

# YAMBA TO ILUKA COUNTRY ENERGY

**PROJECT** 11KV POWER CABLE HDD INSTALLATION

**CLIENT** ESSENTIAL ENERGY (FORMERLY COUNTRY ENERGY)

**TIME** 3 MONTHS



YAMBA &  
ILUKA



— HDD PATH

PIPE: HDPE100  
3000M DN200  
HDD ELECTRICAL  
CROSSING TWIN CONDUITS

GEOLOGY:  
INDURATED  
SANDS AND CLAY

INSTALLATION:  
REMOTE  
LOCATION  
YAMBA

RIG:  
COEDRILL  
550

Coe Drilling applied their specialist knowledge in trenchless technology to design and engineer a horizontal directional drilling (HDD) solution for the installation of almost 3000 metres of high voltage power cables under the Clarence River in New South Wales.

Coe Drilling was contracted to design and construct the HDD crossing and power cable installation and testing, incorporating a marine Harbour, river crossing, road crossing and jointing bay, in the first HDD project for Essential Energy. The drilling commenced from Hickey Island, Yamba in northern New South Wales, drilled 1395 metres beneath the seabed to Iluka, on the northern bank of the Clarence River and crossed under the river at depths of up to 50 metres. The HDD Rig was then repositioned to drill in a southern direction a further 1500 metre borehole to the Yamba Substation under the busy Angourie Road.

Using the latest CAD Software to design the installation, Coe identified the optimal trajectory for the bore path to suit the crossing radius through various geotechnical conditions. A detailed sub-terrain analysis was performed prior to the installation to calculate the installation stresses on both the borehole conduit and cables, as a result of the varied geotechnical conditions and operating depth of the buried cable.

Following the initial HDD installation, Coe Drilling proved and cleaned the conduits and installed and tested the 11KV cable provided by Essential Energy. Coe Drilling constructed a short open cut section and jointing bay on Hickey Island to haul and join the cables. Cut-over was completed by Essential Energy, following handover from Coe Drilling ahead of schedule.

## PROVEN PROJECT DELIVERY

MINIMISED PROJECT RISK  
THROUGH STATE OF THE  
ART TECHNOLOGY AND  
DESIGN

## COMPLEX GEOTECHNICAL SOLUTIONS

DELIVERED A 3000 METRE  
CROSSING THROUGH VARIED  
GEOTECHNICAL CONDITIONS

## CONSISTENT ENVIRONMENTAL OUTCOMES

100% DRILLING FLUID  
RETENTION



ELECTRICITY



A QUANTA SERVICES COMPANY