

# HV BYPASS REPAIR

## CHALLENGE

Provide an optical fibre bypass to allow replacement of damaged OPGW on high voltage transmission line.

## SOLUTION

To wrap 48 optical fibre High Voltage SkyWrap® onto the 225 kV non-bundled conductor.

## RESULTS

The optical bypass has allowed the replacement of the OPGW on the damaged spans without interruption of the optical link. The bypass remains in position and provides resilience in case of further issues.

The High Voltage SkyWrap solution uses AFL's specialised equipment to helically wrap a 48 fibre optical cable onto the phase conductor. The solution includes a system of specialised hardware and accessories to allow the cable to be passed safely around and down the towers protected from the electrical potential of the phase conductor.

AFL provided full turnkey project management installation for the project.

## RESULTS

The SkyWrap solution allows fast deployment of fibre on critical spans reducing the outage times compared to other replacements. 1.5 km of SkyWrap cable was installed on the 225 kV phase conductor and within two days was ready to restore the damaged optical link. This optical bypass now allows the electricity company time to replace the OPGW at leisure and they can rely on the SkyWrap for at least the next 30 years!



## CHALLENGE

One of the largest electricity transmission companies in Europe experienced severe damage to some Optical Ground Wire (OPGW) installed on high voltage transmission lines. The optical fibre link was used for communication and protection of the power network to guarantee consistency in electricity transmission provision. The replacement of OPGW can be a lengthy process due to manufacturing lead times, outages and heavy equipment. The electricity company needed to install an optical bypass quickly whilst waiting for the OPGW to be replaced.

## SOLUTION

AFL was quickly able to provide the customer with the newly developed High Voltage SkyWrap. With the ground wire obsolete and needing replacement, the best option for bypass was to use the phase conductors. AFL's High Voltage SkyWrap is suitable for installing directly onto phase conductors up to 300 kV.

## ABOUT AFL

Founded in 1984, AFL is an international manufacturer providing end-to-end solutions to the energy, service provider, enterprise and industrial markets as well as several emerging markets. The company's products are in use in over 130 countries and include fibre optic cable and hardware, transmission and substation accessories, outside plant equipment, connectivity, test and inspection equipment, fusion splicers and training. AFL also offers a wide variety of services supporting data centre, enterprise, wireless and outside plant applications. For more information, visit [www.AFLglobal.com](http://www.AFLglobal.com).

## SOLUTIONS DESIGNED AND INSTALLED BY AFL:

- High Voltage SkyWrap

