



**KINECTRICS**

a **BWX** company

# Offshore HV Inter-Array Cable System Commissioning Testing

Improving post commissioning uptime via compliant standards and proven test methods



## Overview.

**Off-shore wind is a reliable and cost-effective energy source** that plays a key role in addressing climate change. As the demand for off-shore wind increases, technological advances will continue to utilize high voltage inter-array cables.

To mitigate risks related to the performance of HV inter-array cables, **Kinectrics offers proven off-shore commissioning testing for HV and EHV cable systems**, such as:

- Lightweight, modular Resonant Test Sets (RTS) with proven partial discharge monitoring technology
- Capability to test entire cable strings rated 66/72 kV up to 40 km (24.8 miles)
- Early detection of installation-related, life-limiting defects prior to energization
- Testing in accordance with international standards, including IEC 63026, and industry guides such as CIGRE TB 728 and CIGRE TB 841

## How Our System Set Up Works

1

Each module of the **test system is enclosed in a DNV certified 10ft container** weighing less than 3.7 metric tonnes (8200 lb).

2

The **modular design of the resonant test reactors** helps reduce the space needed on the off-shore substation site.

3

The main part of the system is placed on the deck connecting the **Inter-Array Cable String** under test to the **Resonant Test Set**.

The system can typically be set up in less than two days allowing for one, two or three conductors of a string to be tested per shift. The commissioning tests can be performed during night shifts to ease work planning complications associated with other on-going work on the off-shore substation (OSS).



## Why Us?

### Global Expertise. Complete Off-Shore Cable Testing.

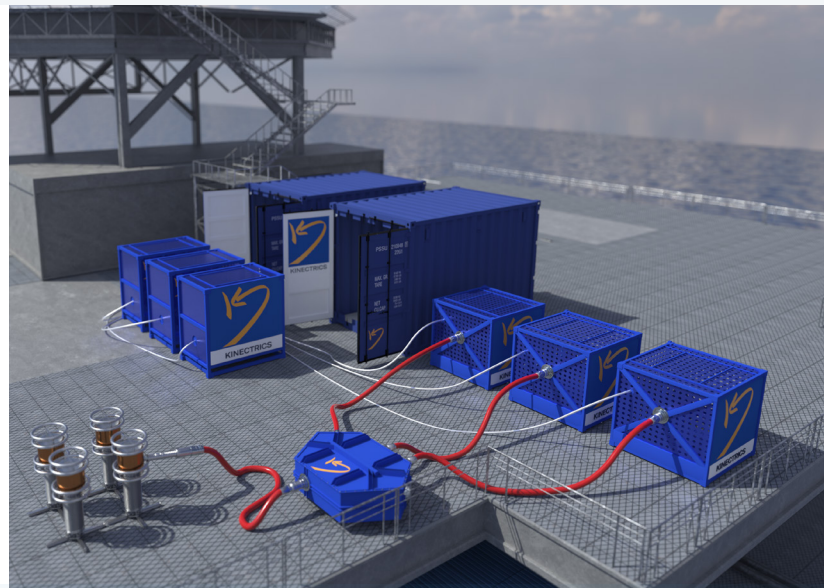
As offshore wind projects grow in scale and complexity, confidence in cable performance has never been more critical. Kinectrics provides the technical expertise and proven testing approaches needed to identify issues before energization.

**For over 50 years, we have delivered commissioning testing for medium- and high-voltage assets worldwide.** From inter-array to export cables, our specialists combine withstand testing, partial discharge monitoring, and real-time diagnostics to detect installation-related defects before they affect project schedules, asset performance, or long-term value. As active contributors to IEEE, CIGRE, and IEC working groups, we help shape industry best practices and advance cable testing standards, enabling our clients to commission critical infrastructure with confidence.

### Full Cable Lifecycle Experience

As an independent service provider, we support Type Testing of HV and EHV cable systems, conduct forensics and in-service failures of MV, HV & EHV cable system components, that are backed by full-fledged laboratory capabilities.

Our cradle to grave experience with HV & EHV cable testing allows us to provide unique insights into long-term performance of HV & EHV cable systems based on proven test results.



## Our Proven Experience

### Extensive MV, HV & EHV Cable History

Kinectrics, formerly part of Ontario Hydro Research Division before being privatized, has collectively been testing MV, HV and EHV cable systems in the field since the mid-1970s.

Many of the technological approaches used today stem from the research we conducted in collaboration with other entities such as EPRI and TSOs as well as universities around the world.

### Additional testing services offered include:

- |                                                                |                                 |                                        |
|----------------------------------------------------------------|---------------------------------|----------------------------------------|
| ✓ PD Measurement                                               | ✓ OTDR                          | ✓ TDR                                  |
| ✓ Tan $\delta$ tests in conjunction with commissioning testing | ✓ Dielectric Spectroscopy Tests | ✓ Cable Line Resonance Analysis (LIRA) |

Powering innovative  
and sustainable energy  
solutions globally.

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### Scan the QR Code

to learn more about our offshore  
HV cable testing services



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