

RIIO-T2 Cost Assessment/Unit Costs

Sept 2018



Scottish & Southern
Electricity Networks

Approach to Cost Estimating

- Approach driven by our Large Capital Framework process – class estimate based on stage gate process (Class 0 – high level uncertainty to Class 3 – Costs/Risks well defined, ready for construction)
- Estimating Class will be determined by level of certainty e.g. NLRE higher level of certainty compared to some LRE categories (volume driver?)
- Need to be clear on level of optioneering/detailed engineering across cost categories taking above into account
- Cost estimating methodologies informed from a variety of sources – benchmarking, detailed rates.
- Methodology deployed for uncertain costs based on average costs from historic schemes e.g. Cut & Fill works

Key Cost Drivers

Substations

- Ground conditions – large range £2m - >£10m (rock blasting, peat management, drainage/watercourses etc)
- Access – construction costs, site logistics etc
- AIS/GIS
- Circuit turn ins – undergrounding, tower works etc
- Requirement for enclosed substations in harsher environments
- Future proofing – land take, spare bays
- Works in existing substations – live operating environment, temporary measures, spatial restrictions (non standard approach)
- Site location – e.g northern Caithness ~ 7hr travel from central belt

OHL

- Similar issues outlined for substations (ground conditions, access, site location etc)
- Requirement for temporary measures – bypass circuits, ERTS etc
- Route specific are variable – average spans/proportion of tension/suspension towers, foundation designs & productivities
- Refurbished OHL – same as for new plus extent of scope can vary drastically (e.g. level of tower steelwork upgrades, foundation works)

Key Cost Drivers

Underground Cabling

- Technology choice – cross bonded/fully bonded solutions
- Similar issues outlined for substations (ground conditions, access, site location etc)
- Water/Road/Rail Crossings – directional drilling/open cut?
- Drainage/watercourse management

Non Load Specifics

- Scope can vary between schemes – e.g. replacement transformer in situ v's offline build
- OHL refurbishment assessed on a case by case basis
- Scope for ancillary works can vary between schemes – e.g. level of foundation works, protection upgrades, control cabling etc
- Specialised scope may be difficult to benchmark – P&C/Comms etc

Questions?