

Carlisle City Council
Environment & Economy Overview &
Scrutiny Panel

**Briefing – NuGen, NWCC &
major projects**

21st January 2016



Serving the people of Cumbria

Guy Kenyon

Lead Officer -
Infrastructure Planning,
Cumbria County Council



Serving the people of Cumbria

Nationally Significant Infrastructure Projects

- Moorside Power Station (NuGen)
- North West Coast Connections (National Grid)
- Dumfries and Galloway Strategic Reinforcement (Scottish Power Energy Networks)

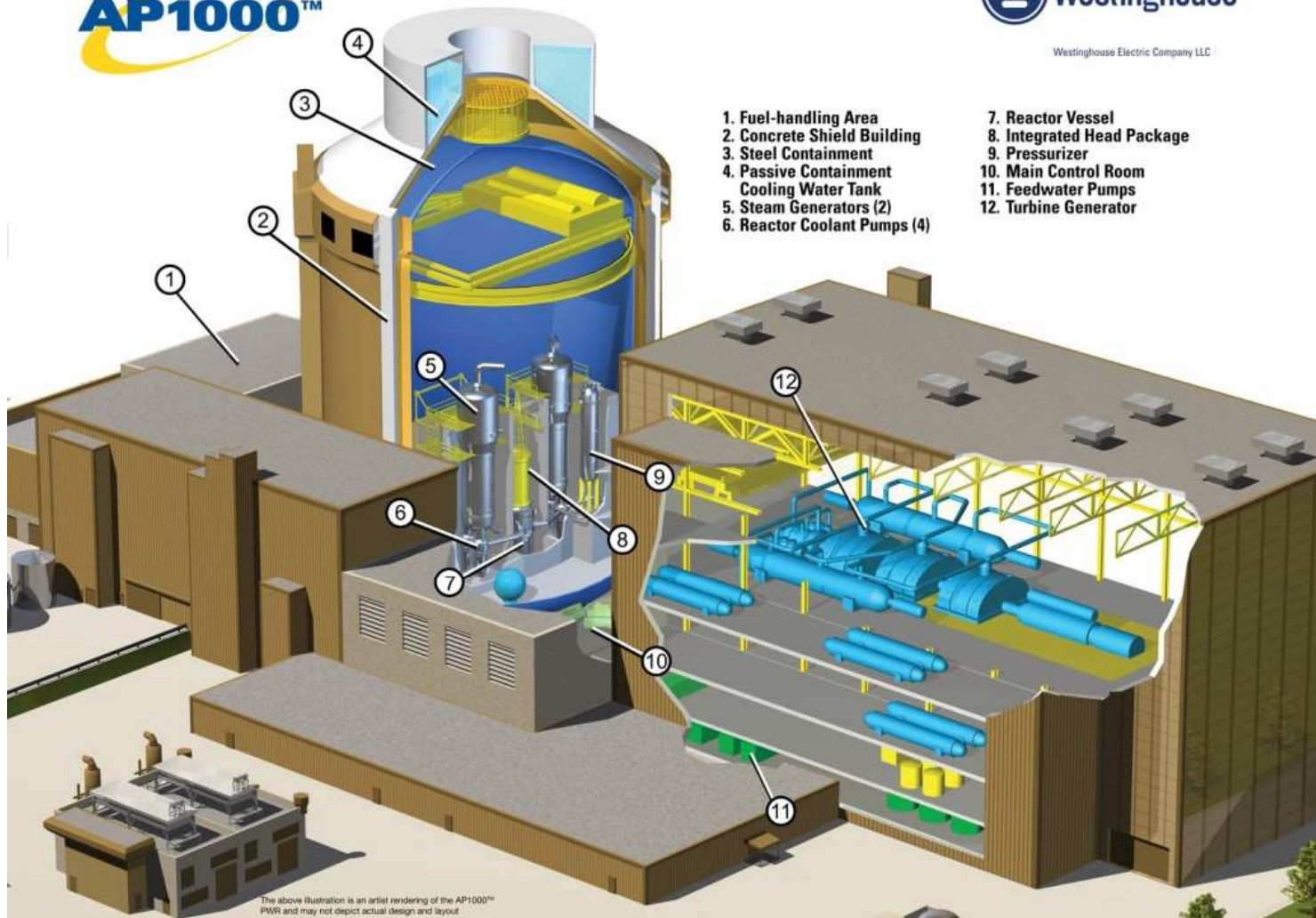
NSIP Principles

- Application to Planning Inspectorate
- Decision by Secretary of State (DECC)
- Local Authorities are statutory consultees (consultation process, project detail, Local Impact Report)
- Planning Performance Agreements (PPA)

AP1000™

 **Westinghouse**

Westinghouse Electric Company LLC



- 1. Fuel-handling Area
- 2. Concrete Shield Building
- 3. Steel Containment
- 4. Passive Containment Cooling Water Tank
- 5. Steam Generators (2)
- 6. Reactor Coolant Pumps (4)

- 7. Reactor Vessel
- 8. Integrated Head Package
- 9. Pressurizer
- 10. Main Control Room
- 11. Feedwater Pumps
- 12. Turbine Generator

The above illustration is an artist rendering of the AP1000™ PWR and may not depict actual design and layout.


Cumbria
County Council

Serving the people of Cumbria



Figure A - Location of Key Moorside Project Elements in Cumbria



Figure C – Moorside Search Area (Excluding Full Extent of off-shore elements of the Moorside Search Area)
 Not to scale and for indicative purposes only

CCC Stage 1 response

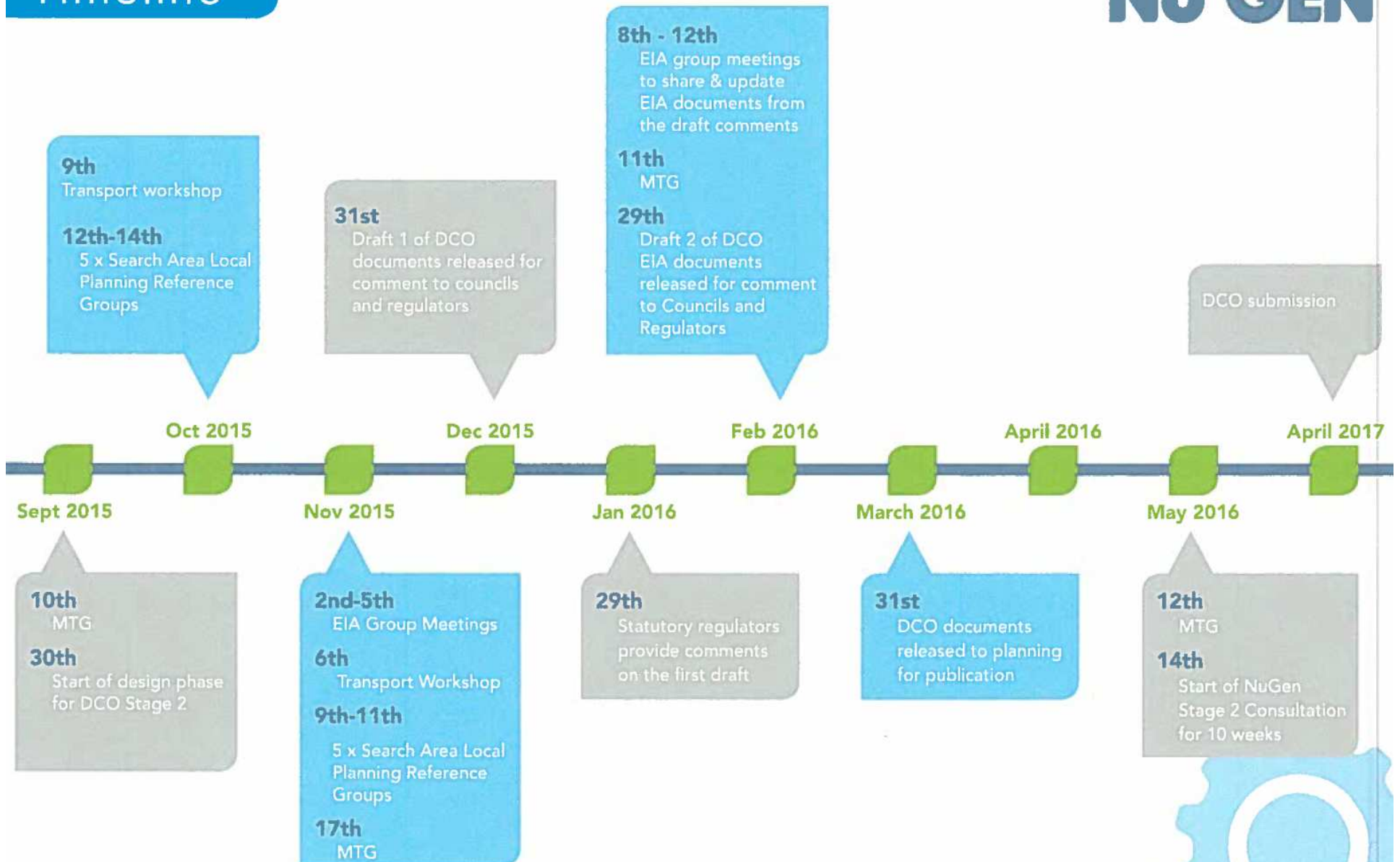
- **Transport** – deliverability, sustainability, legacy
- **Skills & Supply chain** – numbers, local opportunities, training
- **Associated Development sites** – evidence, sustainable transport, housing and other legacy, avoid boom and bust
- **Impact on Services** – quantify size, composition and location of workforce to assess service needs (Education, Health, Social Care, Leisure, etc)
- **Waste** – quantity and potential uses for spoil
- **Emergency Planning** – Sellafield, infrastructure, evacuation, legacy
- **Contribute positively** – identify and mitigate impacts and provide legacy
- **Cumulative impacts** – take account of other key infrastructure proposals (in terms of workforce, skills, transport and other impacts)

NuGen Timetable

- Stage 1 consultation – May to July 2015
- Stage 2 consultation – May – July 2016
- Development Consent application – April 2017
- Consent (if secured) – Oct 2018
- Construction – 2019 - 2026
- Operational (first reactor) – 2024

Timeline

NU'GEN



MOORSIDE

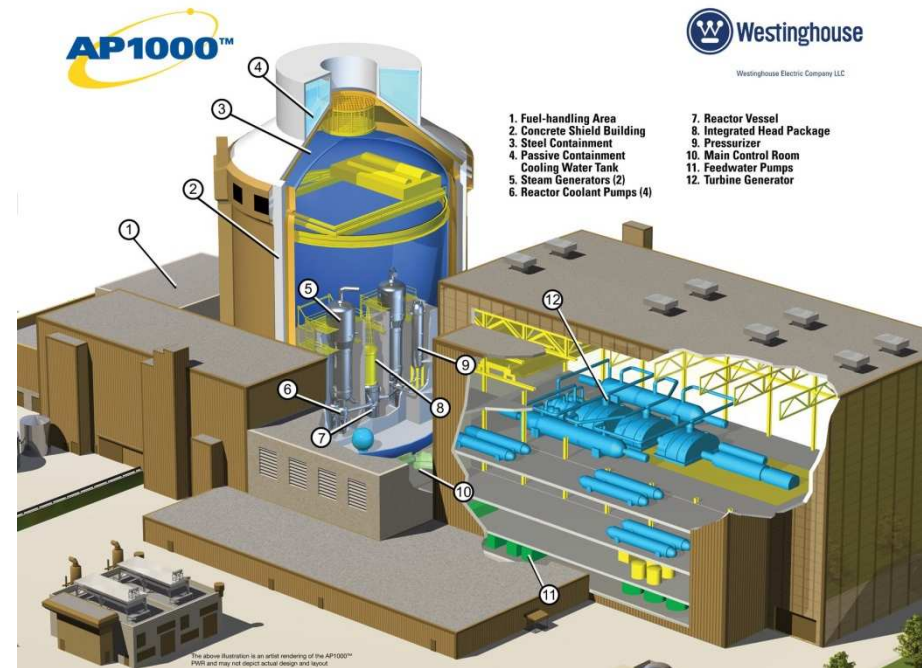


Stage 1 Consultation – NuGen Feedback

- 24 events, 1,800 visitors, 750 replies
- Support for project
- Support for strategic approach and legacy
- Concerns about roads, rail, health, visual, waste

Purpose of NWCC Project

- Nugen is proposing to build a 3.4GW nuclear power station at Moorside adjacent to Sellafield
- The existing 132kV ENW transmission line in West Cumbria has insufficient capacity to provide a connection
- National Grid is required to connect Moorside via two 400kV double circuits
- New connection must be ready to export power by 2024, from the first of three new AP1000 reactors.



Our route corridor



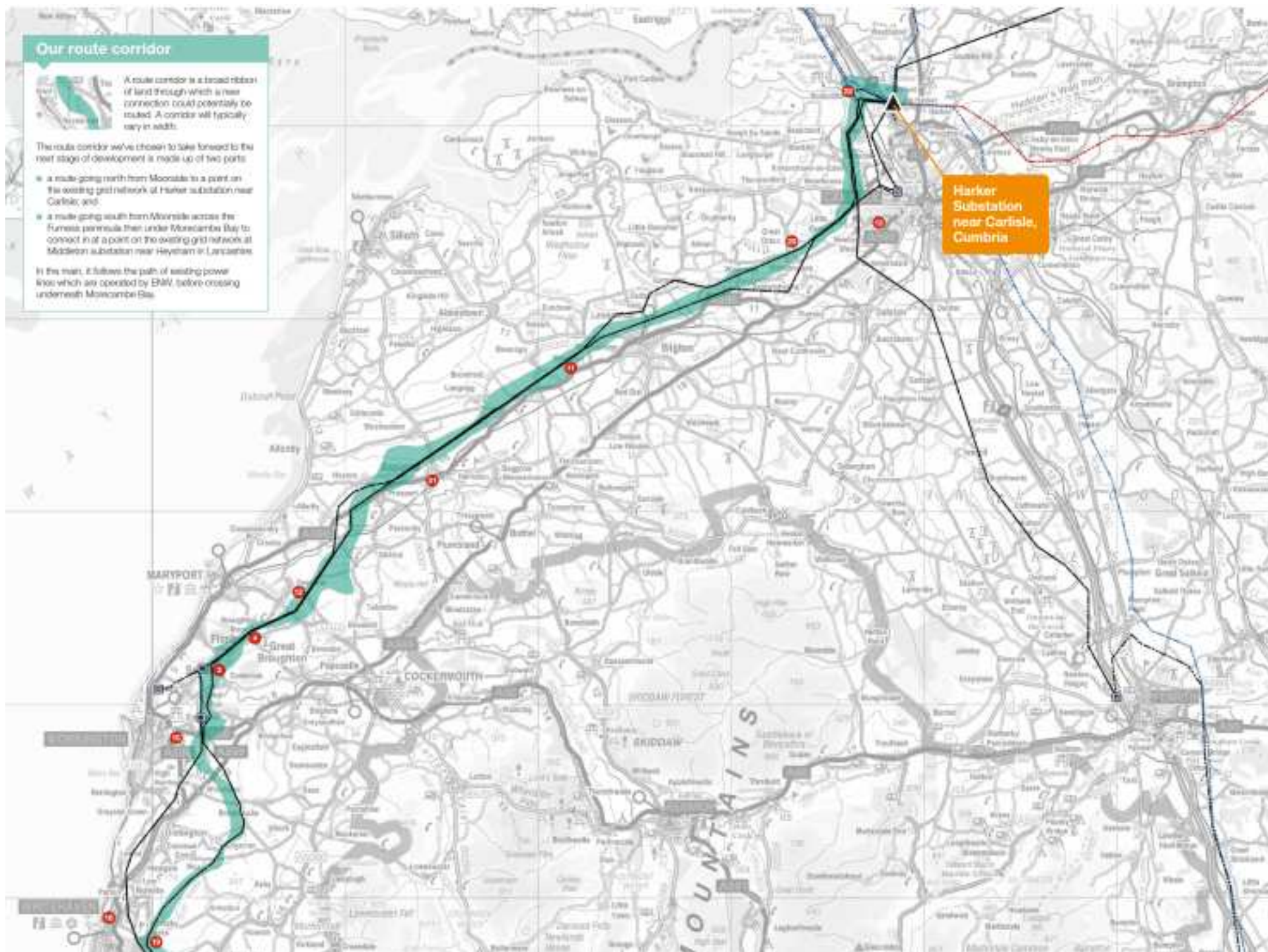
A route corridor is a broad ribbon of land through which a new connection could potentially be routed. A corridor will typically vary in width.

The route corridor we've chosen to take forward to the next stage of development is made up of two parts:

- a route going north from Moonside to a point on the existing grid network at Harker substation near Carlisle; and
- a route going south from Moonside across the Furness peninsula then under Morecambe Bay to connect in at a point on the existing grid network at Middleton substation near Heysham in Lancashire.

In the main, it follows the path of existing power lines which are operated by EHV, before crossing underneath Morecambe Bay.

Harker Substation near Carlisle, Cumbria



NWCC Programme

- 22 Feb 2016 local authorities consulted on Statement of Community Consultation
- June – July 2016 Formal consultation with the public and local authorities
- April 2017 – submission of Development Consent Order
- Late 2018 – DCO granted

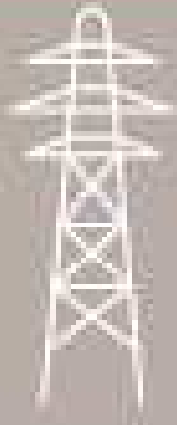
Impacts

- Visual/landscape
- Ecology/Historic Environment
- Transport of materials and equipment – impact on roads, rail & ports
- Social and Economic

Mitigation Issues (1)

- Physical –
 - Routing of line, screening & landscaping
 - Rationalisation of overhead lines
 - Alternative pylon designs
 - Undergrounding
 - Compensation for damage

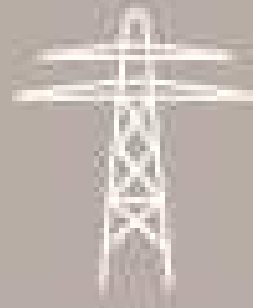
Alternative pylon designs



Conventional lattice pylon

Height: typically 50m*

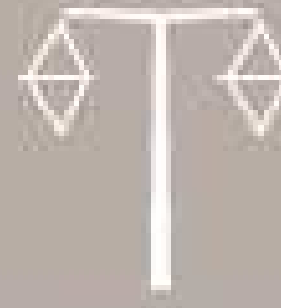
Width: base typically 9.3m square; crossarm typically 20.8m at widest point*



Lower height lattice pylon

Height: typically 35m*

Width: base typically 7.1m square; crossarm 30m at widest point*



T-pylon

Height: typically 35m*

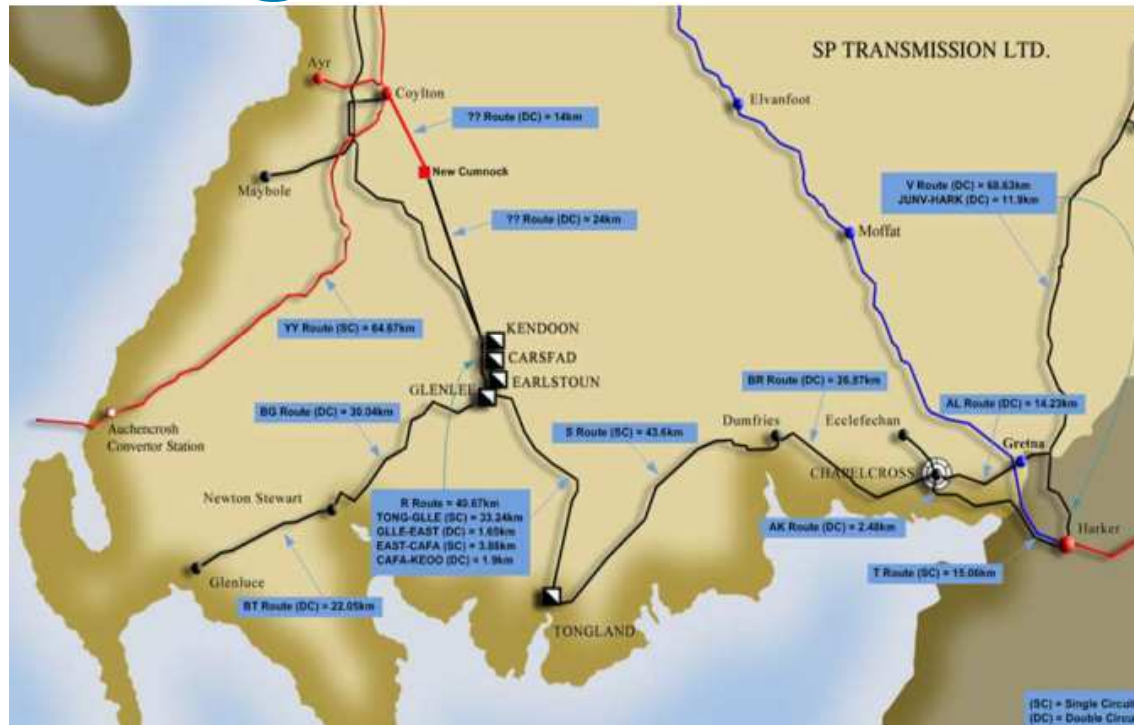
Width: base diameter 2m; crossarm 31m at widest point including insulator arrangement (2.5 crossarm only)*

*Height and widths can vary depending on topography/features

Mitigation Issues (2)

- Social and economic -
 - Job opportunities (incl. training)
 - Supply chain/engage local businesses
 - Impact of incoming workforce

Dumfries and Galloway Strategic Reinforcement



D&G Reinforcement purpose

- Replace ageing assets
- Increase capability of transmission system and to integrate new generation
- To enable cross-border electricity distribution

D&G Programme

- Strategic Route Consultation – 2015
- Route consultation – 2016
- ?
- ?
- Operation of new grid - 2023



Cumbria Infrastructure Plan

- Strategic infrastructure – transport, flood, water, broadband, energy
- Map growth & commitments
- Stakeholder engagement
- Identify long list of schemes
- Prioritisation of schemes
- Plan with business cases

Emerging Infrastructure Priorities

TfN & Devo Deal:

- Cumbria Coast Railway
- Strategic Road Network
- Workington & Barrow Ports

Developer funding:

- Local highways & sustainable transport
- Railway line/stations - Workington to Moorside

Skills Plan

- Large demand for skilled labour from NuGen and other major projects
- Falling population in Cumbria
- Ageing population
- Focus on STEM subjects
- York Consulting appointed to update plan

Legacy Benefits

- Transport – improved port, rail, highway infrastructure
- Employment – local jobs, training, support for local & new businesses
- Minerals & Waste – local quarries, uses for spoil, sustainable transport
- Ecological mitigation plan
- Housing – regeneration, permanent legacy, eg. affordable, extra-care
- Social Care & Education

Questions?



Serving the people of Cumbria