



# Fluid CableCare: Self-healing additive for fluid filled cables

## BAU 2019

### PROJECT SUMMARY:

**INDUSTRY PARTNER(S):** UK Power Networks, Northern Powergrid

**INNOVATOR:** Gnosys

**CHALLENGE:** There are more than 4750km of fluid filled cables (FFC) across the UK electricity network. The fluid forms a key part of the cables' insulation, prevents the formation of voids and aids the transfer of heat away from the conductor, enabling the cable to run more efficiently. However, overtime these fluid-filled cables can leak, causing disruptions to customer supply and impacting the surrounding environment.

**APPROACH:** EIC identified GNOSYS as a partner.

**OUTPUTS:** The development of an innovative self-healing fluid (SHF) that forms a strong, cohesive mass when exposed to air. Under normal operation, the SHF acts as an insulation oil inside the cable and has demonstrated characteristics that are superior to the insulation oils currently in use.



**IMPACT:**

**TRANSFORMATIONAL**



**KEY BENEFIT:**

**FINANCIAL**

Financial >£5m/year  
estimated savings

**ADDITIONAL BENEFITS:**



**ENVIRONMENTAL**

Reduced environmental  
impact as leaks can fix  
themselves



**PROJECT VALUE**

Total: £2.2m

# EIC

Collaborate to innovate