Lincolnshire
POLICE & CRIME COMMISSIONER
SAFER TOGETHER

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National Grid Electricity Transmission

By email only to: contact@g-w.nationalgrid.com

Dear Sirs

Response to Consultation - Proposed Pylon Route, Grimsby to Walpole

I am writing in response to your consultation on the proposed pylon route from Grimsby to Walpole. I oppose the proposal for an above ground solution for electricity transmission across the landscape of Lincolnshire, as I have significant concerns. I believe it provides nothing for the people of Lincolnshire, yet they are expected to live with the risks and consequences of the overland route through the County.

Of particular concern to me, I believe the proposals present a serious risk to the ability of all emergency services in the County to protect the people of Lincolnshire by impacting on the mission critical communications network – Airwave. Powerlines and the pylon structures themselves are likely to interfere with communications; I expand on my concerns below. There is no mitigation that can guarantee continued full functioning of our communications with an above ground solution.

The operation of airwave emergency services radio networks in close proximity to 400kV overhead power lines can be impacted by electromagnetic interference (EMI) generated by these power lines. EMI occurs when electromagnetic radiation from the power lines interferes with the radio signals used by emergency services.

Some potential effects of EMI on airwave emergency services radio networks near 400kV overhead power lines include:

- **Signal Degradation:** EMI can cause a degradation in the quality of radio signals, leading to reduced clarity and range of communication between emergency personnel. This can result in difficulty in transmitting and receiving critical information, which may hamper emergency response efforts.

- **Communication Interruptions:** Strong electromagnetic fields from the power lines can cause intermittent interruptions in radio communication, leading to gaps in coverage and potential delays in coordinating emergency activities.

- **Increased Noise Levels:** EMI can introduce unwanted noise into radio transmissions, making it harder for emergency personnel to hear important messages clearly. This noise interference can further impede effective communication during emergencies.

- **Equipment Malfunction:** In severe cases, EMI can interfere with the proper functioning of radio equipment used by emergency services. This may result in equipment malfunctions or even complete failure, compromising the ability of responders to communicate effectively.

Some potential effects of tall metal structures (pylons) can potentially interfere with emergency services radios in several ways:

- **Signal Blockage:** Tall metal structures can block or weaken radio signals, especially if the structure is between the transmitting and receiving antennas. This can result in dead zones or areas with poor radio reception, making it difficult for emergency responders to communicate effectively.

- **Multipath Interference:** Metal structures can cause radio signals to bounce or reflect off their surfaces, leading to multipath interference. This interference can result in signal distortion or cancellation, making it challenging for emergency personnel to decipher communications clearly.

- **Shadowing:** Tall metal structures can cast shadows where radio signals struggle to penetrate. This can create areas of poor coverage or signal dropout, impeding communication between emergency responders in different locations.

- **Reflection and Refraction:** Metal structures can reflect or refract radio signals, causing them to scatter or bend unpredictably. This can distort the original signal path and make it challenging for emergency radios to maintain a reliable connection.

- **Electromagnetic Interference (EMI):** Metal structures can emit electromagnetic fields that interfere with radio signals, especially if the structure is not properly grounded or shielded. This interference can introduce noise into the communication channel, reducing the clarity and range of radio transmissions.

Conclusion
The choice of an overland solution for transmission of electricity is unacceptable and is unsustainable.

The potential for interference with or loss of Airwave communications could be catastrophic for the people of Lincolnshire, as it could limit the response of all emergency services to incidents across the County.

As Police and Crime Commissioner, I am directly elected by the population of the County of Lincolnshire, and I cannot support a proposal that requires the people of Lincolnshire to face the risks and consequences on the overland route for electricity transmission.

When more sustainable offshore undersea options are available, I see no justification for the proposal in this form, and I will seek to oppose this publicly and directly to Government.

We owe it to future generations to make evidence-based decisions based on the best sustainable solutions, rather than on short term penny pinching and unsightly problematic options that present unacceptable risks to the public.

Yours faithfully

Marc Jones
Police and Crime Commissioner for Lincolnshire

cc: Rt Hon Victoria Atkins MP
Matt Warman MP
Cllr Martin Hill OBE, Lincolnshire County Council
Cllr Colin Davie, Lincolnshire County Council
Cllr Craig Leyland, East Lindsey District Council