Fluid Filled Cables

The risks associated with operating fluid filled cable (FFC) and related assets can be reputational, regulatory and financial.

The primary risk is associated with leakage of insulation oil to the environment causing environmental pollution, loss of pressure and ultimately cable failure. Leaks typically occur as the cable sheath deteriorates with age; at joint failures or as a result of third-party damage. Both the location and repair of leaks can be costly, time-consuming and damaging to the environment.

Since 2012/13 we have achieved the following across the WPD business;

15%

Total distance of FFC in service has reduced by 132km or 15%

9.83%

Total volume of oil in service (FFC) has reduced by 228,544 litres or 9.83%

60%

Volume of oil used to top up cables has reduced by 25,872 litres or 60%

As detailed in graph on the right WPD are well on course of achieving our RIIO-ED1 target of reducing leaks to FFC by 75%.

Improving Leak location

WPD have introduced a tagging system which uses a small amount of perfluorocarbon tracer (PFT) chemical that can be readily detected above ground and that helps to pinpoint leaks quickly and to speed up the repair process. This not only reduces costs but avoids inconvenience to customers, the volume of oil lost to the environment and minimises the amount of excavation required to identify a leak location.

WPD FFC Reported Information					
	2012/13	2013/14	2014/15	2015/16	2016/17
FFC Cable in Service (km)	871	700	785	755	739
Volume of Oil in Service (litres)	2,325,794	2,167,663	2,106,920	2,024,588	2,097,250
Volume of Oil used to top up cables (litres)	43,123	22,216	30,950	17,291	17,251

FFC losses vs. RIIO-ED1 target