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Claire Mack

Chief Executive

Scottish Renewables

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Lee Wilkinson
Senior Consultant
BVG Associates

Scotland's onshore wind future

BVGAssociates

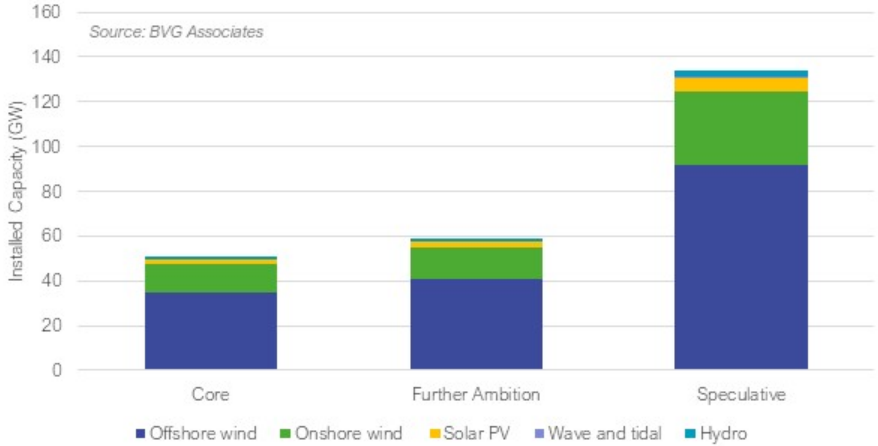
Contents

- Background
- Methodology
- Assumptions
- 2050 onshore forecasts
- High-level geographical assessment
- Future considerations

Background

- BVGA and Scottish Renewables carried out work to understand amount of renewable generation in Scotland in the Committee on Climate Change (CCC) 2050 UK net zero scenarios

- Then we updated projections based on CCC 6th carbon budget work and diving deeper into what the onshore wind industry will look like in Scotland in 2050



Projected Scottish onshore renewable capacity in 2050 based on 5th carbon budget

How much <u>new</u> capacity would be required in 2050 net zero scenarios and how much land would be required to accommodate it?

Methodology

1) We established the history of installed onshore wind capacity across the UK up to 2020

2) We used knowledge of existing planning applications to create an estimate of new installed capacity out to 2027

3) We extrapolated from 2027 to establish the amount of new capacity that must be installed in order to achieve the desired cumulative capacity at 2050, taking into consideration repowering of installed windfarms

4) We used high level assumptions to assign this capacity across the four countries of the UK

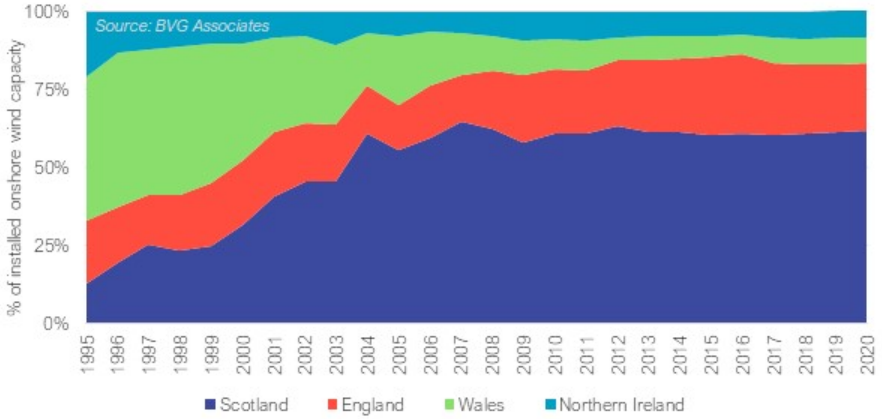
5) Scotland's new capacity was converted to land area requirements

6) High-level geographical assessment of potential land area suitable for onshore wind in Scotland

Assumptions

The model had the following key UK-wide input parameters:

- Target capacity for 2050
- Wind farm lifetime
- Percentage of wind farms that are repowered
- Power density of future windfarms
- Time between planning application granted and commissioning
- Time between planning application granted and commissioning
- Percentage of planning applications granted permission
- Percentage of successful planning applications constructed



Historical mix of onshore wind capacity across four countries of UK

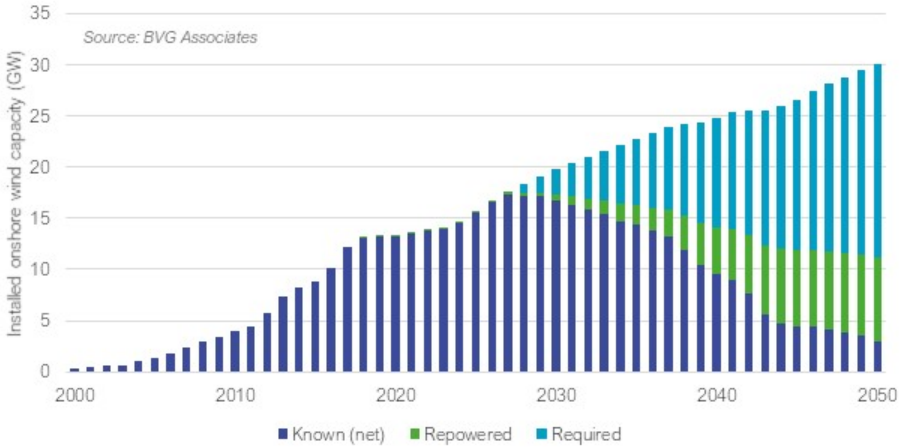
We assumed all future capacity would be allocated as:

- Scotland – 70%
- England – 15%
- Wales – 5%
- Northern Ireland – 10%

BVGAssociates

2050 Forecasts

	25 GW	30 GW	35 GW
Annual installation post-2027	0.6	0.8	1.0
Annual additions to pipeline post-2021	1.5	2.0	2.6
Total new installations 2021-2050	18.2	23.2	28.2
of which is in Scotland	12.7	16.2	19.7
Total Scotland land use required (km^2)	1,416	1,805	2,194



Projected cumulative onshore wind capacity installed across UK in 2050 net zero base case scenario

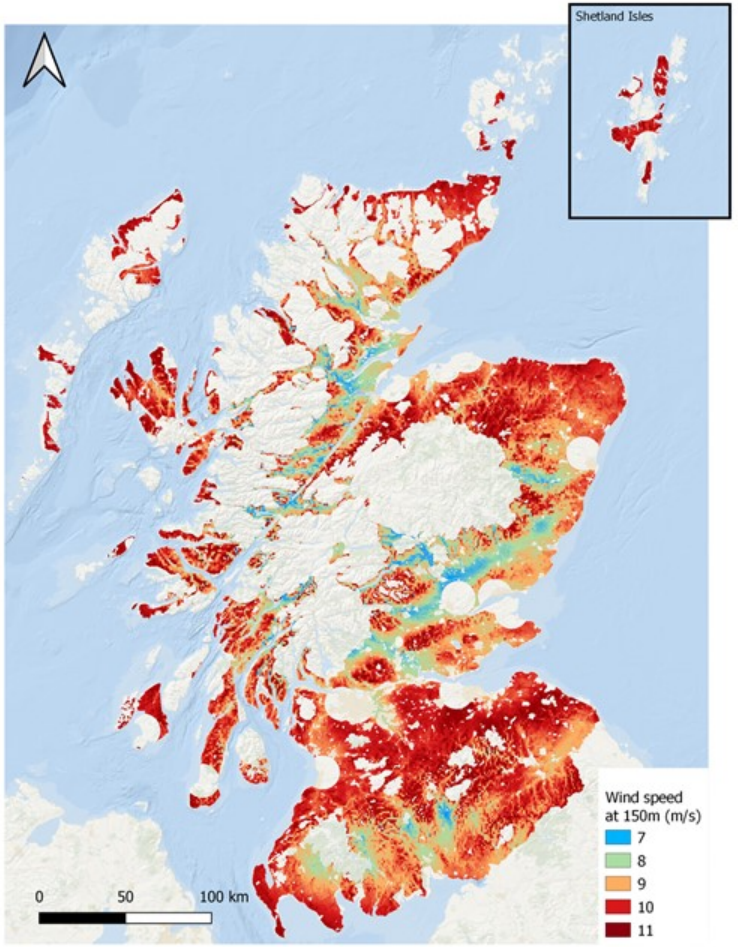
Geographical assessment

To identify potentially viable land for onshore wind we have used wind speed as a proxy of LCOE

We have removed land areas based on usage, such as

- water bodies
- urban areas
- proximity to airports
- SSSIs
- SPA
- SACs
- national parks
- natural heritage sites
- national scenic areas
- wildlands

The remaining land was deemed potentially available for onshore windfarms

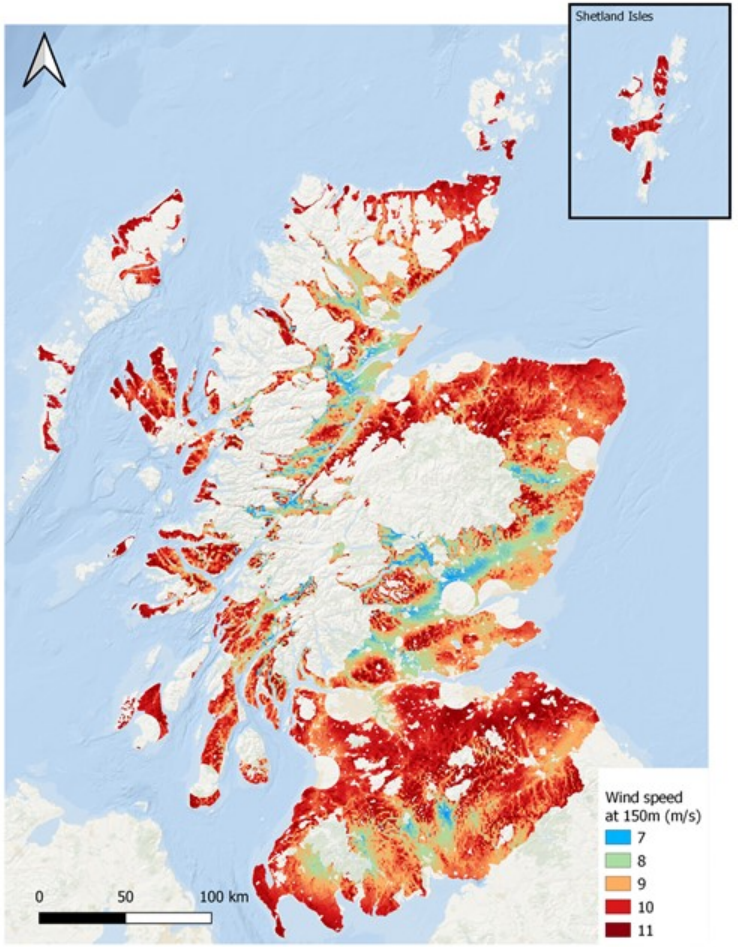


Geographical assessment

- The total area available for onshore wind in Scotland is estimated to be 41,000 km^2. This is approximately 51% of Scotland's total land area.

- The largest available areas of landed are in the central belt, borders and the north east of Scotland. These areas also have good wind speeds in the range of 9 to 11 m/s.

	25 GW	30 GW	35 GW
Total new land use (km^2)	1,416	1,805	2,194
Percentage of "available" land for onshore wind	3.5%	4.5%	5.5%



Future considerations

The power of repowering – the more we can repower the less new land we will need. How will policy facilitate this?

How does LCOE affect CfD allocations and therefore site locations across the UK?

How does TNUoS affect LCOE of projects, and what role does grid reinforcement and energy storage play in enabling more onshore wind in Scotland?

What does 15-22GW of new capacity mean for Scottish jobs and industry?

Onshore wind has a carbon intensity of 15kgCO_2e/MWh – how do we limit the environmental impact of onshore wind?

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Lesley McNeil
Head of Wind Energy Policy & Development,
Scottish Government

Derek Hastings
Head of Onshore Projects, SSE Renewables

Jeremy Sainsbury OBE FRICS
Director, Natural Power

This session begins at 1200

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Grappling with the grid: Getting the wires singing for net-zero

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Morag Watson
Director of Policy
Scottish Renewables

David Boyland

Commercial Policy Manager

SSEN Transmission

Grappling With Grid - Transmission Charging

Scottish Renewables
Onshore Wind Conference, 01.06.2021

Scottish & Southern Electricity Networks

TRANSMISSION

Scottish Government targets

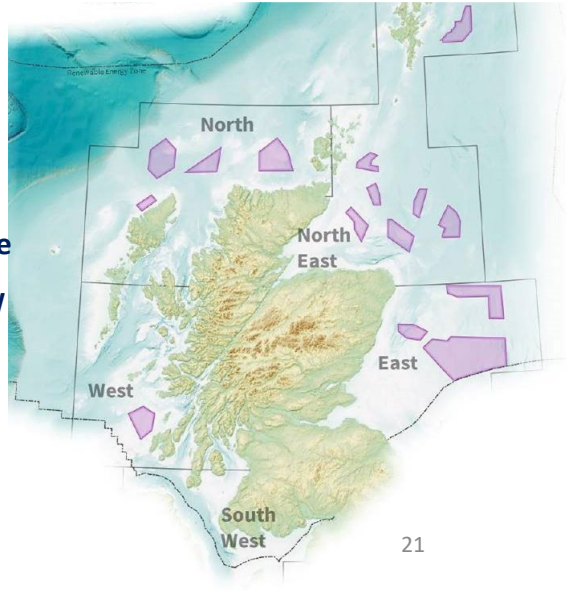
- Net zero emissions by 2045.
- 75% emissions reduction from 1990 by 2030.
- 11GW of offshore wind by 2030.
- Operation of unabated fossil fuel power stations to end in Scotland by 2030.

UK Government targets

- Net Zero by 2050.
- Reduce greenhouse gas emissions by at least 68% on 1990 levels by 2030
- 40GW of offshore wind by 2030.
- AR4 to deliver 12GW of renewable energy.

Our Contribution to Net Zero

- So far agreed **a total expenditure to £2.16bn**. to deliver a Network for Net Zero.
- Certain View **capital investment of £814 million in generation connections, regional and strategic infrastructure**
- Deliver the **capacity and flexibility to accommodate c.12 GW renewable generation** in the north of Scotland by 2026
- Our NoS FES shows **c.20-23GW by 2030 and c.33-37GW by 2050** of renewable generation is required from the north of Scotland to help GB reach Net Zero.



Our stakeholders have told us…

- The cost of wider TNUoS could effect the sustainability of the project.
- Wider TNUoS is far more expensive in the north of Scotland than anywhere else in GB.
- Wider TNUoS is a barrier to entry, costs are volatile and unpredictable.

How does this effect us?

'Put simply, timing and sizing uncertainty for generation developers translates to timing and sizing uncertainty for network investment.'

Scottish & Southern Electricity Networks TRANSMISSION

TRANSMISSION CHARGES PAPER

The paper will be used as a tool to gain the views of industry and to show that we are;

- Listening to our stakeholders
- Advocating for reform
- Serious about removing barriers to Net Zero

The paper includes;

- Investigating stakeholders' concerns about high charges in north of Scotland, volatility and unpredictability – evidences these concerns are valid.
- Baringa assured our analysis.
- Focus on wider charge and concludes **in favour of reform.**

WHAT IS TNUoS?

- A charge to recover the cost of the installation and maintenance of the transmission network.
- Generators are charged based on their declared capacity, known as Transmission Entry Capacity (TEC). Energy suppliers pay TNUoS based on the actual electricity demand of their customers.
- The Electricity System Operator (ESO) recovers the revenue on behalf of the Transmission Owner (TO).
- Detail of the charging methodology is detailed in Section 14 of the Connection Use of System Code (CUSC).

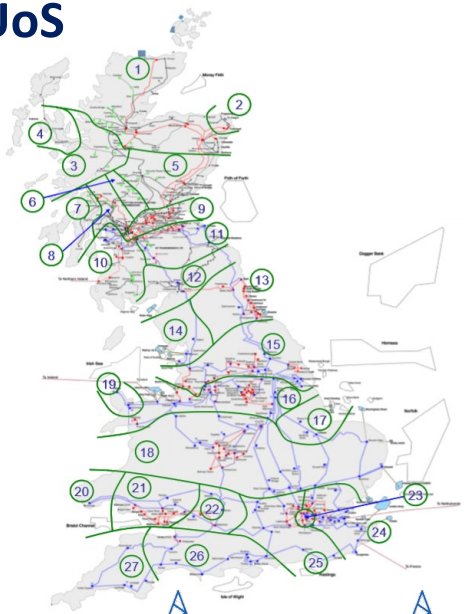
GENERATION TNUoS

Local Substation Tariff

Local Circuit Tariff

The locational charge (Wider TNUoS)

WIDER TNUoS

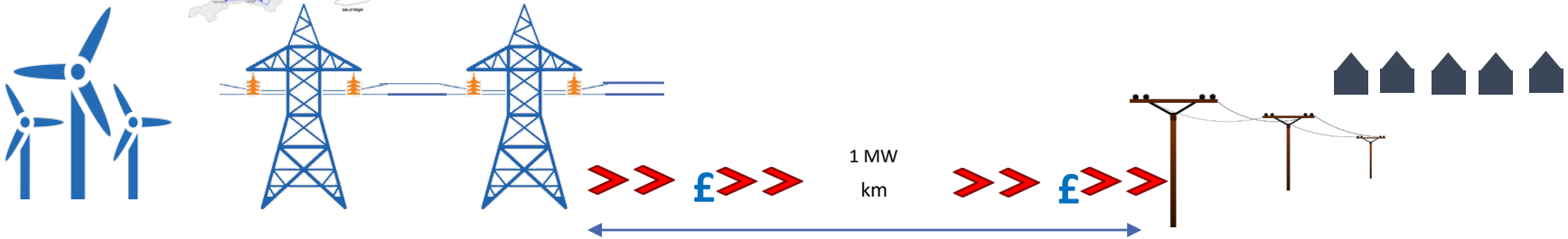


Carbon and Low Carbon Technologies.

Transport Model

Demand Criterion

Economic Criterion



Security Factors

Expansion Factor

EU Cap

Scottish & Southern Electricity Networks
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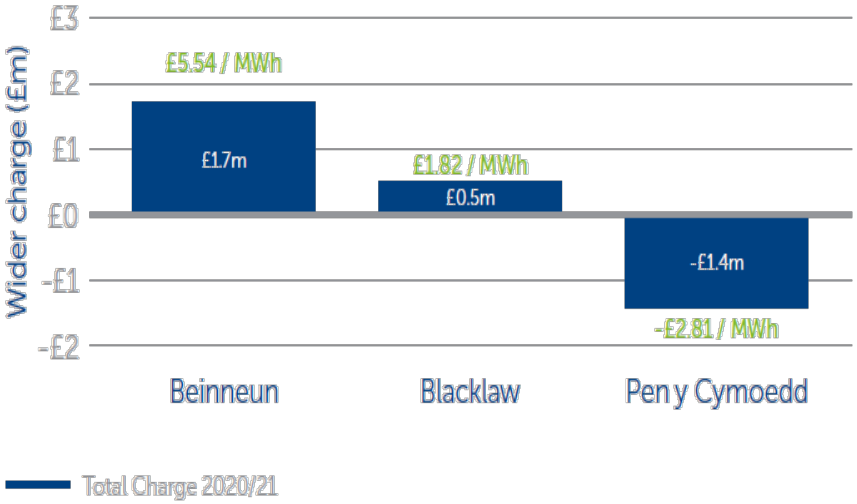
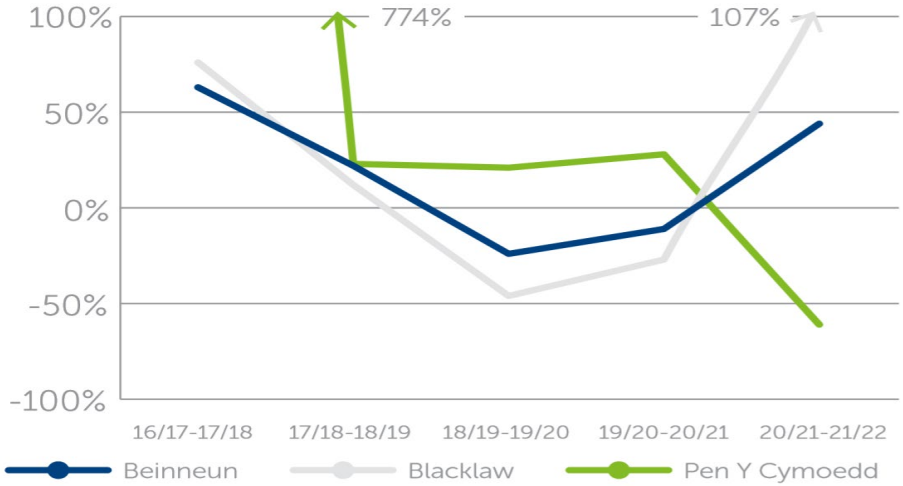
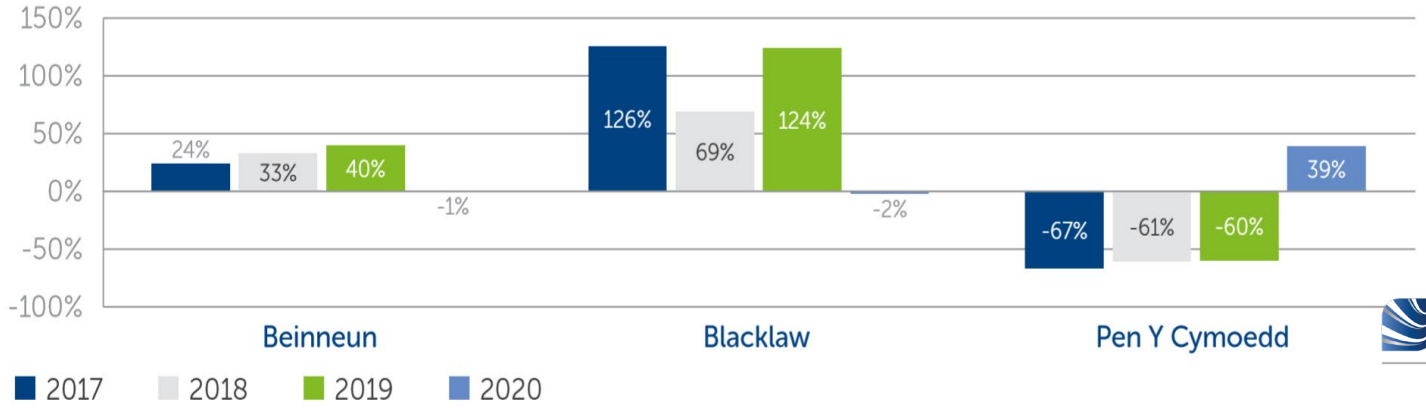
CHARGES BY LOCATION



YEAR ON YEAR VOLATILITY



UNPREDICTABILITY



Scottish & Southern Electricity Networks
TRANSMISSION

12 written responses.

24 bilateral conversations with key stakeholders and decision makers.

Our Webinar attracted 186 people who registered their interest in the event, 123 people attended, and 97 people participated through SLIDO.

12 Survey Responses.

*Based on all feedback received.

93%*

Of all stakeholders told us that they believe that TNUoS reform is required.

70%*

Of all stakeholders who read our Transmission Charges paper agreed with our findings.

84%*

Of all stakeholders told us that TNUoS presents a barrier to the delivery of future projects.

"There is a lack of incentive in the CUSC to decarbonise generation" - Consultant

"A great piece of work which validates what we have been saying to Ofgem for years" – Developer

"It is time to think differently on how grid charging is undertaken" – Scottish Renewable Developer

"Current Ofgem charging reforms will have a negative effect on UK and Scottish Government Net Zero targets." - Consultant

"I was particularly struck by the volatility of TNUoS charges" – Academia

"To deliver benefits to consumers, TNUoS charges cannot be considered in isolation." - ESO

Top 5 Stakeholder Reform Options

1. TNUoS charging should not be locational. Consider implementing postage stamp methodology.
2. Cap TNUoS at zero with the removal of all negative charges.
3. Reform must include improving the certainty of TNUoS.
4. A full fundamental review of TNUoS is required.
5. Changes need to be made to the Connection and Use of System Code (CUSC) to consider decarbonisation.

Our Next Steps.

- We are continuing to seek views from across industry on TNUoS
- We plan to publish a paper on the effect that TNUoS has on Offshore Wind
- We will be reviewing and analysing all feedback which will form our final recommendations.

If you would like to discuss this further or provide any written feedback please email David.Boyland@sse.com

Scottish & Southern Electricity Networks

TRANSMISSION


Scottish & Southern
Electricity Networks
TRANSMISSION

Charlotte Ramsay

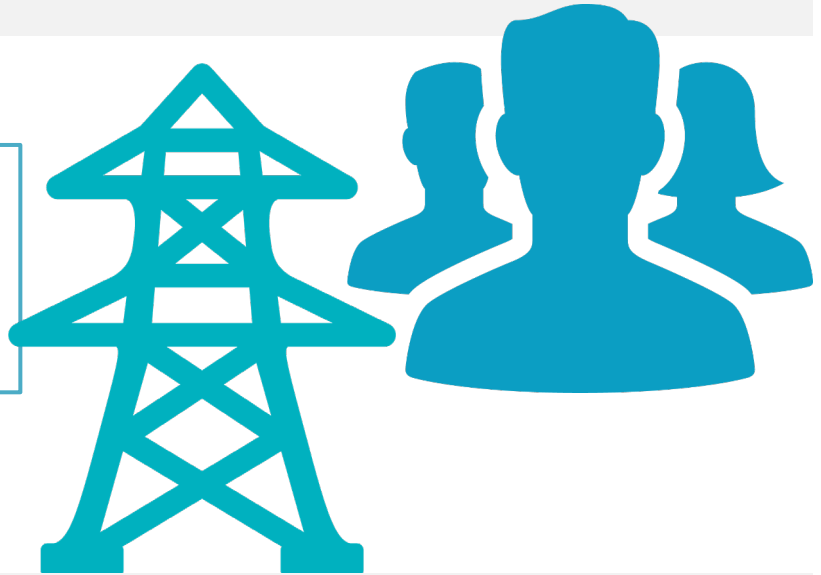
Director - Energy Systems Management and Security

Ofgem

Introduction

Ofgem's priority is to deliver net zero at the lowest cost to the consumer

Network investment costs need to be efficient to manage cost to the consumer



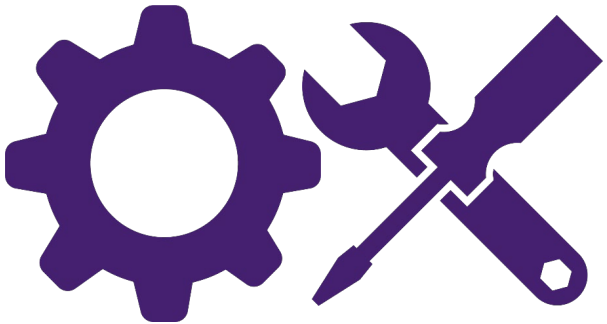
How we've done this in the past and how we will need to do this in the future are likely to be different

Past, present and future

1 *The past*

Charging costs have been driven by:

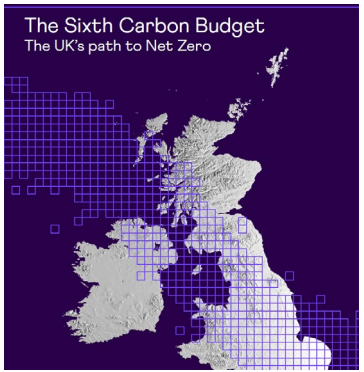
- Historical investments,
- Running costs
- Upgrading the grid



2 *The present*

CB6 & Net Zero change this with focus on:

- Fairness
- Delivery at lowest cost



3 *The future*

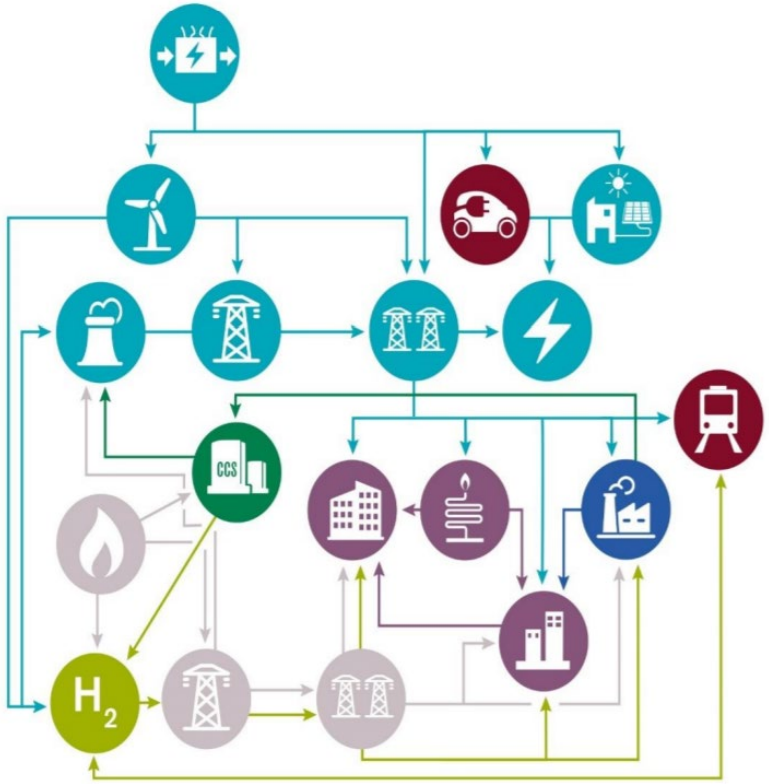
Full Chain Flexibility:

- Optimal use of all assets connected to the system
- Need the right signals to achieve this

The need for collaboration

All of the sector needs to work together on answering the question of what charging needs to look like in the future

We want to deliver a fully flexible energy system collaboratively and want to engage very closely with you all



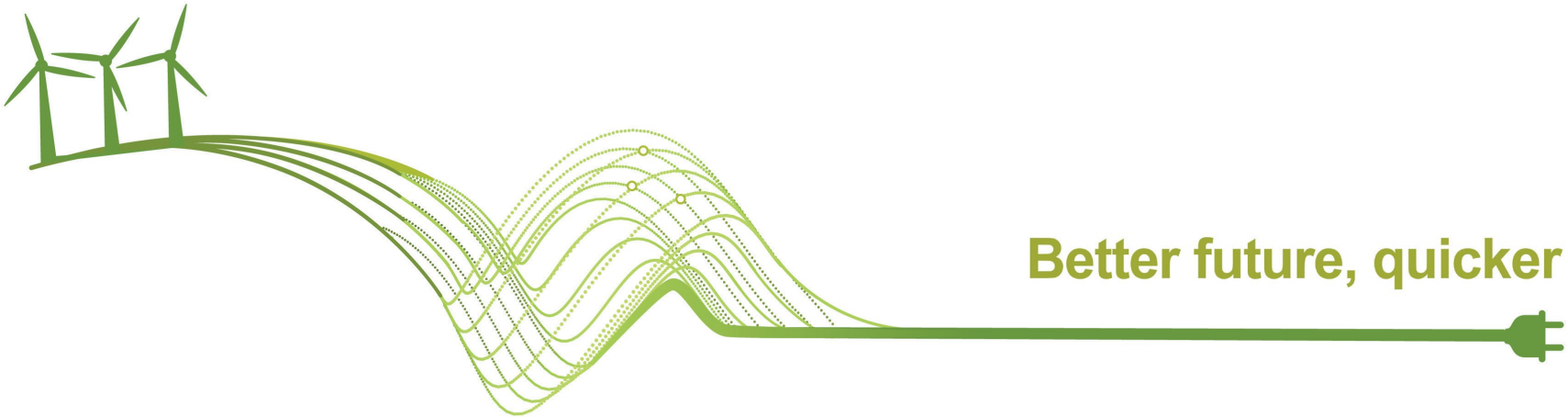
Joe Dunn

Head of Grid and Regulation

ScottishPower Renewables

SCOTTISHPOWER RENEWABLES

Joe Dunn
Head of Grid & Regulation



ScottishPower Renewables: Investing in a Net Zero Future

ScottishPower is part of the Iberdrola group, one of the world's largest utilities and a global leader in renewable energy.

ScottishPower Renewables are investing in green generation to help decarbonise the power sector and accelerate progress towards Net Zero.

£3.7bn UK Renewable capacity investment
between 2020 - 2025

Construction of 2.1GW of onshore wind, solar PV and Battery establishing innovative hybrid energy parks across UK

Developing plans for a 3.1GW offshore
East Anglia Hub

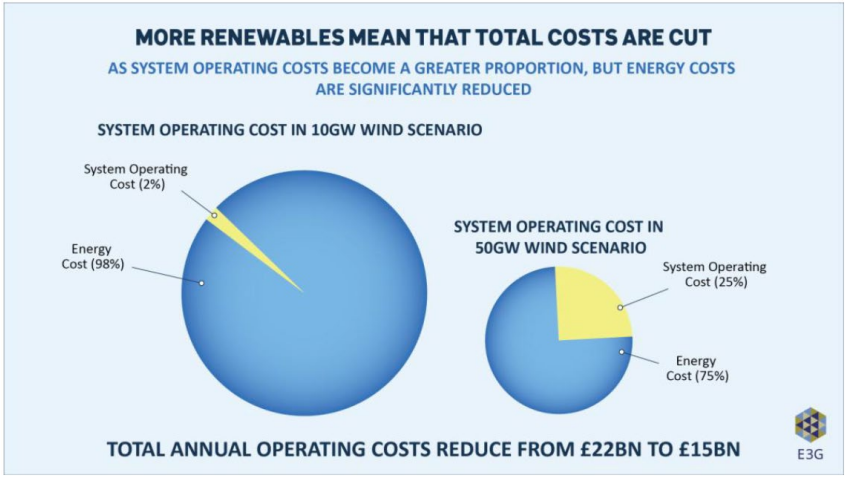
Further 5GW onshore opportunity by 2030

The Market: our energy system is changing

… a Net Zero System requires Net Zero Services …

- **Shifting** from a model of large power stations and one-way flows of electricity
- Decreasing proportion of fossil fuels gives way to intermittent renewables
- Balancing the grid currently **costs £1.4bn** annually
- **93%** of these services are provided by fossil fuel generators
- There is an opportunity for windfarms to move past just being ‘wind technology’
- **Wind *is the future*** of our energy system

Effects of Renewables on System versus Energy Costs



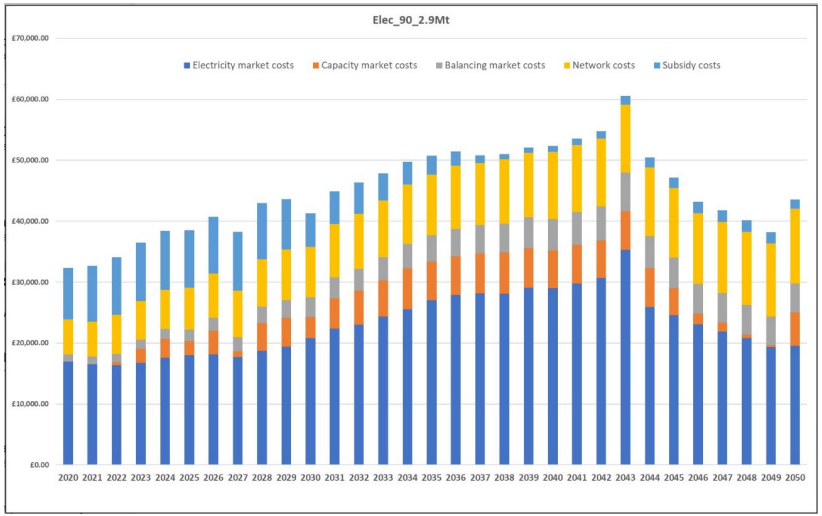
(Imperial College)

Effects of adding additional Wind/RES

Total costs are cut by RES

System Operation cost increases its share

Effects mirrored over time with Proportion of network (system) and balancing costs increases



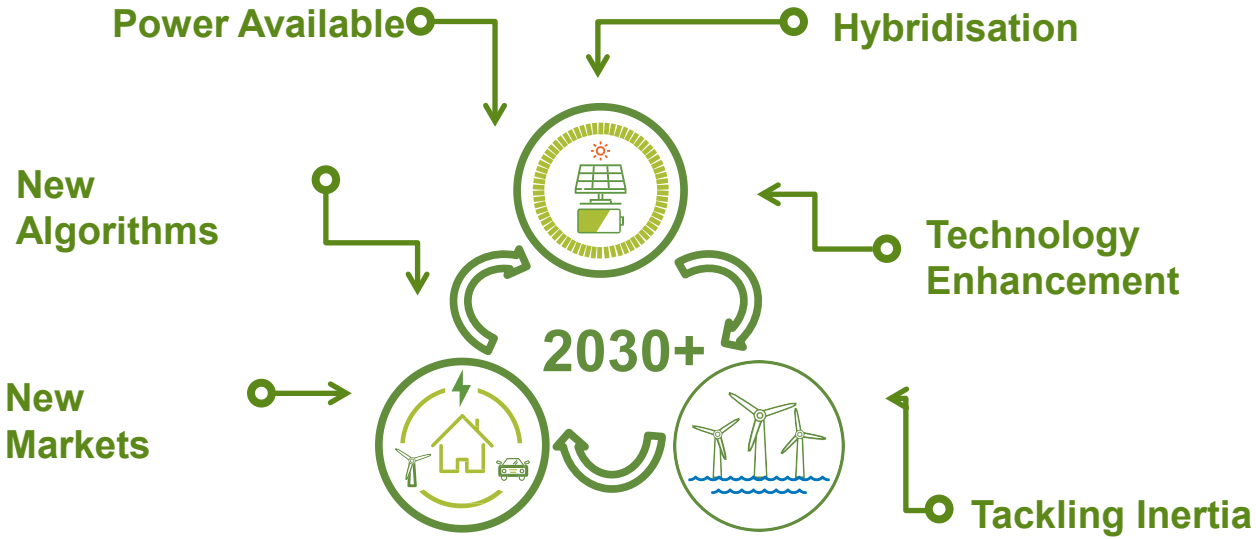
(National Infrastructure Commission)

Combining technologies and pioneering innovation

Innovation is a major part of the next chapter. We're looking at building hybrid sites, combining wind with solar power and battery storage. We're also revolutionising the way windfarms can operate.

- Helps diversify our energy mix
- Efficient use of network infrastructure
- Flexibility
- Balancing the system at local and national level

Parts of the Flexibility whole…



Dersalloch: Background and Project Intro

NGESO 2025 Zero Carbon target

Grid Systems rely on Generator services

Need for services from Renewables

Increase in Renewables penetration

Dersalloch Windfarm

- 69MW (33kV)
- Ayrshire, Scotland
- 23 Direct Drive Siemens-Gamesa D3 Turbines

Low Carbon Infrastructure Transition Programme funding (2019) ✓

Ph1-3: Grid Forming/ Inertia, Island Mode, BlackStart (Q1 2019, Q3/4 2020) ✓

Transmission Owner support to enable Ph-4 network energisation (Q3 2020) ✓

Overview Trial Phases

Phase 1 (2019)

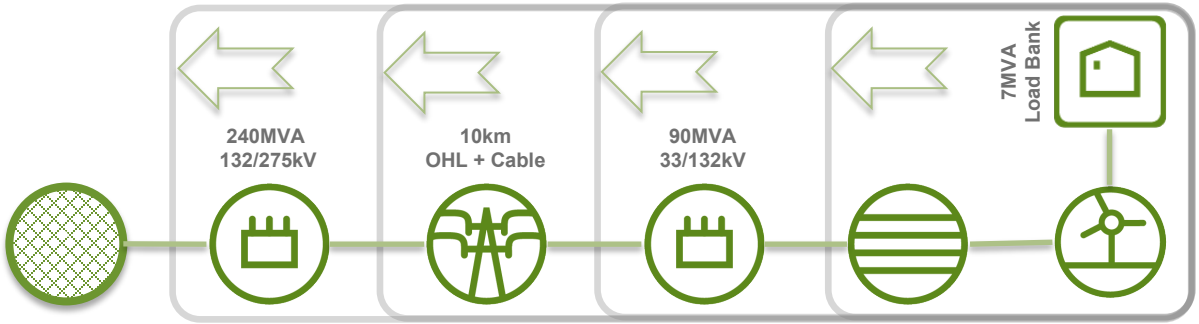
Inertia Response

- ✓ Demonstration of Inertia Response capability
- ✓ Turbines curtailed grid frequency deviations by ramping up MW output
- ✓ Successful inertia response was seen during simulated events and 2 real, unplanned grid events

Phase 2,3,4 (Q2/3 2020)

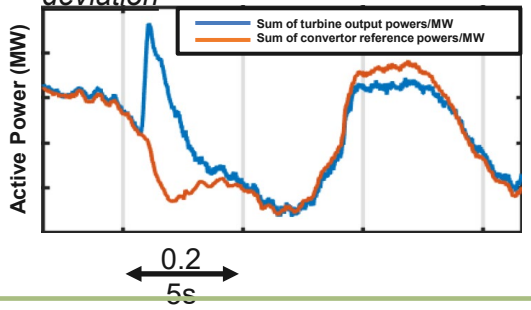
Island Mode and Restoration

- ✓ Disconnection & re-synchronisation to Grid
- ✓ Operation in Island Mode
- ✓ Black Start turbines energised windfarm
- ✓ Following de-energised local network, Dersalloch re-energise grid to 132kV
- ✓ Repeat tests with Windfarm at reduced load

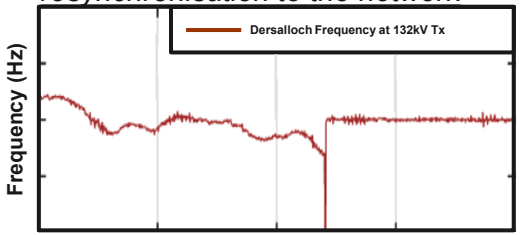


Windfarms are more capable than anyone thought possible

Inertia in response to frequency deviation



Frequency stabilisation after resynchronisation to the network



What Grid Forming from wind could achieve

- Tackle the 4 key challenges identified by NGESO
  - Stability
  - Frequency
  - Voltage
  - Thermal Constraints
- Maintain GB at the forefront of innovative solutions
- Facilitate journey to a Net Zero energy system
- Unlock existing site capabilities that are to become the backbone of the grid
- Meet new Restoration Standard targets

Why hasn't this all just happened?

Potential Value of Wind	All key industry stakeholders should develop a better understanding of the added value that wind could play across the system (which ultimately could lead to reduced costs to the consumer)
System Needs and Product Criteria	System needs and the strategic requirements to deliver value needs to be accommodated through product criteria that is flexible enough to encourage participation from renewable generators
Forward visibility of Market opportunities	Sufficient foresight and visibility of future market opportunities is required in order for developers to be able to develop and build services over time and for potential revenues to be included in investment appraisals

It is essential that we can capitalise upon the successful demonstrations of projects like Dersalloch to unlock the vast amount of potential across the country

David Acres

Head of Policy

EDF Renewables UK

Onshore Wind & CfD Auction Round 4

1 June 2021

Operational Excellence

ZERO HARM

BUSINESS GROWTH

Inspiring People

EDF Renewables UK & Ireland

We're one of the UK's leading renewable energy companies, specialising in wind and solar power as well as battery storage technology.

We develop, build, operate and maintain wind farms and other renewable technologies throughout their lifetime.

We have an operational portfolio of 37 wind farms – including two offshore wind farms.

We are busy building the 450 MW Neart na Gaoithe offshore wind farm in the Firth of Forth and we continue to install roof mounted solar panels on a number of Tesco supermarkets.

EDF Renewables has almost 1GW in operation and another 4 GW in our development pipeline.

Onshore Wind & CfD AR4

- BEIS will open Auction Round 4 for renewable Contracts for Difference in December 2021.
- BEIS will include Pot 1 for established technologies in CfD AR4 - for the first time since AR1 in early 2015.
- Established technologies in AR1 were Onshore Wind, Solar, EfW with CHP, Hydro (>5MW and <50MW), Landfill Gas and Sewage Gas.
- AR4 will also include:-
    - Pot 2 (less established technologies – Floating Offshore Wind, Remote Island Wind, Anaerobic Digestion (> 5MW), Dedicated Biomass with CHP, Geothermal, Remote Island Wind (> 5MW), Tidal Stream, Wave, Advanced Conversion Technologies)
    - Pot 3 (Offshore Wind).

Onshore Wind Pipeline & Opportunities

- New onshore wind can deliver on two key challenges - reviving the economy and decarbonising our electricity to reach net zero.
- There is an extensive pipeline of low cost, ‘shovel ready’ onshore wind projects with planning consent.
- RUK Project Intelligence has identified over 3 GW of onshore wind ready to deploy now.
- Solar Energy UK analysis indicates the solar pipeline is similar or greater.
- Pipelines for other Pot 1 technologies are significantly smaller.

Setting the Pot 1 Capacity for CfD AR4

- Through AR4 Pot 1, Government has the opportunity to procure a high volume of low cost renewables with early delivery dates.
- A capacity of 5 GW for Pot 1 would deliver a competitive AR4 outcome.
- There is scope for an even higher Pot 1 capacity in AR4.
- However, the Government will need to make a judgement on the balance of capacities between technologies across the three Pots.
- BEIS has indicated a target of up to 12 GW of total capacity to be awarded CfDs through AR4.

Onshore Wind Beyond AR4

- RUK has recommended that the UK Government sets a new target of 30GW onshore wind by 2030, ahead of COP26.
- Current operational onshore wind capacity is 13.7 GW.
- Annual onshore wind deployment rates of 1.5 – 2.5 GW were delivered up to 2017.
- A target of 30 GW by 2030 is challenging, but achievable. An AR4 Pot 1 capacity of 5 GW is consistent with this ambition.

Onshore Wind & Future Grid Access

- Securing timely grid connections for onshore wind projects is already a frequent challenge for developers.
- Without a change in approach, this project risk can only increase.
- Urgent action on grid capacity & connection access is essential to enable a 30 by 30 onshore wind target to be delivered.
- Anticipatory investment in transmission & distribution network capacity is appropriate, having established a net zero objective and supporting technology targets.
- An onshore transmission review is recommended to provide the basis for a coordinated plan of action. The current review of the future offshore transmission system has some helpful pointers.

This session begins at 1430

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Planning: Putting ambition into practice

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Marcus Trinick

QC

PLANNING:PUTTING AMBITION INTO PRACTICE

KEY ASKS FOR NPF 4

Marcus Trinick QC

NPF 4 Position Statement 2020

"Our places will look and feel different in the future. A significant shift is required to achieve net-zero emissions by 2045"

Key opportunities defined include:

8. Supporting renewable energy development, including .. re-powering and extension of existing wind farms...

10. Expanding green infrastructure, biodiversity to make our places .. more resilient to climate change..

12. Restricting.. development on peatland...

NPF 4 Position Statement 2020

A Plan For Net-zero Emissions: some key themes:

- Climate change the "overarching priority for our spatial strategy"

- "The climate and nature crises are intrinsically linked"

- Promotion of nature based solutions to climate change

- Priority to "facilitate .. roll out of renewable electricity"

SO the task is to achieve NPF 4 policies which enable both renewable energy and net biodiversity benefits from development – the key arena being onshore wind on peatlands.

NPF 4 – Suggested Key Asks For Renewable Electricity (1)

- Spatial Framework:
  - Accept no commercial scale development in National Parks and NSAs
  - Development acceptable in principle in all other areas (so no Group 2 SPP areas)
  -Especial emphasis on re-powering etc

- Key battlegrounds:
  - Wild Land Areas
  - Landscape sensitivity (not capacity) studies (OK if strategic and positive)
  - Peatlands (see next slide)

NPF 4 – Suggested Key Asks For Renewable Electricity(2)

- Peatlands – NB carbon losses, carbon calculator, peat management and peatland habitats within overall topic

- NPF 4 Position Statement emphasis on both renewables and "nature based solutions"

- Inevitability of more onshore wind on peatlands if continued roll out of onshore wind to be achieved

- More precise and scientific approach to "carbon rich soils, deep peat and peatland habitats" (SPP Group 2 phrase) required

- But synergy with nature based solutions means acceptance of net benefits for biodiversity on almost all rural sites – implications for land deals and planning practice

NPF 4 – Suggested Key Asks For Renewable Electricity (3)

Development Management – Key Issues/Asks

- The challenge of a presumption in favour – SPP experience
- Avoiding overuse of "significant" - try "special regard"?
- To justify refusal need case must be "significantly and demonstrably outweighed" by impacts which are more than just significant effects – i.e.more than ordinary
- Acceptance of the importance of design to make development acceptable?
- Attention to be given to Wild Land Areas
- Avoidance of LDP "refinements"

Geum Chrystal

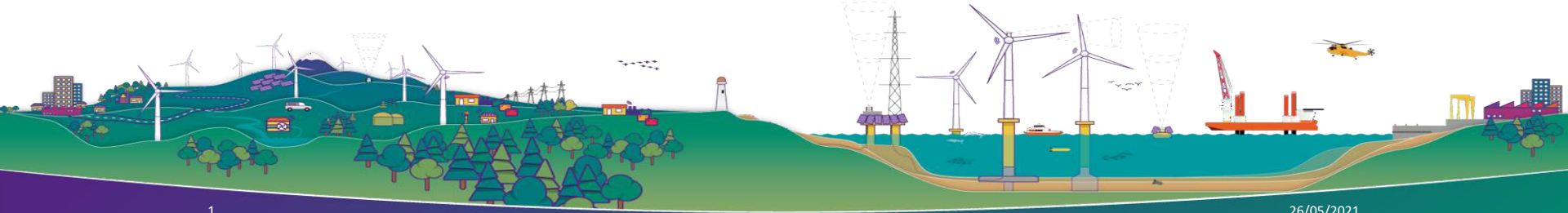
Senior Project Manager

Natural Power

Planning: Putting ambition into practice

Assessment of aviation lighting impacts

Geum Chrystal, Senior Project Manager, Planning and Environment



Planning: Putting ambition into practice

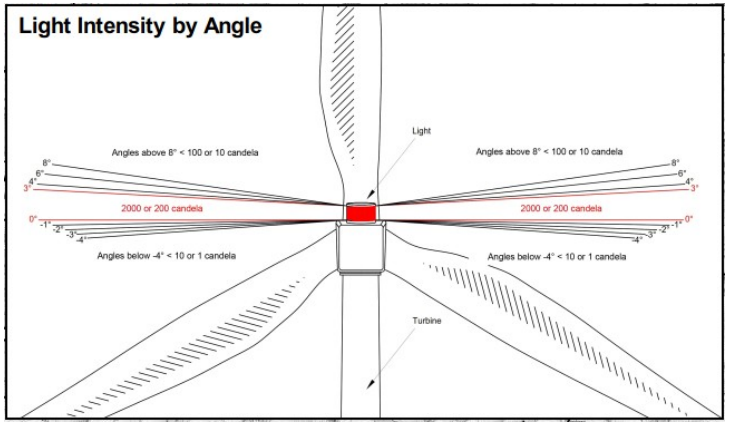
The planning system's role in enabling the use of the latest turbine technology

- Increasing rotor diameters and hub heights
  - Global trend
  - Decreasing availability of turbines below 150m
- Aviation lighting requirement
- Scientific approach to assessment of aviation lighting

Planning: Putting ambition into practice

Aviation lighting

- Characteristics of aviation lights
- Assessment to consider
  - Where can the lighting be seen from?
  - Who can see the lighting?
  - What lighting can they see?
- Inputs required from a number of professionals
  - Aviation
  - Science
  - Landscape architect



Planning: Putting ambition into practice

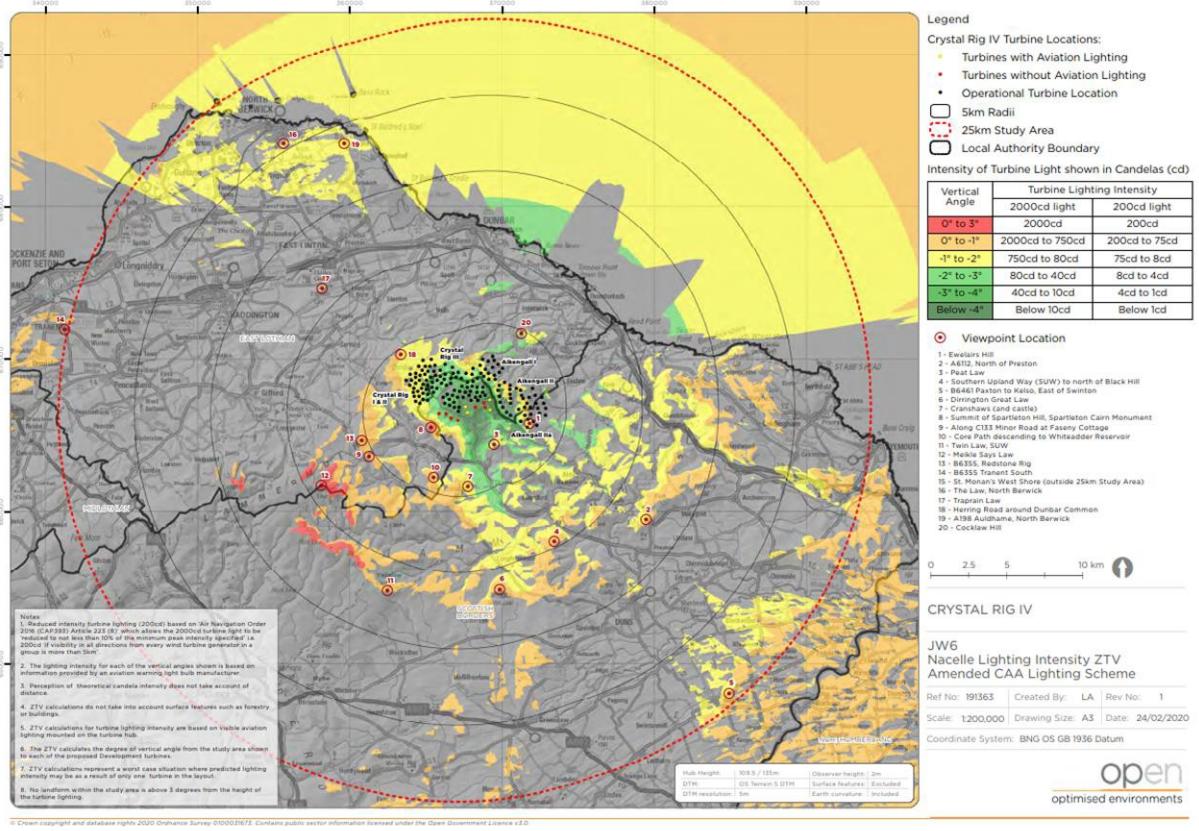
Where can the lighting be seen from?

Crystal Rig Wind Farm (Phase IV), Scottish Borders/East Lothian
Figure 8.17g (vi) Viewpoint 7 Cranshaws (and Castle)

Crystal Rig Wind Farm (Phase IV), Scottish Borders/East Lothian
Figure 8.17g (vii) Viewpoint 7 Cranshaws (and Castle)

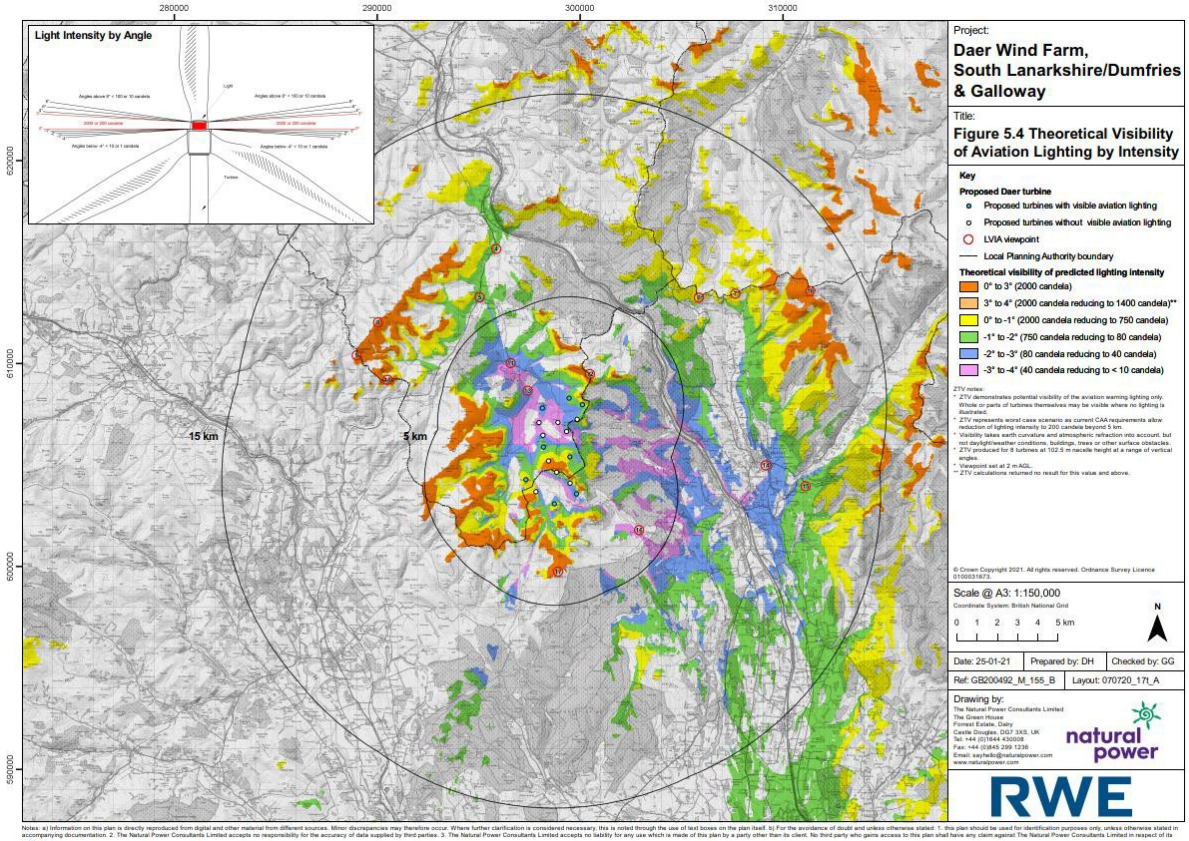
Planning: Putting ambition into practice

Where can lighting be seen from?



Planning: Putting ambition into practice

Where can lighting be seen from?



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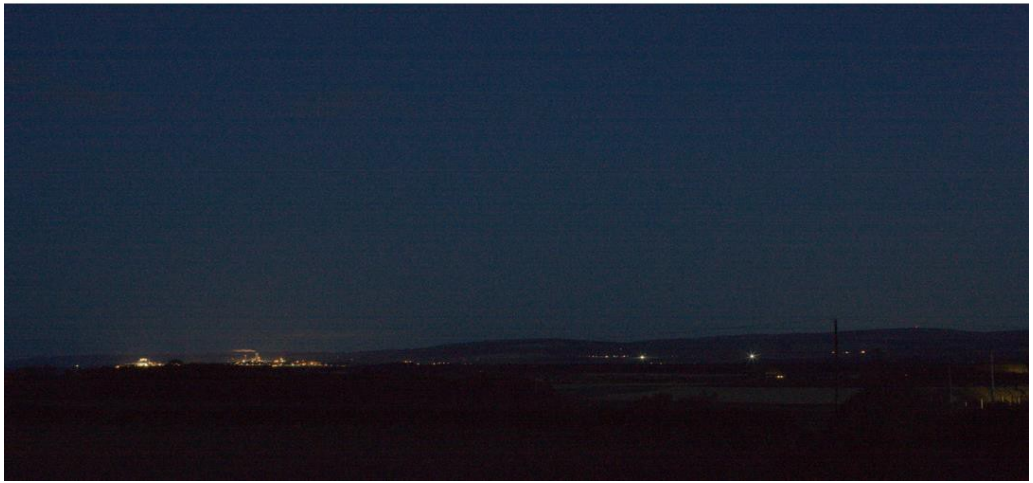
Planning: Putting ambition into practice

Who can see the lighting?

- Types of receptor
- Basline lighting at the receptor location (including torches, car lights, street lighting)
- Other visible lighting

Figure D.5

Night time - Auldhame



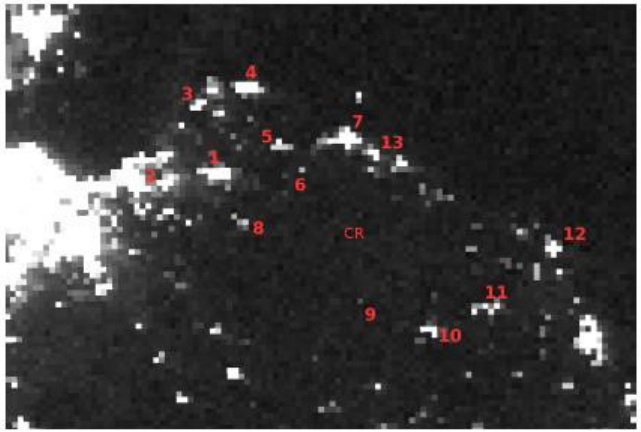


Figure 8: Merged image from SUOMI and JP1 satellites of a selection of clear moonless nights of the region in 2019. The numbered locations are: 1; Haddington, 2:Tranent and nearby communities such as Wallyford; 3: Gullane; 4: North Berwick; 5: East Linton; 6: Stenton; 7: Dunbar; 8: Gifford; 9: Longformacus; 10: Duns; 11; Chirnside; 12: Berwick; 13: Cement works (western source) and Torness power station (eastern).

Planning: Putting ambition into practice

What lighting can be seen?

- Can ascertain how visible the light is in different locations
  - ZTVs will show candelas visible based on angle between the aviation light and the receptor, but do not generally account for distance
  - Further calculation required to establish how visible the light is in any location
  - How many candelas are visible, and what can this be compared to?

Planning: Putting ambition into practice

Mitigation

- Toolbox of appropriate mitigation measures
  - Advanced lighting technology to ensure limited vertical beam spread
  - Ability to dim intensity to 200 candelas where horizontal meteorological visibility exceeds 5km
  - CAA approved reduced lighting schemes
  - Aircraft Detection Lighting systems activated by transponders
- Appropriate mitigation solution will vary from site to site
- Assessment process can be utilised wherever required

Simon Brooks

Strategic Planning Manager

NatureScot

Delivering for climate and biodiversity: Securing positive effects for biodiversity

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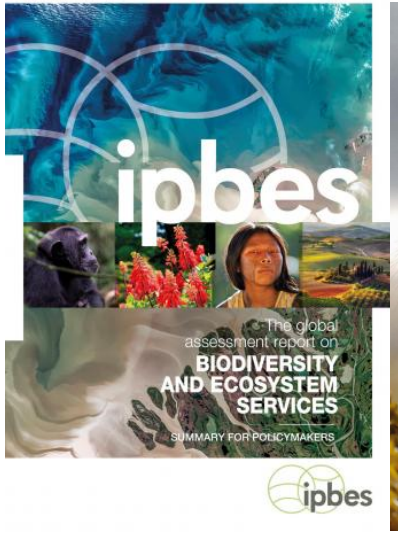
Scotland's Nature Agency
Buidheann Nàdair na h-Alba

Simon Brooks – Strategic Planning Manager

Scottish Renewables Onshore Wind Conference

1st June 2021



Convention on Biological Diversity

49%

of species decreased in abundance

24%

decline in average species abundance

14%

decline in species distribution

https://www.nature.scot/state-nature-scotland-report-2019

Town & Country Planning (Scotland) Act 1997

3A National Planning Framework

…

(3) The National Planning Framework must contain …..

(c) a statement about how the Scottish Ministers consider that development will contribute to each of the outcomes listed in subsection (3A) …..

(3A) The outcomes are …..

(f) securing positive effects for biodiversity.

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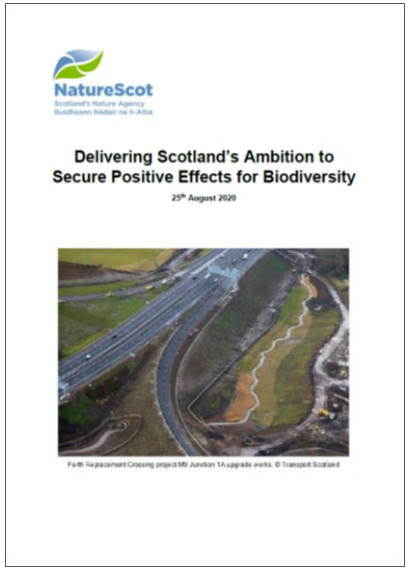
NatureScot report – delivering positive effects



Scottish Government Commission

Report on:

- ❑ links to other planning policies
- ❑ provide a menu of options
- ❑ identify case studies

Considerations:

- ❑ be ambitious (improving on English system)
- ❑ bureaucratically light (no complex metrics)
- ❑ deliverable without unreasonable costs

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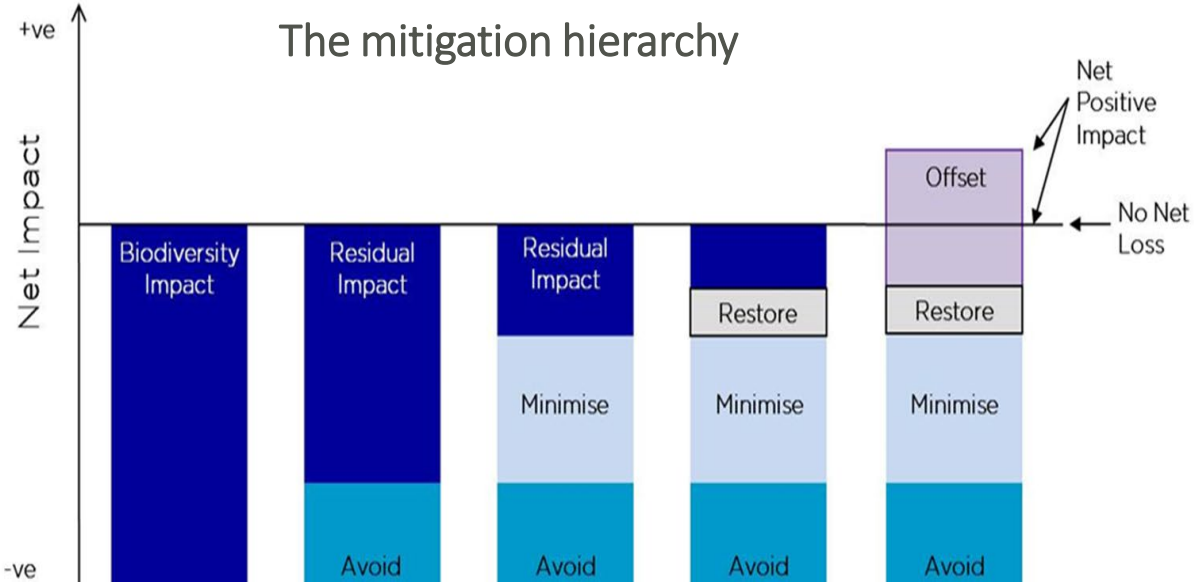
What are positive effects?

- ❑ Restoration of existing
- ❑ Creation of new
- ❑ Improving connectivity
- ❑ Species provision
- ❑ Better nature-based solutions
- ❑ Improved understanding & access



Source: The Biodiversity Consultancy

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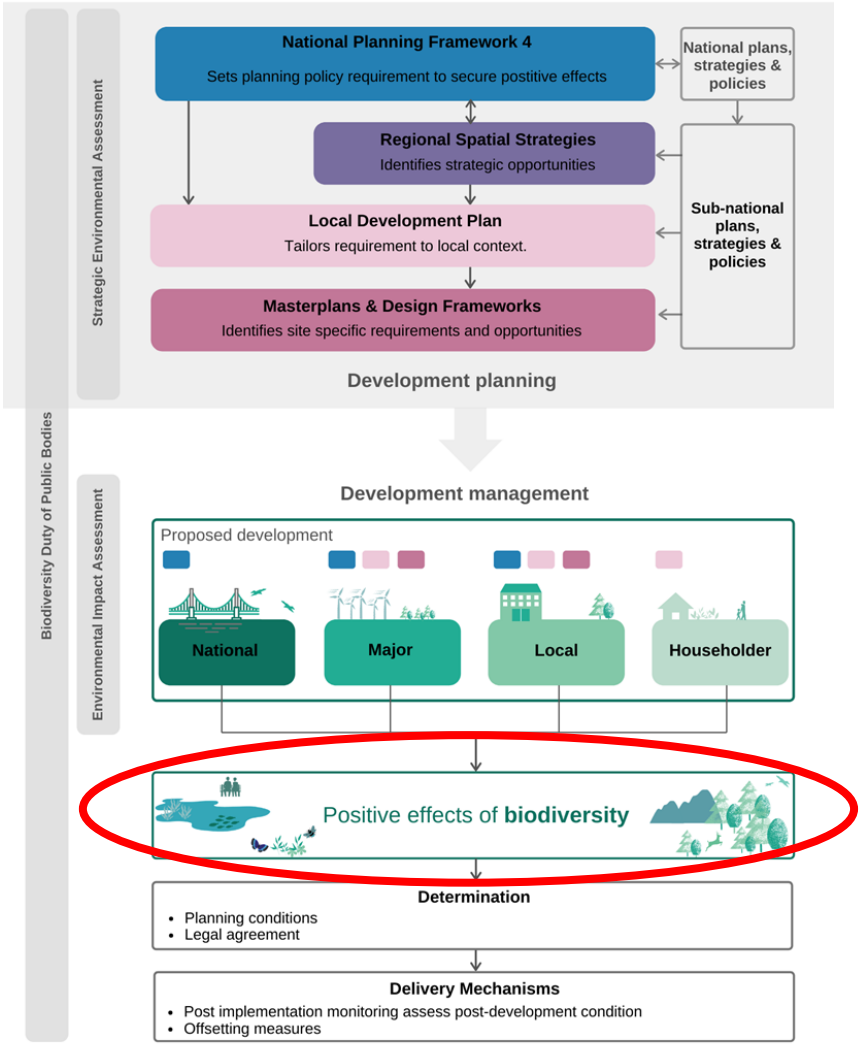
Fit with existing planning process



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Menu of options

- ❑ Policy based
  - National or local
- ❑ Standards based
  - Universal obligation
  - Quantitative – 'green / eco-points' or 'gre
  - Qualitative standards – devised by develo
- ❑ Metric or formulae based
  - Simple or complex
- ❑ Off-site offsetting

"The selected approach should provide the certainty, clarity, consistency and confidence sought by planners and the development sector."

DVL Deutscher Verband für Landschaftspflege

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Scottish Government Working Group

- ❑Green Action Trust
- ❑Homes for Scotland
- ❑Loch Lomond & The Trossachs National Park Authority
- ❑Planning Authorities
- ❑RTPI
- ❑Scottish Council for Development and Industry
- ❑Scottish Environment LINK
- ❑Scottish Land Commission
- ❑Scottish Renewables
- ❑Scottish Government – natural resources, regeneration, planning, energy consents

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Andy Sloan

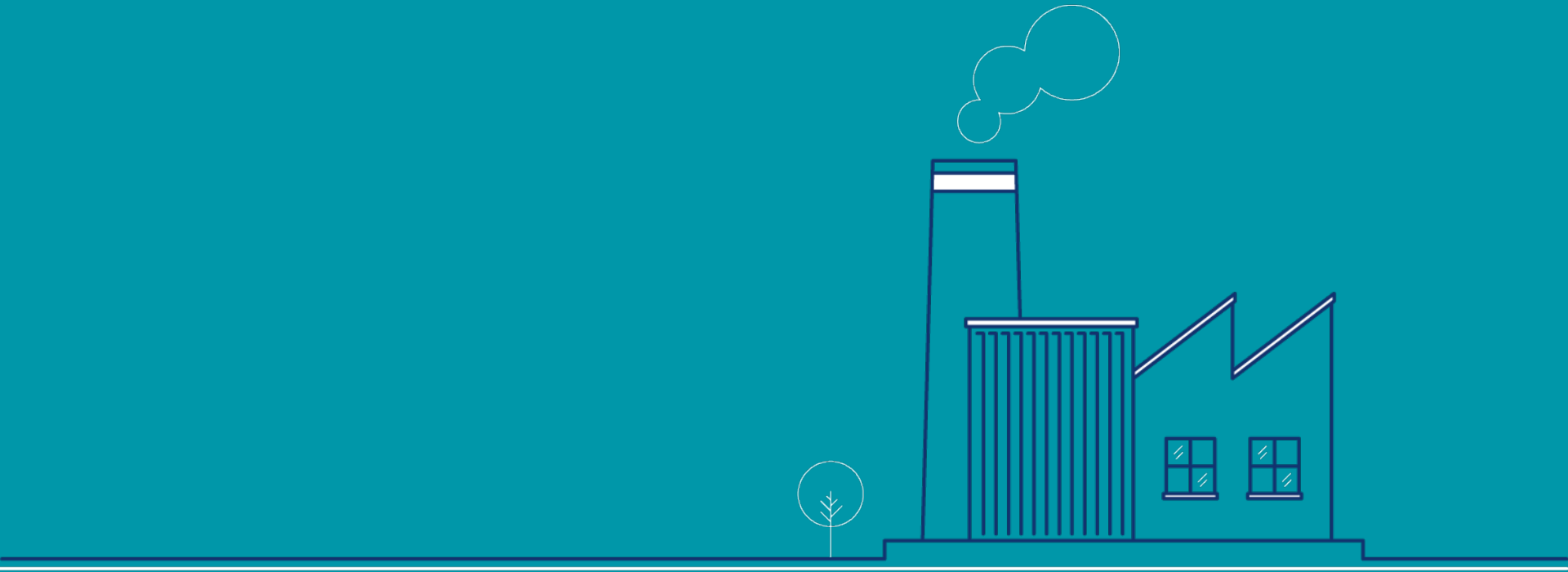
Head of Consents Strategy

SSE Renewables

PLANNING

Putting ambition into practice

THE PAST



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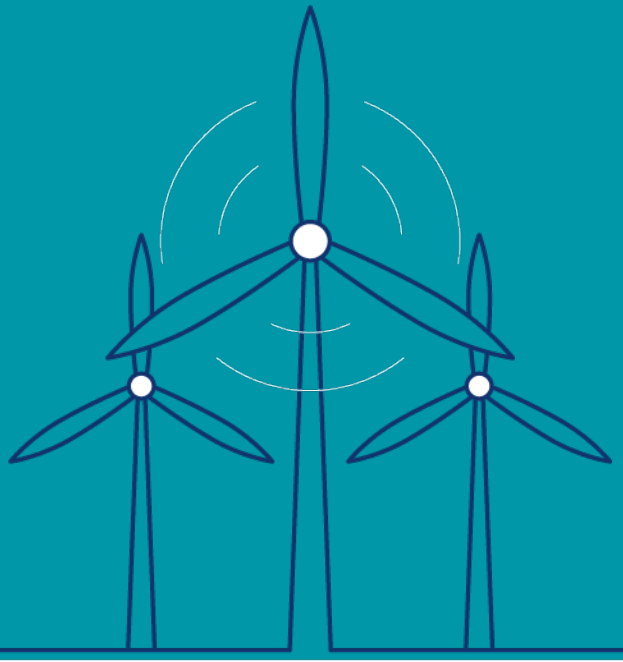
THE FUTURE



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THE FUTURE-LARGER TURBINES

Challenge or opportunity

- Windy sites are more critical than ever.
- The world has moved on to newer technology.
- Land, access, grid and environment are similar.
- Larger turbines mean more output.
- The focus on local landscape impacts hinder progress towards the targets.
- New challenges such as lighting and peatland/biodiversity net gain.

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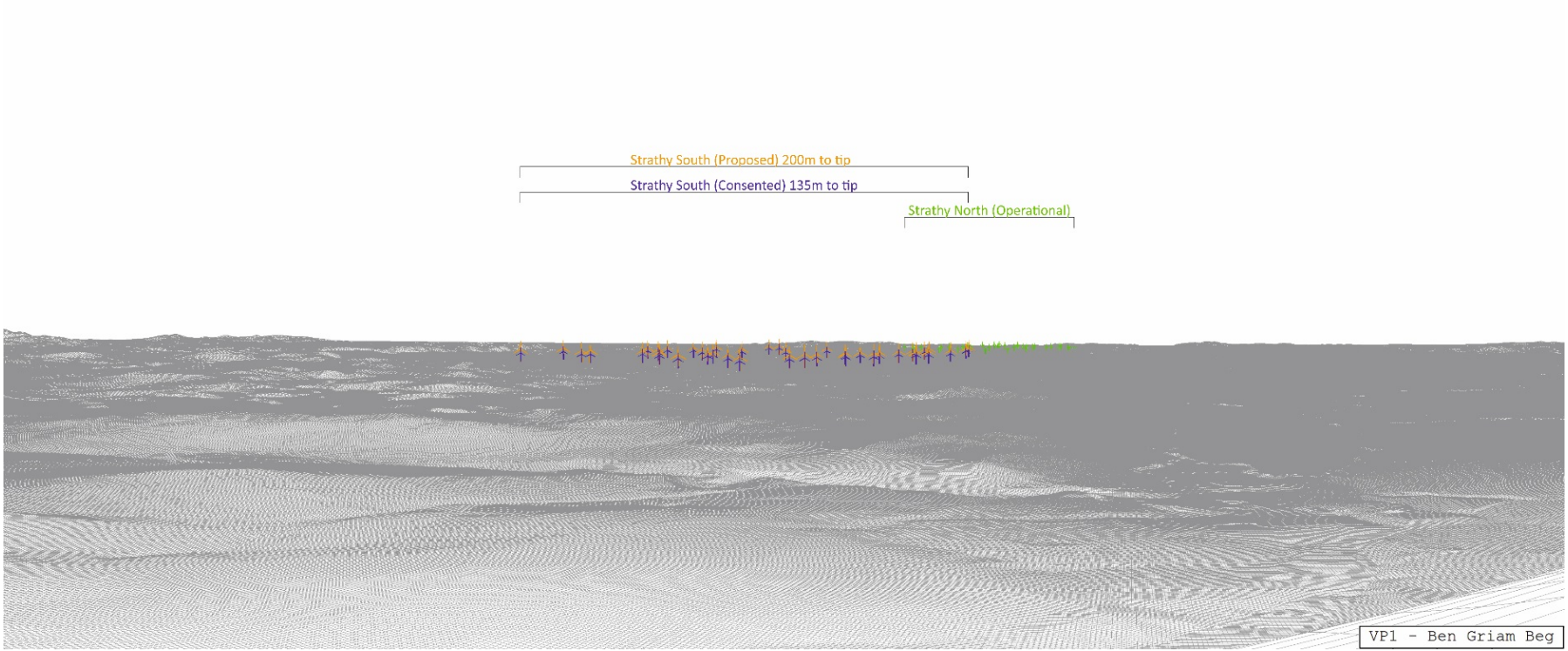
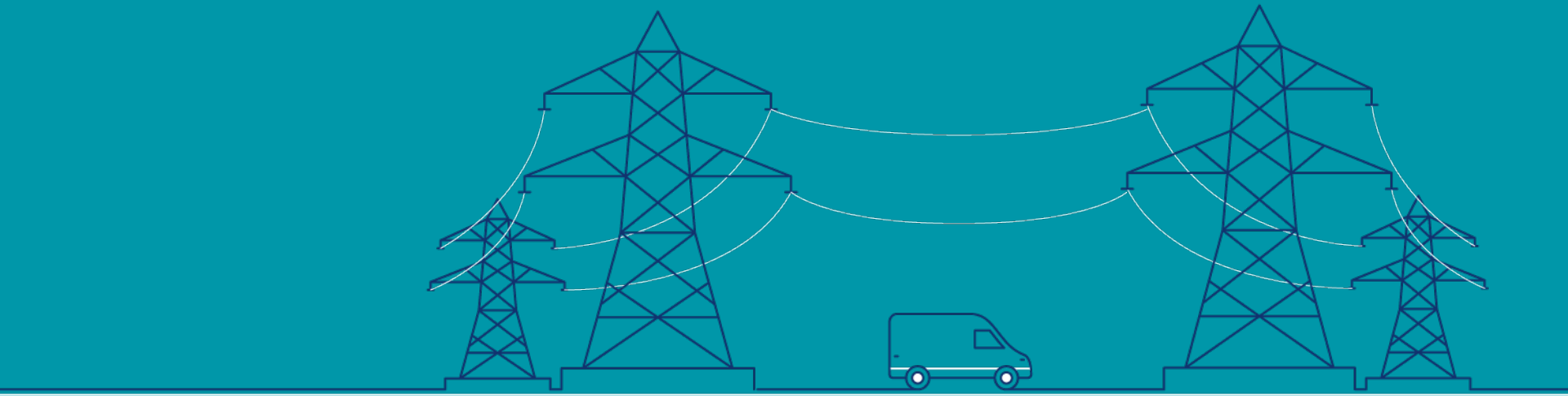
VP1 Ben Griam Beg



THE CHALLENGES



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ONSHORE WIND POLICY AND THE PATH TO NET ZERO

Are we acting with “appropriate urgency”?

ON THE ONE HAND…

Nov 2016 - The Paris Agreement

2017 - The Scottish Energy Strategy

May 2019 – CCC published report Reaching Net Zero

April 2019 – Climate Emergency declared by Scottish Government

Oct 2019 - Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 making net zero targets legally binding

March 2020 – onshore wind to be eligible to compete in the next Contracts for Difference round (due 2021)

Nov 2021 COP26 Glasgow ???

ON THE OTHER HAND…

Planning system reliant on NPF3 and SPP which are outdated

Scottish Government consultation on SPP and Housing

Emerging LDP’s that don’t prioritise the climate emergency

Outdated Landscape Capacity Studies

Turbines getting larger

Feedback that the declared climate emergency has made no difference so far to the way applications assessed…

….more and more sites refused and delayed at PLI…

POLICY HIATUS

2020 was to have been the year that NPF4 emerged to bridge the gap and provide the strategic direction needed.

Delays are perhaps understandable given COVID.

However, there is no getting away from the fact the planning system has not caught up with the requirements of the climate emergency.

Expected Autumn Draft is an opportunity…

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SPECIES AND HABITAT MANAGEMENT

HMP

- SSER's Habitat Management Plans (HMPs) strive to offset potential impacts of projects and may also deliver biodiversity enhancement.
- SSER currently has around 21,150 hectares of habitat under management plans.
- SSER is striving to achieve net-gain on all new envelopments from 2025 onwards however recognises that there are challenges to delivering this considering the range of environments in which its assets are situated. SSER is committed to working with external partners and agencies in order to progress towards successful realisation of this goal in the coming years.
- At Viking Energy Wind Farm (103 turbines with an installed capacity of up to 457MW)- An ambitious HMP has been proposed to not only offset the environmental impacts of the development but, moreover, enhance the existing peatland habitats. The enhancement measures propose restoration of blanket bog, equating to 260ha (equivalent to 364 football pitches).

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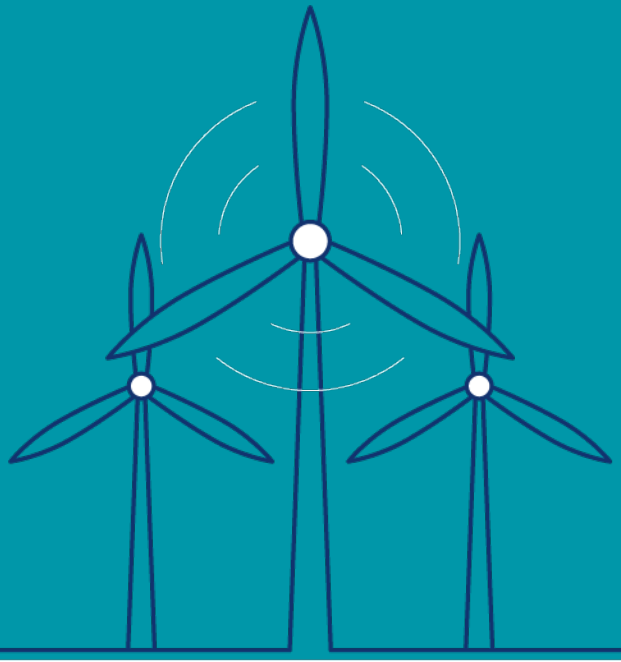
SPECIES PROTECTION

Regional Eagle Management Plan

- SSER supports the regional eagle management plan in the Scottish Highlands through Dunmaglass and Stronelairg wind farms and is contributing to conservation efforts and improving understanding of the golden eagle. Remote cameras have been installed at Stronelairg Wind Farm to monitor golden eagle activity.
- A conservation management plan at Dunmaglass which was established in 2015 has enabled intensive monitoring of active and vacant golden eagle ranges to improve the knowledge base and document the status of golden eagle activity and breeding success in this area.
- To date 19 juvenile golden eagles have been fitted with satellite tags as part of the research programme which has been undertaken in collaboration with the Scottish Raptor Study Group.
- In 2019, monitoring found that there were 25 territories occupied by golden eagles within the study area, up from 19 in 2015, making this area one of the most rapidly increasing populations of golden eagle in Scotland

THE ASKS



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GETTING THE BALANCE RIGHT

The asks

- In a climate emergency we can't have 'business as usual'. Projects tackling net zero must be given priority.
- Wind Farms and Habitat/species protection is not an either/or scenario. We need both.
- NPF4 is central to achieving Net Zero and so must be prioritised.
- Landscape policy/approach is currently tilting the balance in the wrong direction.
- Spatial planning needed which does not dictate size of turbines.
- Repowering and Life Extension – presumption in favour.
- Wild land and carbon rich soils mapping and policy should be reviewed in light of the Climate Emergency.

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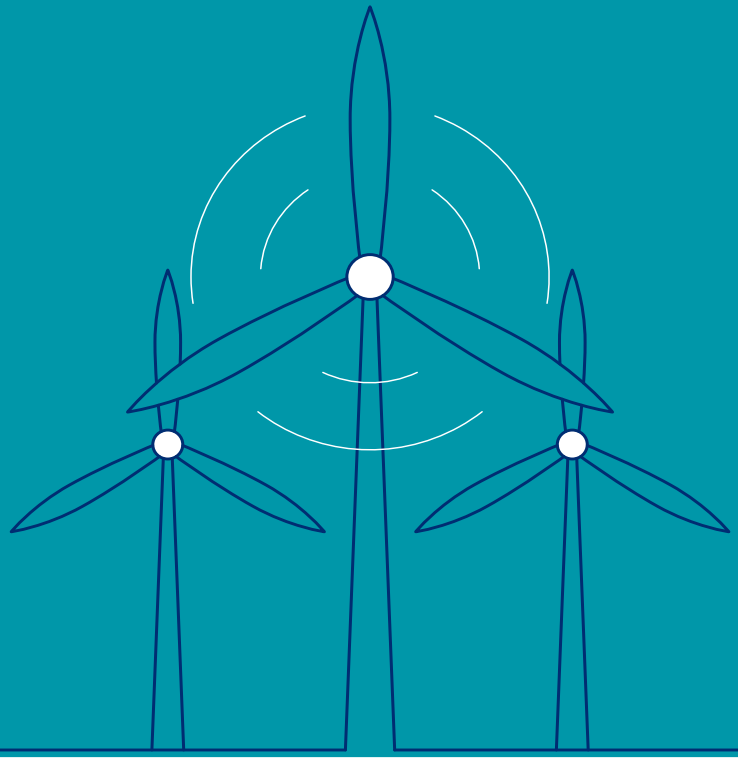
THANK YOU



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Morag Watson
Director of Policy
Scottish Renewables

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