

Northern Powergrid

Peter Collinson & Claire Thomas Friday, June 11th

Northern Powergrid:

who we are and what we do

- Northern Powergrid is an electricity distributor.
- We own, operate and maintain the network of cables and power lines that transport electricity to homes, business premises and around the local area.
- Northern Powergrid is responsible for keeping the electricity on for 3.9 million homes and businesses in the North East, Yorkshire and northern Lincolnshire.





The beginnings of our adaptation planning

In 2000, severe flooding along the River Ouse affected the Osgodby substation in North Yorkshire.

Northern Powergrid saw costs of:

£1.3m at Osgodby substation

£4.0m in total recovery costs

There have been several subsequent notable flood events:

| 2007 | Sheffield which prompted the publication of the Pitt Review |
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| 2012 | Newcastle flash flooding which prompted consideration of surface water flooding |
| 2015 | Nationwide which prompted the National Flood Resilience Review (NFRR) |







What does adaptation mean to Northern Powergrid?

The greatest risks to the distribution network include:

- Extreme prolonged rainfall
- Extreme heat
- High winds and lightning
- Gradual increase in temperature and rainfall
- Drought





What are Northern Powergrid's adaptation plans?

Ongoing adaptation works include:

- Programme of flood mitigation works
- Programme of vegetation management works
- Roll our of remote control and automation

- Cross sector working
- Established major incident management plans and lessons learnt feedback loop





Flood Mitigation Programme

We began a programme of flood mitigation works in 2003.

Substations are considered for works in line with the requirements of ETR 138.

To March 2019:

- ✓ We have completed works at 162 sites
- £ Expenditure totals £24.7m

By the end of 2021 we plan to have:

- 𝔆 Upgraded 254 sites €
- function for the function of £36.4m for the function of £36.4m for the function of £36.4m for the function of the function of









Our Environmental Resilience Propositions, 2023-2028

- Maintain best practice levels of flood resilience for major substations – reacting to changes in the latest flood mapping
- Use technology to improve and better target overhead resilience to reduce the impact of storms
- Adopt innovative technologies and continue research targeted at reducing environmental risk and improving resilience
- Collaborate and support coordinated efforts with regional agencies and infrastructure providers to improve wider resilience and target interdependencies
- Adopt the latest climate change projections into our adaptations, standards and processes embedding resilience into our organisation



Longer term challenges

- Increasing reliance on electricity greater impact of disruption of supplies
- Impact of sea level rise, particularly in the Humber Estuary
- Increasing demand for air conditioning greater loading on the network
- Land use changes





Questions



Thank you

