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Ofgem Consultation for ED2.

The current process ED1 took to manage trees and vegetation has not worked and does not provide tools for DNOs to monitor and manage risk and performance of trees and vegetation. Flaws in the reporting and management of vegetation has created multi-million £ overspend on reactive works, planned and unplanned outages.

Trees and vegetation need to be surveyed at all voltages by aerial LiDAR to establish detailed baseline map by creating “trees as assets” that provides a metric enabling DNOs to neatly and efficiently assess, monitor and report performance of proximity trees to power line infrastructure. Using a tree as “an asset” allows a DNO to attach maintenance schedules to tree assets, which also aligns with reporting of assets such as poles and towers as per ‘Common Network Asset Indices Methodology’ (A recent business case with the European Space Agency have proven this approach)

Key to this is identifying standard parameters that allows LiDAR data to be meaningful for the use of Arboricultural reporting and planning of trees and vegetation risk and performance.

Point density of LiDAR data should be collected at 100+ per meter, allowing data points to be transformed into trees as assets. It has been proven that lower point density misses some assets completely. To date DNOs have only used low point density.

LiDAR has been in and around the electricity sector for some time now and the benefits of its accuracy are well documented. It should be the aim of ED2 to report tree and vegetation risk and performance on LiDAR templates giving the Regulator confidence and robustness of DNO reporting.

There are multiple levels of geospatial platforms available to industry and basic output requirements can easily be standardised allowing DNOs an initial robust reporting procedure. At the same time allow DNOs to build out further their own understanding of tree and vegetation proximity risk should they wish too.

Infield technology now allows real time updates of felling and pruning operations allowing DNO's to provide the Regulator with 100% audit of every tree asset.

Considerations for consultation:

Network Risk from vegetation maintained as live data and reported from platform at:

- Licensed region level
- Route Level
- Circuit Level
- Span Level
- Tree Level

In terms of threat from:

- Tree Growth infringement
- Falling trees
- Storm damage
- Creeper infestation of support structures
- Accumulation of outages required to cut backlog

with potential consequences of

- Death or injury to member of public
- Circuit faulting
- Damage to lines causing loss of supply
- Excessive Cis and CMLs and customer dissatisfaction
- Resource constraints (Arboreal and SAPs)

Reporting should highlight infestation levels by Region, Route, Circuit and Span.

Trees as Assets allows alignment of planned veg management costs/budgets to mitigation plan for the identified risks. (This is how tree cutting budgets are approved by Ofgem)

Requirement for 100% audit reporting of work completed back into the geospatial platform.
(This is how DNOs prove they have done what they said they would)

Validation aerial LiDAR re-survey every 5 years.