

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;

16%

Total length of FFC in service by 140km or 16%.

31%

Volume of oil in service (FFC) by 738,427 litres or 31%.

46%

Volume of oil used to top up cables by 19,765 litres or 46%

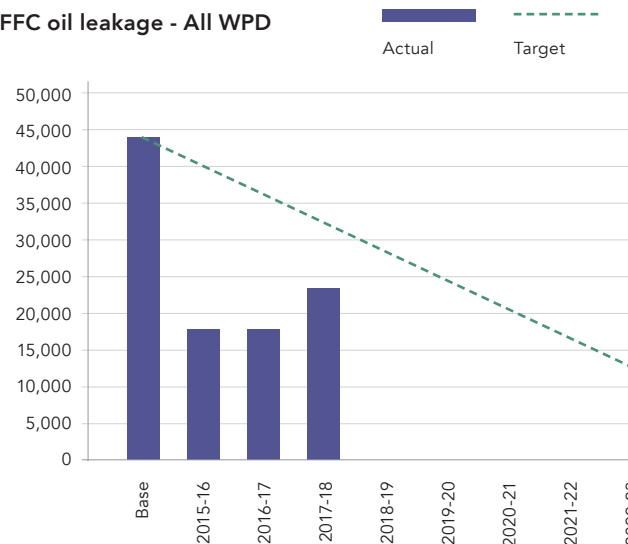
As detailed on the right, WPD is on course to achieving its RIIO-ED1 target of reducing leaks to FFC by 75%

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	2017/18
FFC Cable in Service (km)	871	700	785	755	739	731
Volume of Oil in Service (litres)	2,325,794	2,167,663	2,106,920	2,024,588	2,097,250	1,587,367
Volume of Oil used to top up cables (litres)	43,123	22,216	30,950	17,291	17,251	23,358

FFC oil leakage - All WPD



2017/18 witnessed an increase in the reported volume of FFC leaks; this was due to a number of reasons;

- Improved reporting of FFC across our business
- Better detection of FFC leaks
- Maturing assets
- Severe winter weather conditions experienced in the latter half of 2017/18