - Highly local: Research has shown that those directly affected are WTP large amounts to maintain current levels of visual amenity (e.g. research in Australia)
  - Low levels of knowledge: majority overestimate percentage of the total bill spent on transmission
  - Rising prices: consumer bills have increased significantly in recent times

- This presentation tries to put the findings on undergrounding in broader context
  - This presentation is focused purely on electricity transmission, not gas

ENERGY BILLS: KNOWLEDGE AND UNDERSTANDING

ENERGY BILLS: KNOWLEDGE AND UNDERSTANDING

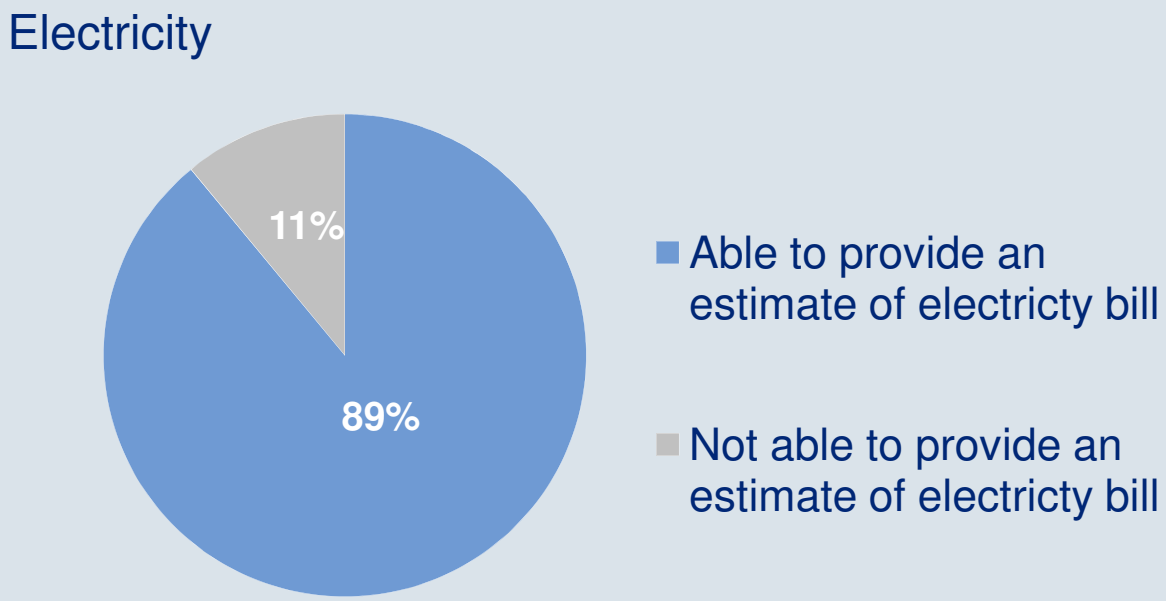
Gaining insight into the level of knowledge of bill payers/ decision makers on the subject of electricity transmission was a key research objective

Several questions focused on knowledge and understanding:

- The first questions related generally to energy bills and consumption
  - Bill payers/ decision makers were asked to provide estimates of their annual electricity and/ or gas bills
    - One aim of the question was to test the proportion who could provide an estimate of this total – and the proportion who could not
- The second pair of questions focused on knowledge of the composition of domestic electricity bills
  - Electricity bill payers/ decision makers were asked to estimate the proportion of their bills spent on each item
- Finally, bill payers/ decision makers were shown the actual composition of domestic electricity bills
  - They were asked whether or not they thought the transmission element represented value for money

LEVELS OF KNOWLEDGE OF ELECTRICITY BILLS

Nine in ten bill payers/ decision makers were able to provide an estimate of the amount their household spends on electricity. One in ten could not provide an estimate



Q. Overall, how much does your household pay each year for electricity/ gas?
Base: All electricity bill payers/decision makers (1000) / All gas bill payers/decision makers (862)

KNOWLEDGE OF ELECTRICITY BILL BREAKDOWN

Establishing the level of public knowledge and perceptions around the composition of gas and electricity bills was a key objective

- The aim was to understand the extent to which consumers understand how the amount they pay for electricity is distributed among the following items:

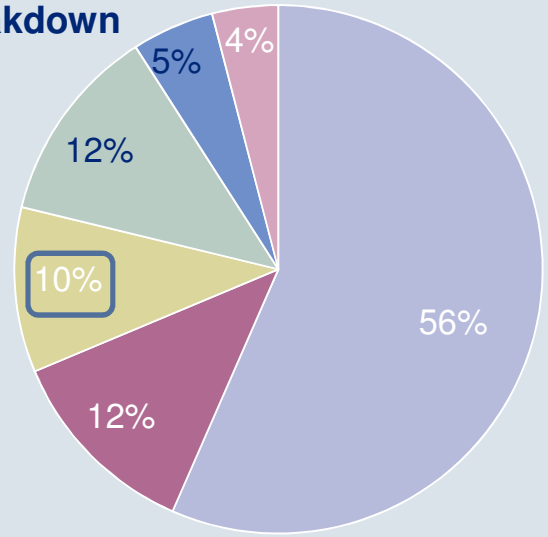
– Wholesale energy and supply costs – Distribution charges – Transmission charges	– VAT – Meter provision – Environmental costs

- It was anticipated relatively low levels of knowledge of the industry among the general public. Therefore, participants were provided with a short explanation of each of these items
  - For each item, they were asked to enter the proportion of their electricity bill is spent on this
  - Because of the question's difficulty, participants were asked to make their best estimation of the breakdown of the bill

KNOWLEDGE OF ELECTRICITY BILL BREAKDOWN

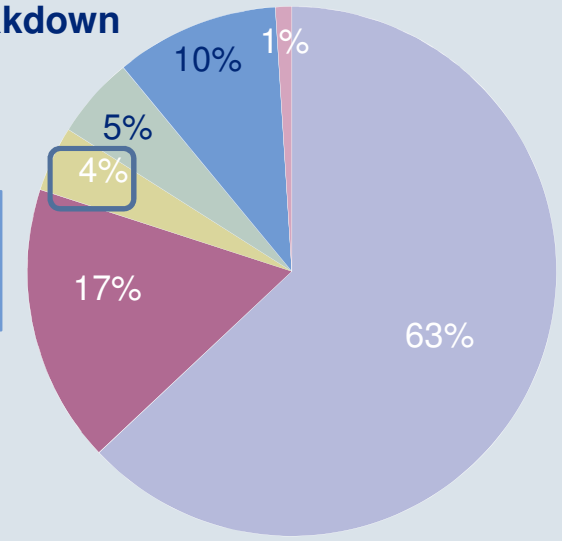
Bill payers estimate that 10% of their electricity bills are spent on transmission – double the actual proportion. The cost of VAT is also over-estimated

Perceived Breakdown



This chart is based on those who provided an answer. **31%** could not provide on answer

Actual Breakdown



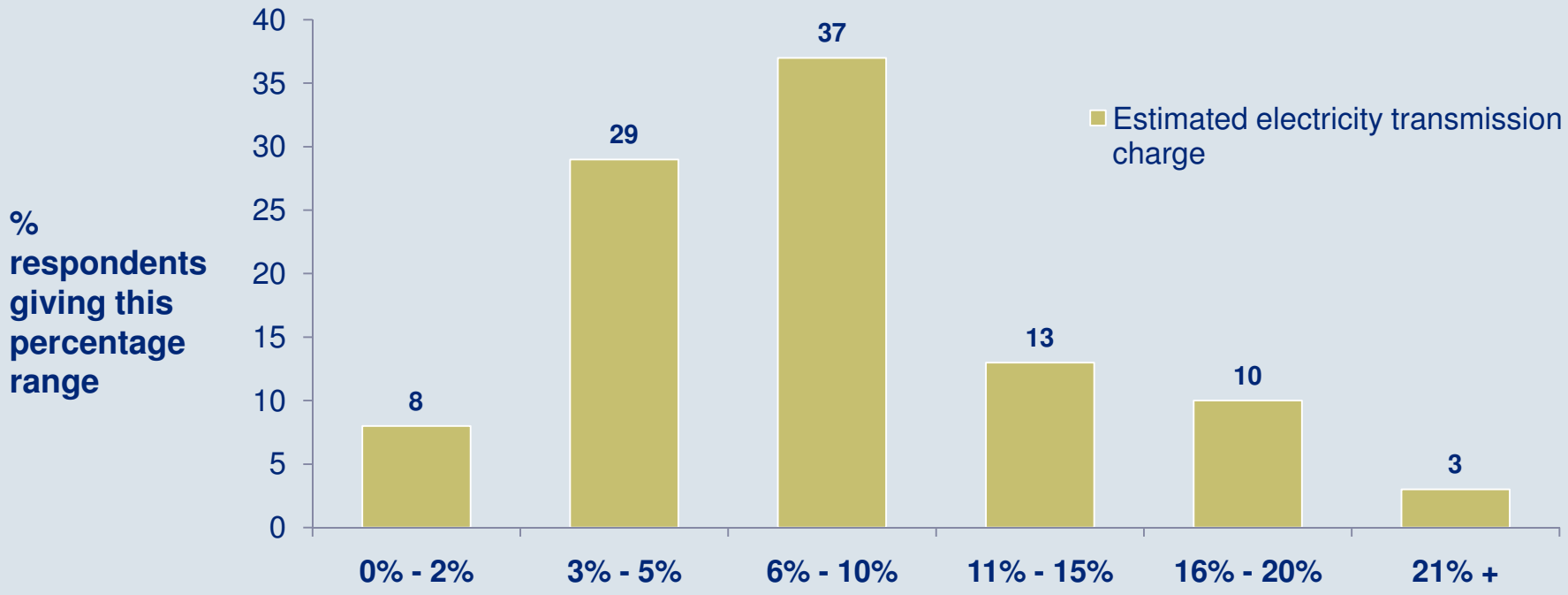
- Wholesale energy and supply cost
- Distribution charges
- Transmission charges
- VAT
- Environmental costs
- Meter provision

Note: Perceived breakdown based on mean of answers given

Q. Please indicate what proportion of the amount you pay for your electricity you think corresponds to each of the following items.
Base: All electricity bill payers/decision makers giving a value, and answering 'Electricity' block first (399)

ESTIMATED COST OF ELECTRICITY TRANSMISSION

The range of estimates for transmission charges show that 6 in 10 overestimated the proportion spent on electricity transmission. Just over a quarter (29%) were +/- 1 percentage point of the correct proportion: 4%

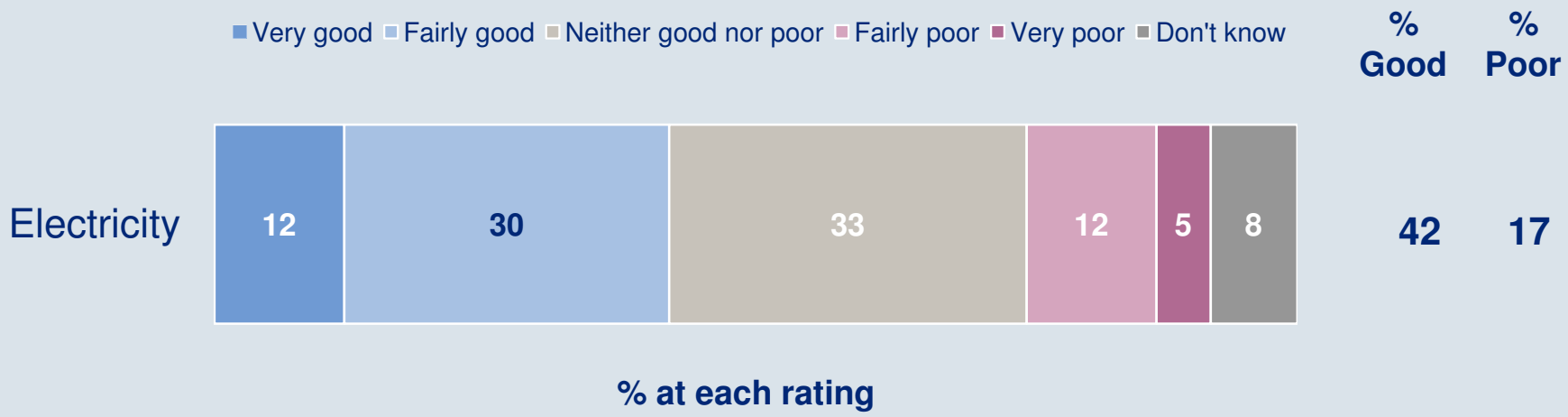


BRUNSWICK RESEARCH

Q. Please indicate what proportion of the amount you pay for your electricity you think corresponds to each of the following items.
Base: All electricity bill payers/decision makers giving a value, and answering 'Electricity' block first (399)

ELECTRICITY TRANSMISSION: VALUE FOR MONEY?

Respondents were then shown the actual breakdown of electricity bills. Four in 10 stated transmission charges represent good value for money, compared to around 2 in 10 who believe it is poor value



Q. Bearing these figures in mind, to what extent do you feel that the current level of charges for electricty/ gas transmission represents value for money? Base: All electricity bill payers/decision makers (1000) / All gas bill payers/decision makers (862)

ATTITUDES TO UNDERGROUNDING OF TRANSMISSION LINES

ATTITUDES TO UNDERGROUNDING

Assessing public attitudes to the undergrounding of new and existing transmission lines was another key research objective

Questions on undergrounding covered the following issues:

- The **importance** of undergrounding new and existing transmission lines in: National Parks (NPs), Areas of Outstanding Natural Beauty (AONBs), other rural areas and urban areas
- **Who** should bear the cost of undergrounding new and existing transmission lines in NPs, AONBs and other rural areas
- The **amount** bill payers/ decision makers say they would be willing to pay for undergrounding new and existing power lines in NPs, AONBs and other rural areas. This was asked in two ways
  - As an **unprompted** question, with bill payers simply asked to enter an amount
  - As a **prompted** question, in which bill payers were asked to select from a range of costed options (each of which included the price and result of that price)
- The **total** amount that bill payers would be willing to pay for the undergrounding of new and existing lines across NPs, AONBs and other rural areas

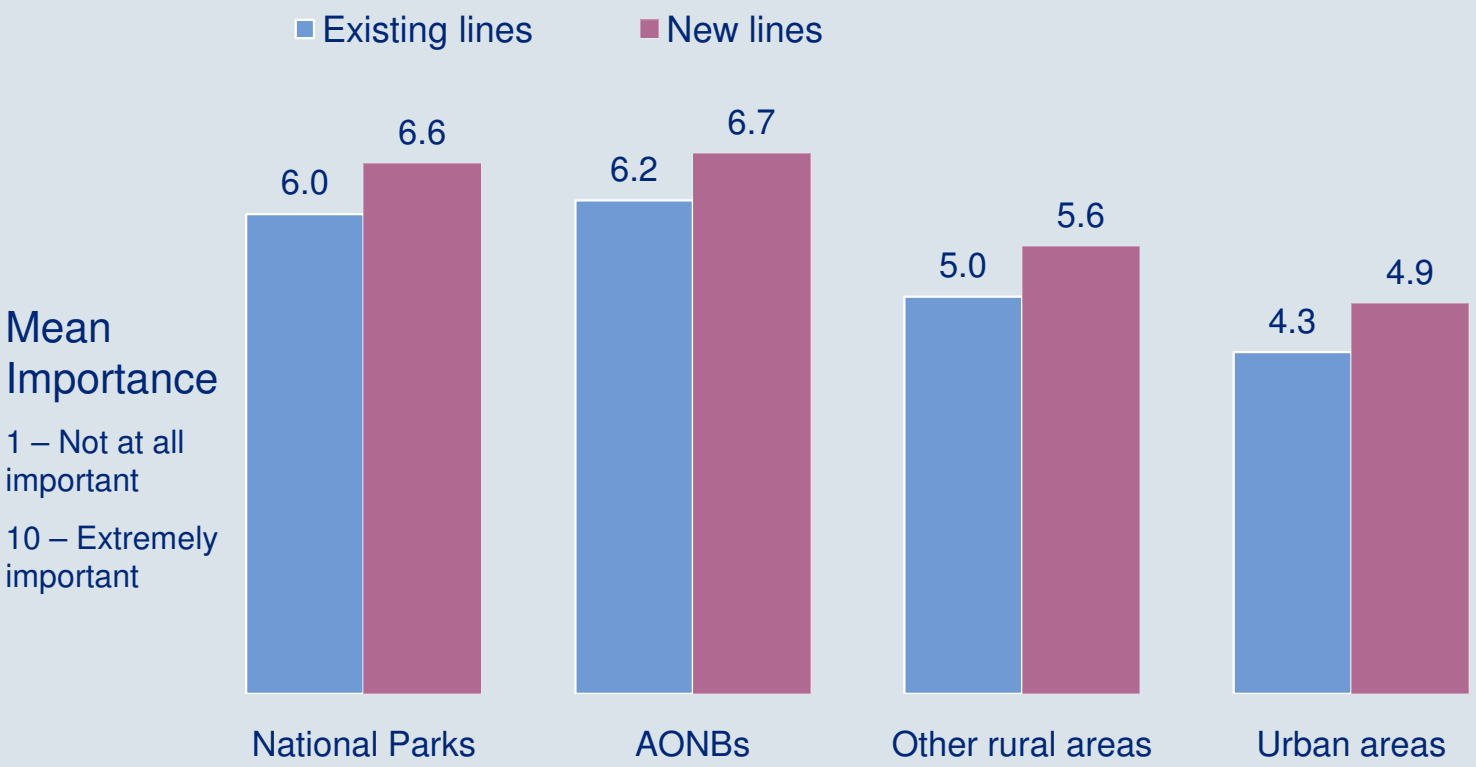
UNDERGROUNDING TRANSMISSION LINES

The issue of undergrounding also presented several challenges which the questionnaire design sought to address

Issue	Action
It was felt likely that most members of the general public would struggle to differentiate between transmission and distribution pylons	To ensure all participants understood this distinction, pictures of the different pylon types were shown at the beginning of the Undergrounding section
Several questions made reference to National Parks (NPs) and Areas of Outstanding Natural Beauty (AONBs)	Participants were provided with short explanations of National Parks and AONBs
A single, straightforward question asking how much more bill payers would be willing to pay for undergrounding in each area does not provide sufficient information on this issue	A combination of unprompted questions and specific costed option questions were used to test appetite for undergrounding
When several parallel options are proposed in isolation, the combined cost of all individual responses may be greater than a bill payer would be willing to pay in total for undergrounding	Before participants confirmed their preferred price points for each of the costed options, they were asked to confirm that they would be happy to pay the **combined** amount they had entered for all their chosen options

RELATIVE IMPORTANCE OF UNDERGROUNDING

Undergrounding new lines is considered marginally more important than existing lines. Undergrounding in National Parks and AONBs is considered more important than in other rural areas. Undergrounding in urban areas is least critical



47% of bill payers give undergrounding new lines in National Parks an score of 8-10 out of 10 for importance. **49%** say the same for AONBs.

However, only **20%** give undergrounding new lines in urban areas a score of 8-10 out of 10.

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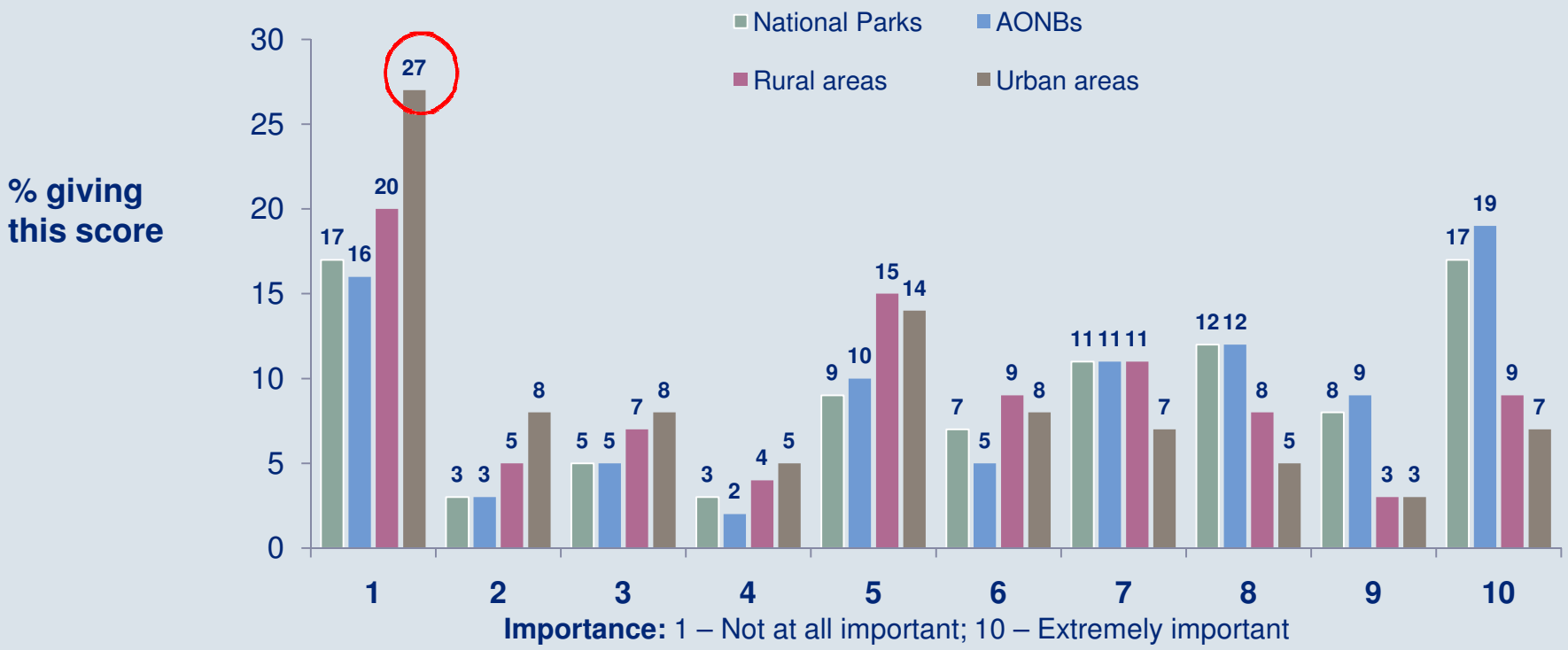
Q. On a scale of 1 to 10, how important to you is it that existing/new electricity transmission lines are put underground in the following areas? Base: All electricity bill payers/decision makers (1000)

UNDERGROUNDING EXISTING LINES: RESPONSE RANGE

The importance placed on undergrounding in existing areas varies considerably. A quarter say undergrounding in urban areas rates only 1 out of 10 in terms of importance

EXISTING LINES

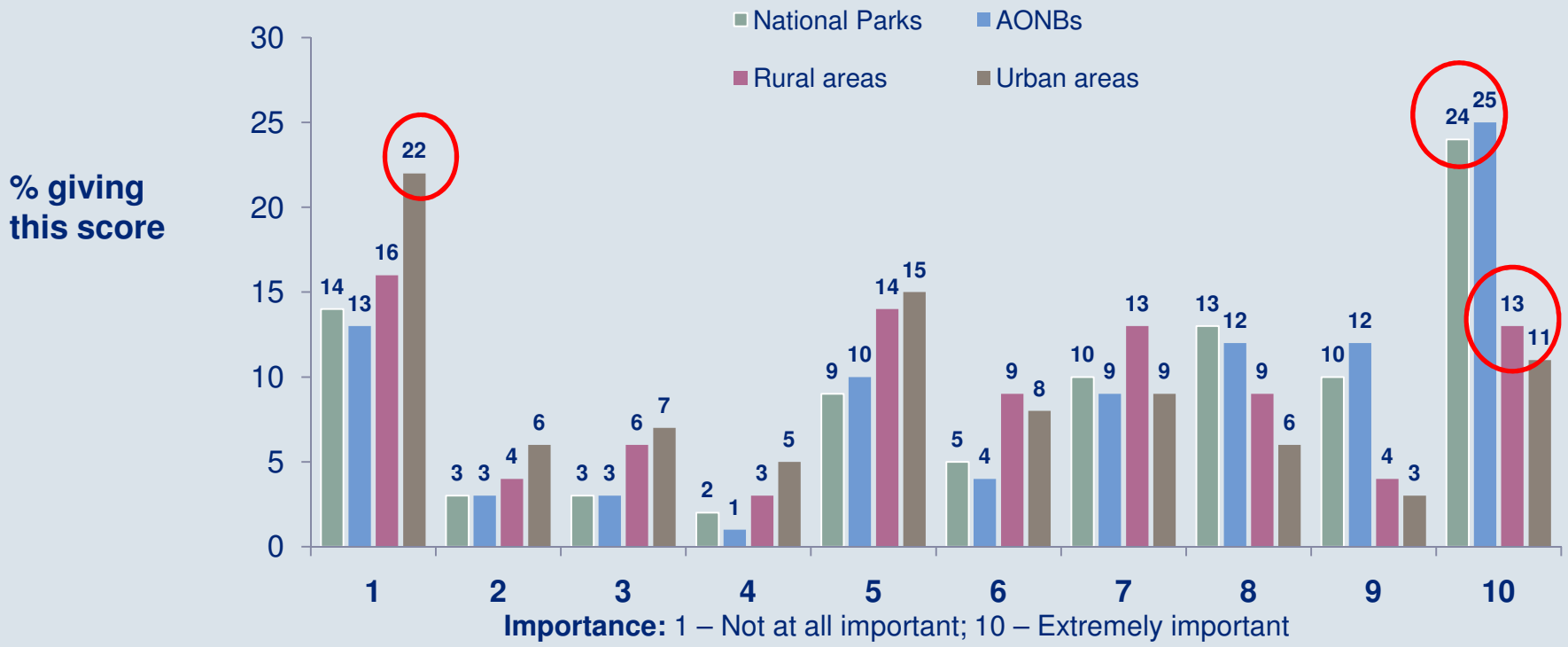


Q. On a scale of 1 to 10, how important to you is it that existing/new electricity transmission lines are put underground in the following areas? Base: All electricity bill payers/decision makers (1000)

UNDERGROUNDING NEW LINES: RESPONSE RANGE

The importance placed on undergrounding in new areas varies considerably among respondents. Undergrounding in National Parks and AONBs are considered highest priority

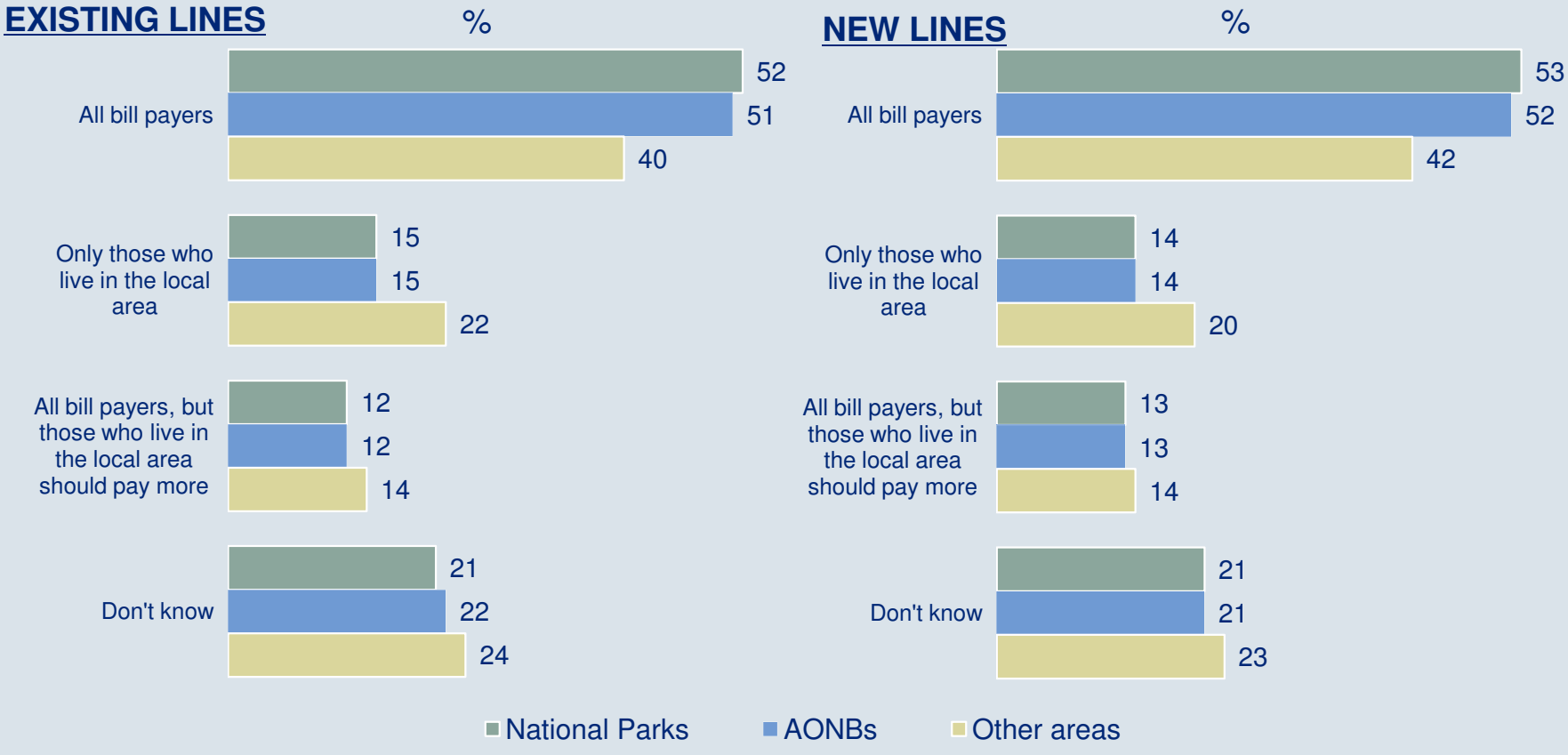
NEW LINES



Q. On a scale of 1 to 10, how important to you is it that existing/new electricity transmission lines are put underground in the following areas? Base: All electricity bill payers/decision makers (1000)

WHO SHOULD PAY FOR UNDERGROUNDING?

Socialisation of the costs of undergrounding among all bill payers is the most popular option for both new and existing lines. For National Parks and AONBs, socialisation is around twice as popular as differential charging

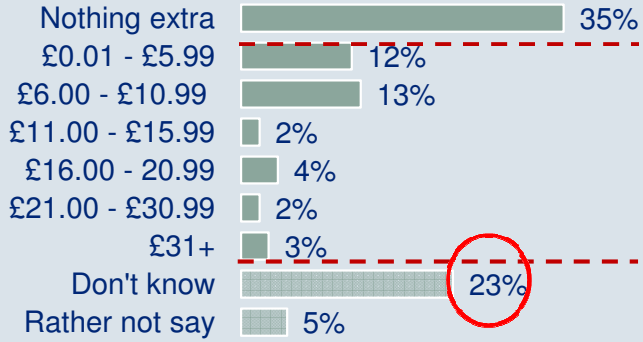


Q. Who do you feel should be responsible for paying to put existing/new transmission lines underground in the following areas? Base: All electricity bill payers/decision makers (1000)

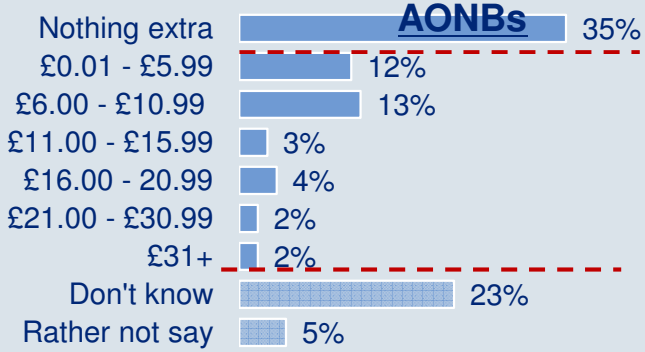
PAYING FOR UNDERGROUNDING EXISTING LINES: UNPROMPTED

A significant minority would pay nothing more for the undergrounding of new or existing lines in any area. More people would be willing to pay something extra for undergrounding in AONBs and National Parks than in other rural areas

EXISTING LINES: NATIONAL PARKS

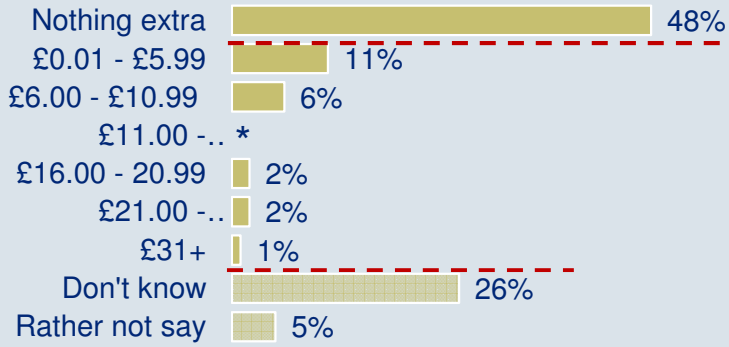


EXISTING LINES: AONBs

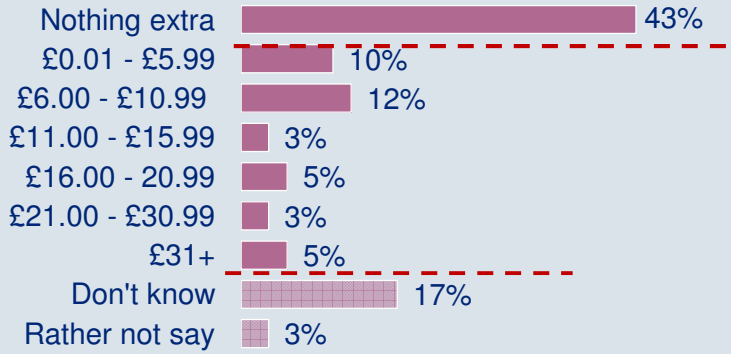


These amounts represent what respondents would pay **on top of the existing average bill**

EXISTING LINES: OTHER RURAL AREAS



NEW LINES: ALL AREAS



Q. How much more, if anything, would you be prepared to pay each year from now on to put existing electricity transmission lines underground in each of the areas listed? / How much more, if anything, would you be prepared to pay each year from now on to put new electricity transmission lines underground? Base:All electricity bill payers/decision makers (1000)

ATTITUDES TO UNDERGROUNDING: PROMPTED QUESTIONS

As well as being asked a number of unprompted questions on undergrounding transmission lines, respondents were also presented with a series of costed options

- Separate questions focussed on new and existing lines
  - The undergrounding of existing lines was subdivided into the following types of area: AONBs, National Parks and Other Rural Areas
- For each question, bill payers were given a range of costed options, as well as the opportunity not to pay anything more
  - Each option included:
    - The cost (based on the increased monetary cost to the average bill)
    - The distance of line which would be undergrounded in that area
    - The undergrounded distance as a percentage of all overhead lines in the area
- While each of these questions was asked separately, the responses were subsequently combined to give the total amount all selected options would cost the average bill payer.
  - Respondents then had the option to revise their responses, if they felt the total was more (or less) than they would be willing to pay (though very few did). The following tables are based on the final amounts people would be willing to pay for each option

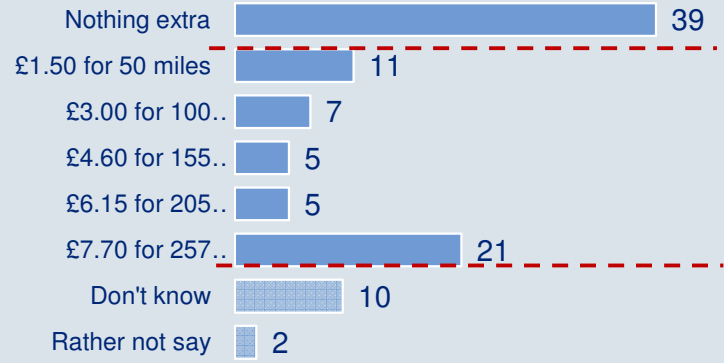
PAYING FOR UNDERGROUNDING EXISTING LINES: PROMPTED

When provided with a range of costed options, the amounts individuals say they would be willing to pay reveals some polarisation on the issues of undergrounding in AONBs and NPs

EXISTING LINES

National Parks

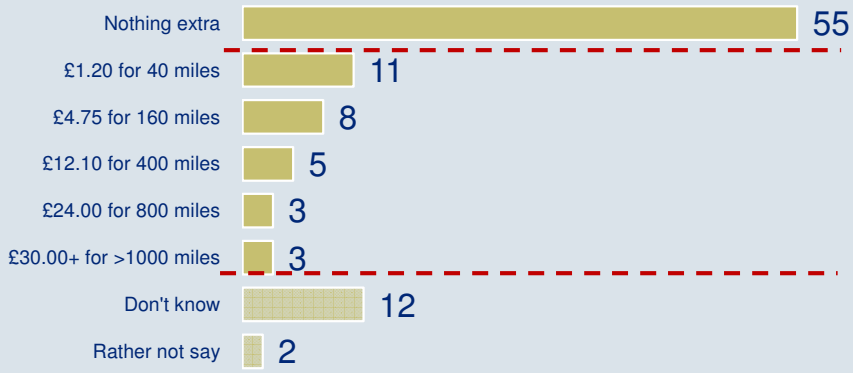
AONBs



On undergrounding in NPs and AONBs, opinion is split – half would be willing to pay something more, and half either wish to pay nothing extra or don't know.

For Other Rural Areas, a majority (55%) do not wish to pay anything more, suggesting that undergrounding protected areas is valued more highly

Other rural areas



% Willing to pay amount per **year on top of average electricity bill**

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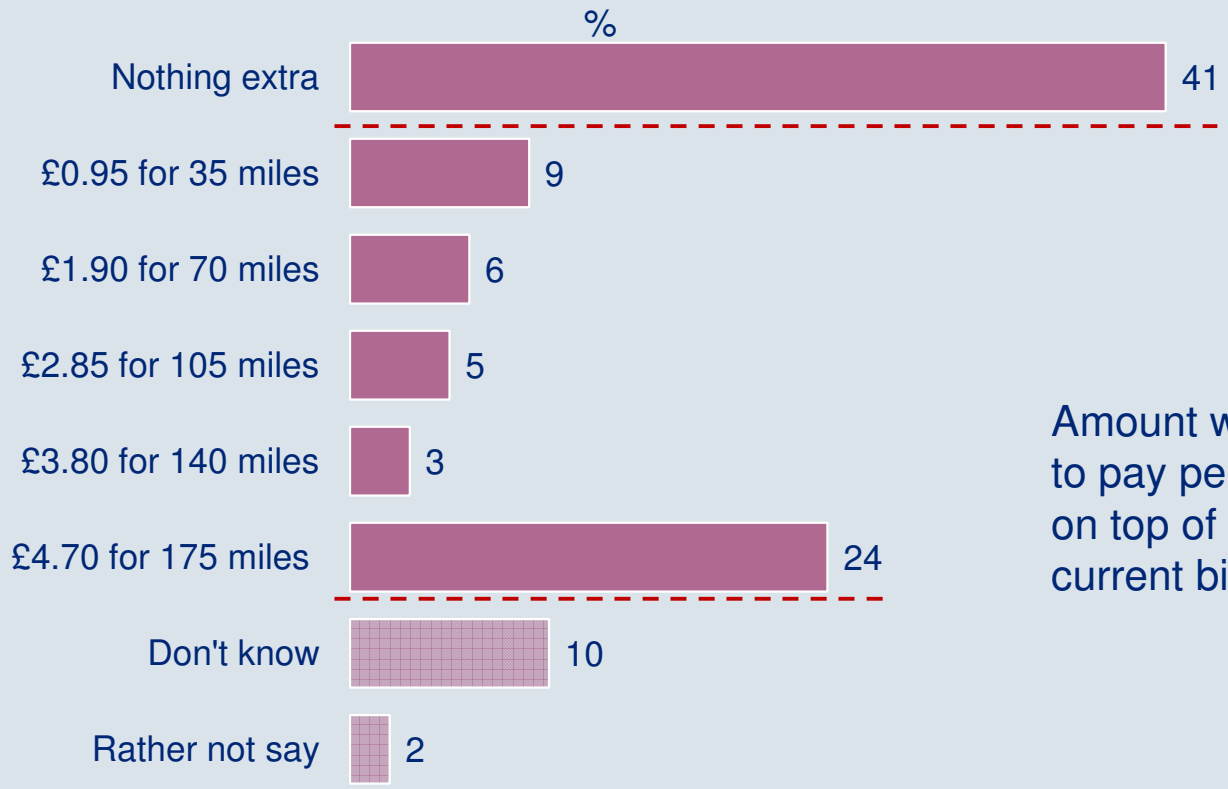
Q. How much more, if anything, would you be prepared to pay each year from now on to put existing electricity transmission lines underground in each of the areas listed? Base: All electricity bill payers/decision makers (1000)

PAYING FOR UNDERGROUNDING NEW LINES: PROMPTED

Prompted responses relating to the undergrounding of new lines shows a similar pattern of polarisation: 41% would not pay any more, while 24% would pay the top amount (£4.70) which would see all new transmission lines undergrounded

NEW LINES



Amount willing to pay per year on top of current bill

£4.70 would be enough to underground all proposed new transmission power lines

Q. How much more, if anything, would you be prepared to pay each year from now on to put new electricity transmission lines underground? Base: All electricity bill payers/decision makers (1000)

TOTAL AMOUNT, NEW & EXISTING: PROMPTED vs. UNPROMPTED

The mean amounts derived from the prompted and unprompted questions vary significantly, while mode and median are more closely aligned.

NEW/ EXISTING LINES: TOTAL

	Prompted	Unprompted
Mean	**£9.24**	**£24.13**
Mode	**£0.00**	**£0.00**
Median	**£4.54**	**£5.50**

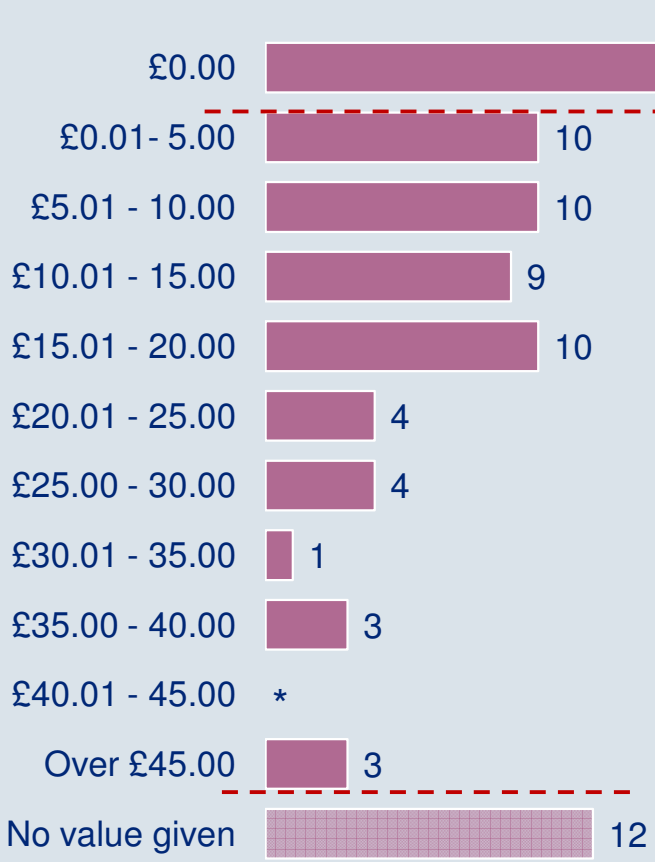
These averages include all bill payers giving a value (incl. those saying 'Nothing extra'), but do not include those who did not give an answer.

TOTAL AMOUNT: PROMPTED RESPONSES

The combined amount bill payers would be willing to pay for undergrounding varies significantly among bill payers. A third would not be willing to pay anything extra

NEW/ EXISTING LINES: TOTAL

Amount willing to pay per year on top of current bill



Average type	Amount
Mean	£9.24
Mode	£0.00
Median	£4.54

These averages include all bill payers giving a value (incl. those saying 'Nothing extra'), but do not include those who did not give an answer.

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Q. How much more, if anything, would you be prepared to pay each year from now on to put existing/new electricity transmission lines underground? Base: All electricity bill payers/decision makers (1000)

EXECUTIVE SUMMARY: KNOWLEDGE AND UNDERSTANDING

- **Knowledge of the make up of energy bills is somewhat varied**
  - A third of all bill payers do not feel able to estimate the breakdown of their gas or electricity bills

- **Bill payers who do feel able to estimate the breakdown of domestic bills overestimate the relative cost of transmitting gas and electricity**
  - 6 in 10 of electricity bill payers overestimate the proportion of domestic electricity bills spent on transmission by at least 2 percentage points
  - 9 in 10 of gas bill payers overestimate the proportion of domestic gas bills spent on transmission by at least 2 percentage points

- **Bill payers are more than twice as likely to say that the cost of transmission is good value for money, than say it represents poor value**
  - 42% say electricity transmission is very or fairly good value; 17% say it is fairly or very poor value
  - 43% say gas transmission is very or fairly good value; 18% say it is fairly or very poor value

EXECUTIVE SUMMARY: UNDERGROUNDING

- **Undergrounding is a complex issue which can polarise opinion**
  - For National Parks and AONBs, half would be willing to pay something more to underground existing lines
    - But half either wish to pay nothing extra or are don't feel able to answer the question
  - For new lines, 41% don't want to pay anything extra, but 24% would pay £4.70 extra – enough to underground all proposed new transmission lines

- **Undergrounding in National Parks and AONBs is considered most important**
  - Around half of bill payers give undergrounding new lines in National Parks and AONBs a score of 8-10 out of 10 for importance
  - But only a quarter give undergrounding in other rural areas a score of 8-10 out of 10
  - More bill payers would pay something extra towards undergrounding in "protected areas" – AONBs and National Parks

- **Sharing the cost of undergrounding equally among all bill payers is the most popular option**
  - For National Parks and AONBs, socialisation is supported by around 50% of bill payers. It is twice as popular as charging those living nearby more
  - But the issue is not clear cut: a quarter of people are unsure how it should be funded

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Visual Amenity in relation to existing lines and infrastructure

Talking Networks

Graham Frankland

RIIO-T1 Price Review

Visual amenity of existing infrastructure

- Possibility for future willingness to pay research being carried out
- Possible funding available in relation to visual amenity of existing lines

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Visual Amenity in relation to existing lines and infrastructure

Talking Networks

Participant Workshop

Facilitated by Brunswick Research

Visual amenity of existing infrastructure

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- This afternoon will consist of a workshop session, facilitated by Brunswick Research
- Before the coffee break we will be asking you to think about what should determine the level of funding made available (if any) to address the visual amenity of existing lines
- After the coffee break we will be asking you to think about what a strategy for addressing the visual amenity of existing lines could look like
- National Grid are available to answer questions and there are also lots of materials available to aid these discussions

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Concluding Remarks

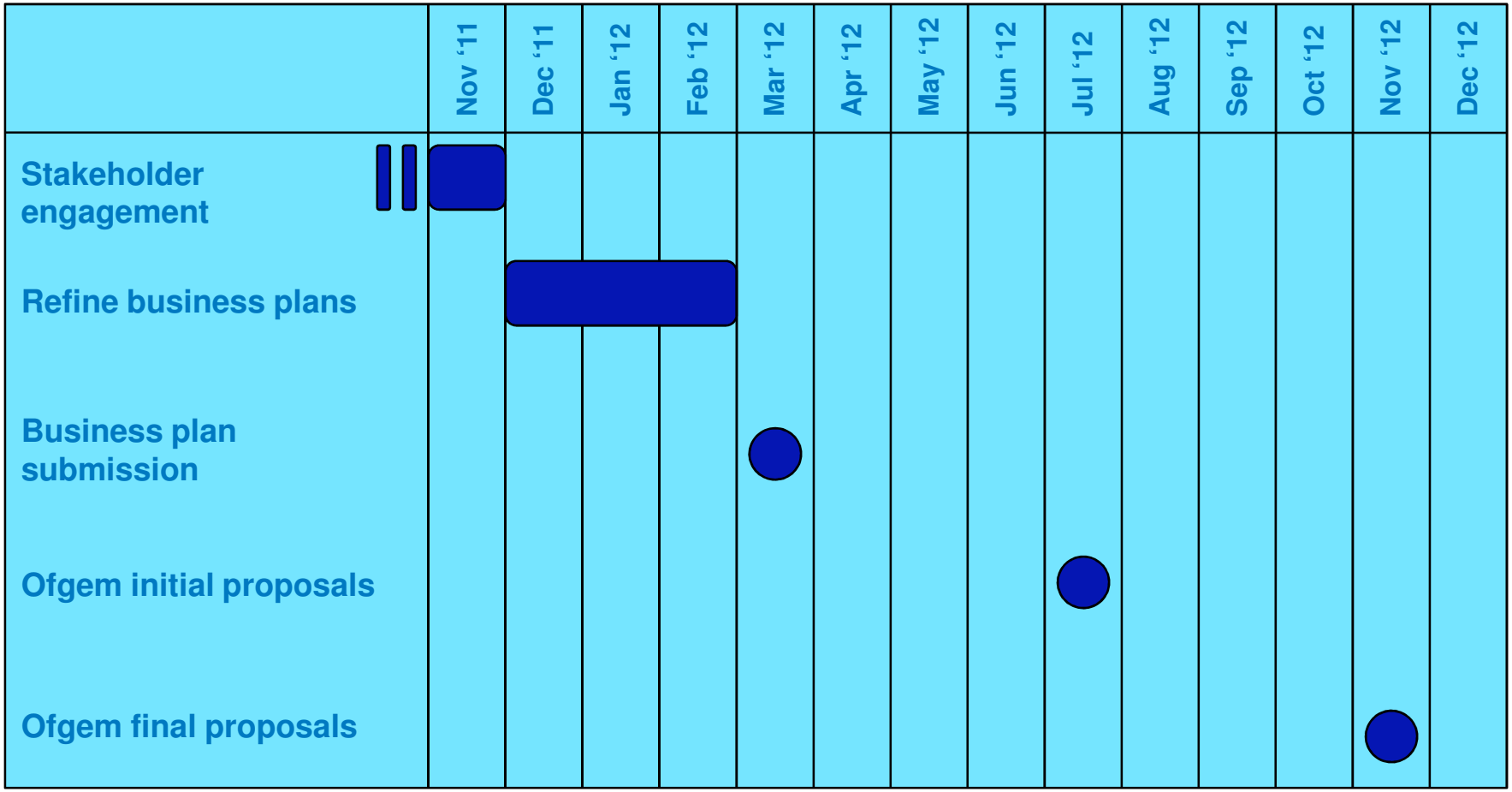
Talking Networks

Next steps

- We will collate the feedback from today and publish a summary
- RIIO-T1-2-1
  - If you would be interested in a 1-2-1 to run through your feedback, please contact:

    talkingnetworkstransmission@uk.ngrid.com
- We will also ensure that all feedback from today is reflected in the development of our business plan
- Do you want us to feed back on thoughts to you before then? And if so, what is the most appropriate forum?

Timetable


Nov '11
Dec '11
Jan '12
Feb '12
Mar '12
Apr '12
May '12
Jun '12
Jul '12
Aug '12
Sep '12
Oct '12
Nov '12
Dec '12
Stakeholder engagement
Refine business plans
Business plan submission
Ofgem initial proposals
Ofgem final proposals