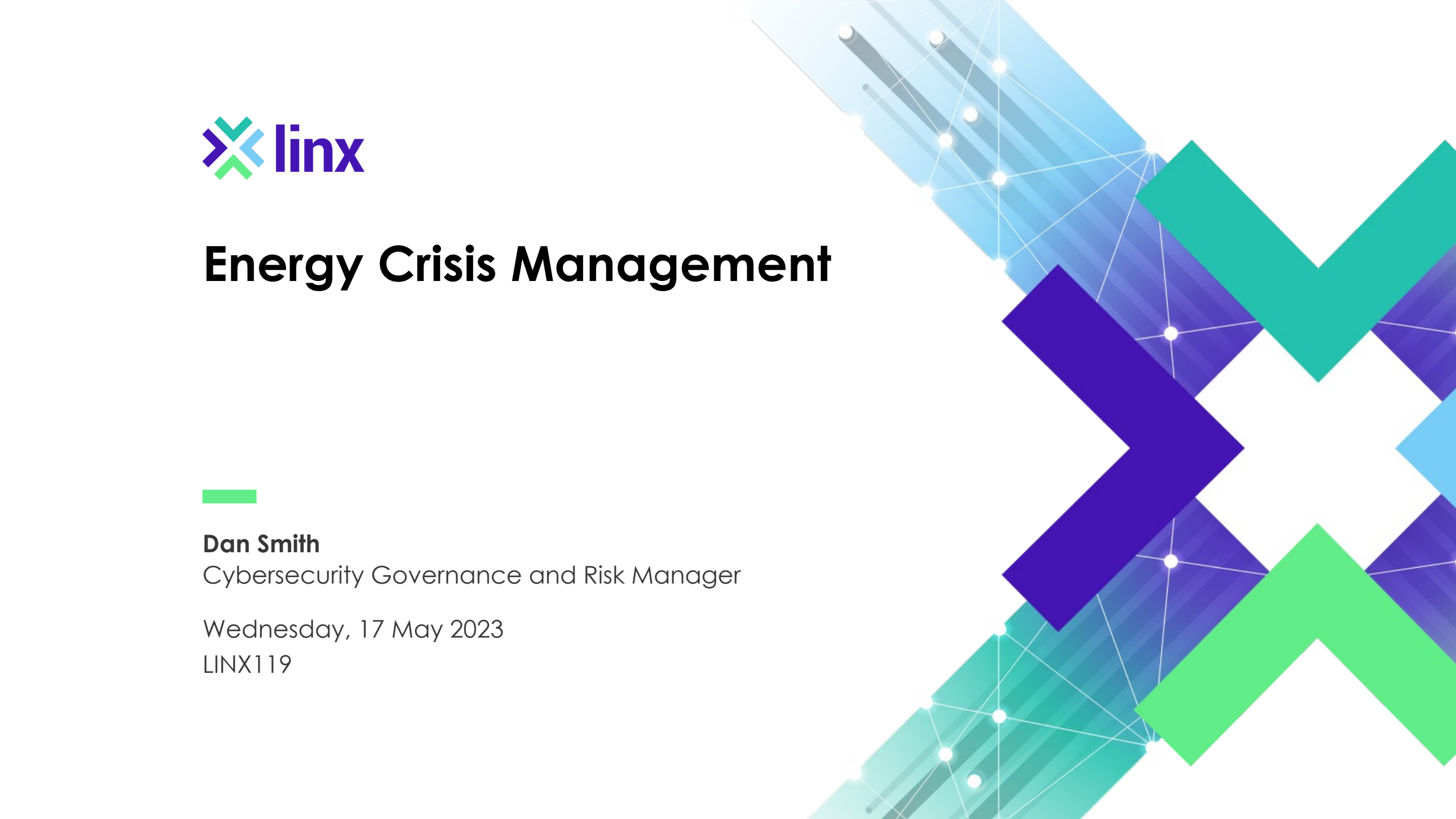

Energy Crisis Management

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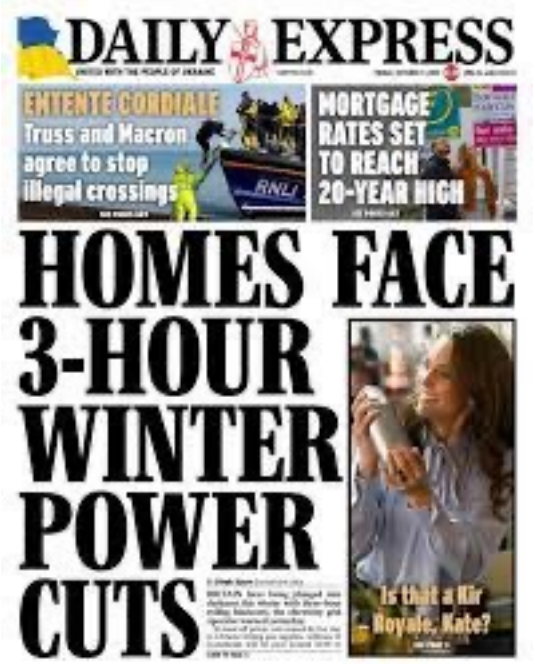
LINX119

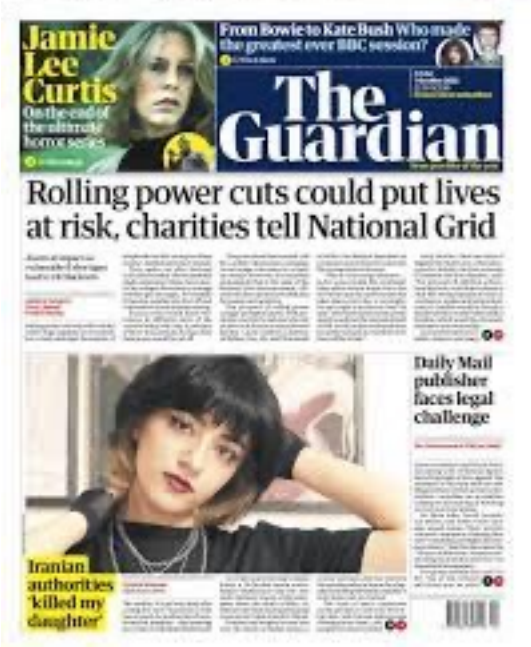
Background

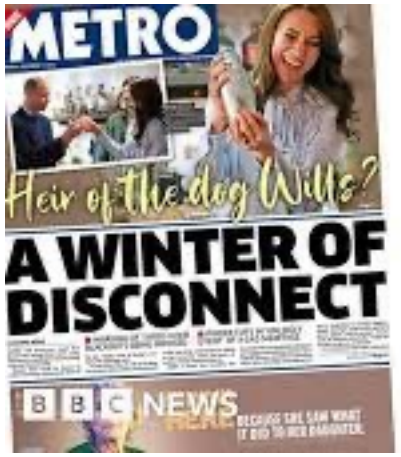
- Since 2021, we've been experiencing an energy crisis
- It began in the aftermath of the COVID-19 pandemic
  - Shortages and increased prices in oil, gas and electricity markets
- It escalated into a widespread global energy crisis following the 2022 Russian invasion of Ukraine

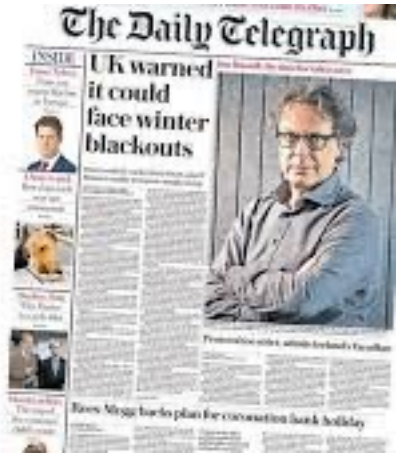
Autumn 2022

- Reports suggest the UK is facing a potential shortfall in the national energy supply over the winter, which could require organised blackouts
- In response, we instituted a resilience review and preparedness programme









Energy Crisis Management Committee

- The first action we took under this programme was to establish an Energy Crisis Management Committee, with the following mandate:
  - to share information on the energy crisis, risks to LINX and our mitigation measures, with all relevant senior managers
  - to receive reports on changes to risk assessments
  - to receive proposals on mitigation measures (both for preparedness and reports from incident management and response processes)
  - to direct changes to this strategy and the implementation of mitigation and response measures
- The Committee is chaired by the CEO and currently meets weekly but can do so more frequently if required

Information from data centre partners

- We are critically dependent on our data centre partners for electricity supply
- We therefore needed to understand what contingency plans they had in place
- We sent out each one a questionnaire to allow us to identify the protection available for such a scenario
- Responses stated that each data centre had contingency plans in place were there to be interruption to power supply from the main grid

Discussions with government

- At about this time, we also began engaging with the UK government
- They said the most likely scenario was that both electricity and gas margins for the winter would be adequate
- However, they had also produced a set of Reasonable Worst Case Scenario (RWCS) Planning Assumptions

Government planning assumptions for RWCS

- The RWCS assumes that during electricity supply disruption approximately 35% of customers could lose their supply in 3-hour blocks, over evening peaks (16:00 – 21:00) and occasionally other periods within the day
- For the first 2 days of disconnections, no prioritisation would be available and the same customers would be impacted at each peak
  - Sectors are responsible for ensuring their own contingency planning and business continuity arrangements, including for power resilience
- For any disruption longer that 48-72 hours, the Electricity Supply Emergency Code (ESEC) would be initiated

Overview of ESEC

- ESEC describes the steps which the UK government could take to deal with an emergency affecting energy supplies
  - It was last updated in 2019
- ESEC's purpose is to enable an equal distribution of electricity supply to customers as far as reasonably practicable
  - While ensuring that pre-designated Protected Sites maintain supplies for as long as possible
- To do this, it utilises a Variable Rota Disconnection Plan (VRDP)
  - This is the core plan used to establish the disconnection and reconnection of electricity supplies in an electricity supply emergency

Variable Rota Disconnection Plan

- The VRDP divides non-protected sites in a Network Operator's licence area into 18 Load Blocks of near equal demand
- Supply to these Load Blocks is sequenced for rota disconnections in the VRDP
- It sets out the nominal three-hour disconnection periods, i.e. eight periods in any 24-hour day
- The rota level and level of disconnection will be based on the shortage of supply
- If available supplies diminish, an increasing number of Load Blocks will be disconnected in any one period
- Customers should be warned of potential disconnections in advance

Criteria for Protected Sites

1. The site must fall within the list of approved designated services
   - This list includes "Digital and telecommunication services where there is a national need for continued operation"
2. The site must meet the following additional criteria:
   - The site does not have standby generation and has demonstrated that it is not possible to install standby generation; and
   - Either:
     1. the site is connected to a discrete feeder; or
     2. in the opinion of the Network Operator, maintaining supply during rota disconnections would involve retention of not more than a marginal amount of associated load; or
     3. the Network Operator has been required to list the site by DESNZ
        - This can happen if the service the site provides is deemed vital to a region or nationally, rather than locally

Fuel supply

- The government did not include a hypothetical fuel shortage as part of the RWCS
- It simply said it was confident there would not be a supply issue as a shortfall is not expected on the basis that:
  - During periods of electricity disconnection, fuel demand is expected to fall overall as people stay at home and travel less
  - This will offset any increase in demand for diesel for generators
  - The rate at which generators run out of fuel will vary from site to site, meaning there is unlikely to be a sudden spike in demand for diesel
  - The government is confident that industry can react to meet that demand
- The government emphasised that it is up to individual sites to ensure they have appropriate business continuity plans in place

Impact through winter

- Fortunately, we did not see an impact this winter (other than very high power bills!)
- Europe experienced unusually warm winter weather, including spells of record-breaking temperatures that helped curb demand for gas in home heating
- Analysts have said Europe's lower winter gas use was driven by a combination of weather, policies to tackle the energy crisis, and industries curbing production in response to high gas costs
- We continued to speak to the government and our data centre partners to ensure we were ready if anything changed

Outlook for winter 2023/24

- The current government view is that next winter will look very similar to this winter
  - Energy supply margins will be tighter than usual but remain manageable
- However, some reports suggest it could be worse due to:
  - The weather
  - Chinese liquified natural gas (LNG) demand
  - No Russian gas supply
- Either way, we need to make sure we are adequately prepared

Tabletop exercise

- As part of our preparations, we ran a business continuity tabletop exercise
- It was based on a scenario where a week of particularly cold weather in winter 2024 caused the government to implement rolling power cuts
- The scenario mirrored the expected government response with a few wildcards thrown in

Learnings

- Planning
- Communication
- Geographic mapping of staff
- Access to data centres and spares
- Staff welfare
- Fuel
- Government support

Preparation for winter 2023/24

1. Draft a rolling blackout preparation and response plan
2. Map out where all our staff live and ensure this is kept up to date
3. Update our data centre questionnaire on energy supply and aim to begin engagement with our data centre partners on these issues in late summer/early autumn
4. Continue engaging with the UK government, Ofcom, and industry partners through our memberships of techUK and EC-RRG

Final thoughts

- Prepare for the worst
  - It's unlikely but far from impossible
- Don't expect to rely on government support
  - But it is still worth engaging with them
- Collaboration is key
- Scenario testing of plans is invaluable

linx

Thank you

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