

## 110kV Erdkabelanbindung UA Bacharach



### SHORT DESCRIPTION

In the process of the energy turnaround, high-voltage power lines must be built in Germany in order to be able to transport the regeneratively generated wind energy from the wind farms to the conurbations. Some of these are to be constructed as underground cables.

### THE PROJECT

In the area of the Bacharach substation in Rhineland-Palatinate, Implenia is laying a total of 4.1 km of cable protection pipes using the newly developed E-Power Pipe® method from Herrenknecht. Using a specially developed tunnel boring machine with a bore diameter of 505 mm, almost 700 m are driven six times in a curved drive. In the future, the method will be used in areas where, for example, open construction methods cannot be approved for environmental reasons.

### CHALLENGES

- Pilot process with partial need for technical optimisation
- Work processes must first be developed
- Strongly changing geology with partly very hard quartzite deposits
- Height difference of approx. 13 metres between start and target shaft

### SUSTAINABILITY

- The E-Powerpipe method prevented an open trench and thus an impact on the natural soil layers. In addition, the emissions on the local infrastructure and buildings can be kept to a minimum.

## FURTHER INFORMATION

Total length: approx. 4,130 m, 6 attitude

Gradient: 2 % falling

Line layout: Straight and curves with  $R_{min} = 500$  m

Diameter: OD 505 mm

Pipe type: steel pipes, 9.00 m, subsequent pulling-in, PE pipes, 315 x 28.6 mm SDR 11

Geology: Hunsrück shale, siltstone, quartzite

## FACTS

<b>Location</b>	Bacharach , Germany
<b>Status</b>	completed
<b>Construction volume (value of our services)</b>	7.73 M CHF
<b>Start of construction</b>	September 2018
<b>Completion</b>	April 2019
<b>Building owner</b>	Amprion GmbH, Dortmund
<b>Other tunnelling</b>	✓
<b>Overall length</b>	4130 m
<b>Diameter</b>	0.51 m
<b>Bauingenieur</b>	Ingenieurbüro Fischer GmbH, Düsseldorf

## SERVICES

Special Foundations

E-Powerpipe



<https://implenia.com/en/references/detail/ref/e-powerpipe-bacharach/>

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