

ENERGY



# High-quality. Flexible. Corrosion resistant.

Customized electrical installation  
solutions for wind energy

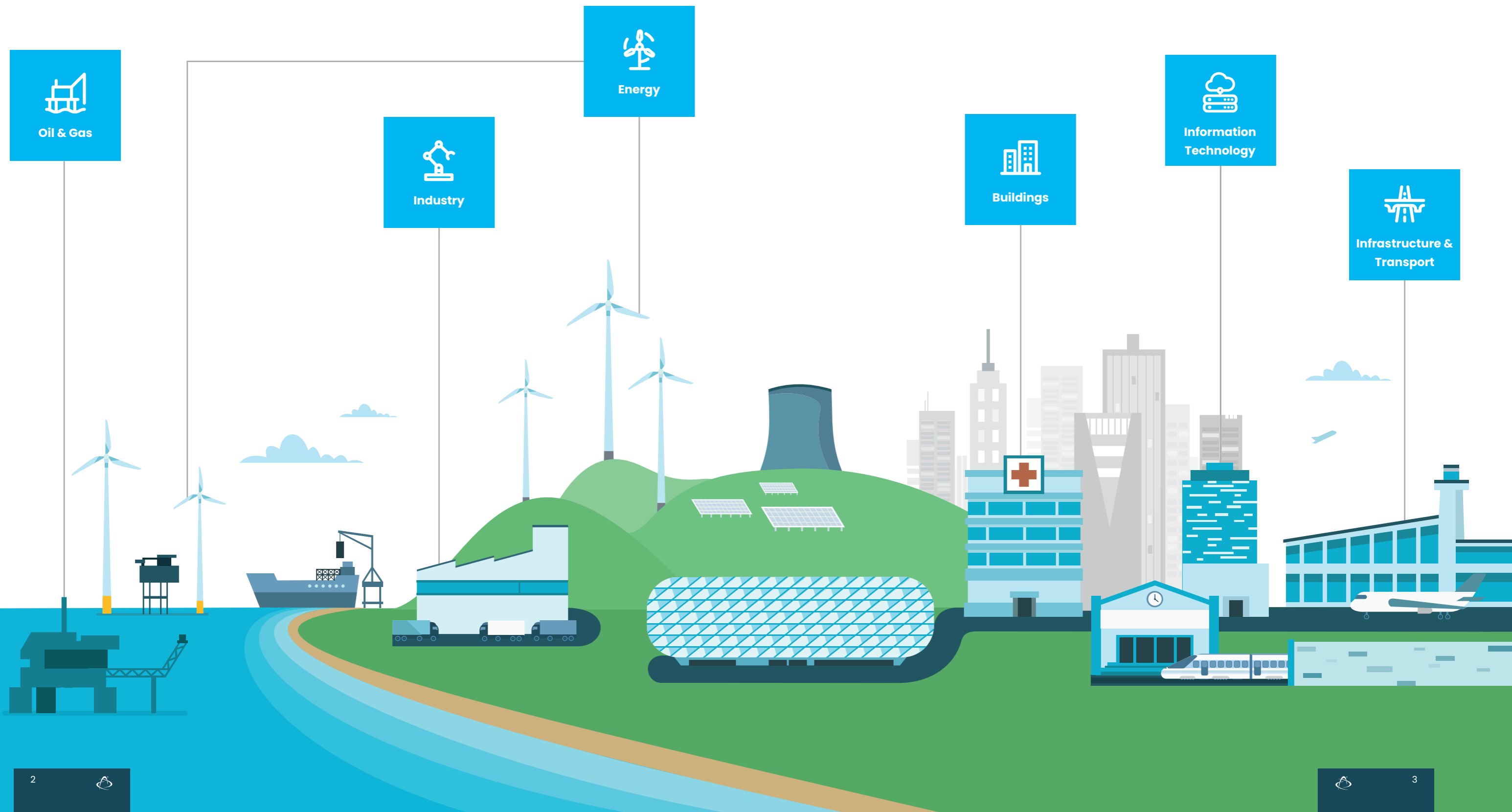


# Expertise in complex sectors

## High-quality electrical installation solutions

For more than 100 years, the name Niedax represents future-orientated electrical installation. Today, future-orientated no longer refers solely to state-of-the-art, but also to sustainability. As a global player with a vision of a safe electric world, we fulfill this responsibility with conviction. We are a strong partner in various sectors, including the wind energy sector – with a comprehensive service portfolio that is as individual as our customers' projects.

We think of every construction project holistically. In addition to consulting, planning, and construction, we also take care of on-site production, custom-fit packaging, and delivery of the cable laying systems. To achieve this, we always provide uncompromising Niedax quality. This is ensured by our quality management, which regularly checks and optimizes all our electrical installation solutions!



# Onshore, offshore & more

## Safe electrical installation solutions for wind turbines

Whether on dry land or on the high seas: wind turbines place the highest demands on the quality of all components used. After all, water, wind and weather take their toll. The electrotechnical infrastructure in particular must reliably withstand these influences, as it ensures the function of the entire system. Starting with the nacelle and the tower to the transition piece all the way to the substation!

The Niedax product portfolio offers high-quality, customized electrical installation solutions that cover the entire spectrum of applications. All products are individually designed, tailor-made and available in the suitable design for each project.



Scan the QR code for the  
wind energy industry  
video – start watching!

<https://bit.ly/3w66rHG>





**Nacelle of a wind turbine:**  
MTC-wire mesh tray

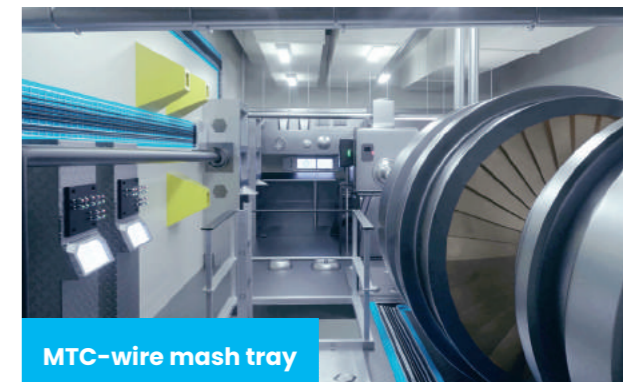
**Tower:**  
KRC-/KRO cable ladder

**Transition piece:**  
ROS-cable tray  
KP-cable support  
GRP-cable duct

# Aiming high with safety

## Load bearing products for wind towers

The tower of a wind turbine demands special requirements regarding the stability of the electro-technical equipment. Especially challenging: cable ducts and ladders must remain stable over the entire length of the tower and safely guide electrical components. Starting from foundation and transition piece, tower cellar and tower up to the nacelle - and in any weather condition! KRO or KPC cable ladders are specially designed for vertical guidance over longer distances, so they're suitable for this purpose.



**MTC-wire mesh tray**

- + Versatile
- + Light weight



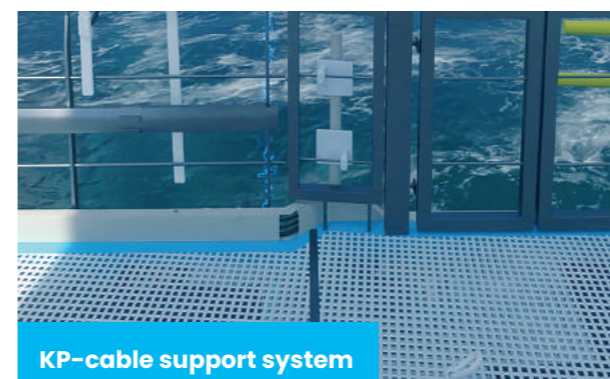
**KRC-/KRO-cable ladder**

- + Perfect for heavy installation
- + Perforated and oval bars available



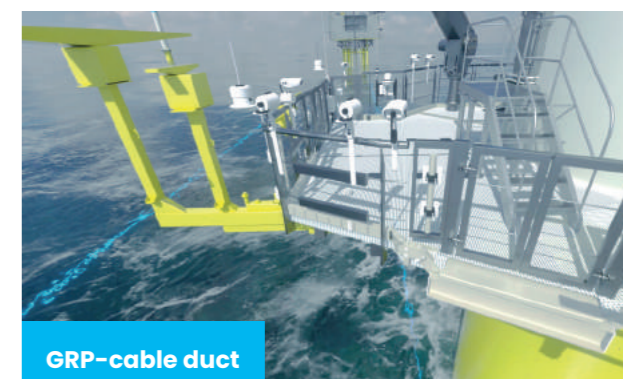
**ROS-cable tray**

- + Flexible lengths and connectors
- + Various standard perforations with versatile usages



**KP-cable support system**

- + Fiber-reinforced plastic (GRP)
- + Certified up to wind zone 4



**GRP-cable duct**

- + Direct attachment to the railing




# Crux of the matter

## Highly resistant electrical engineering for the substation


The substation is the most important part of any offshore wind farm. If a technical defect occurs here, all offshore components fail without exception. Consequently, the demands regarding the electrotechnical equipment of the substation are correspondingly high!

The Niedax Group offers high-quality electrical installation solutions for every plant part. We design and supply highly load bearing and weather-resistant GRP- or stainless-steel-products, including all supplies, for the installation of high, medium, and low voltage cables. The installation is possible even over longer distances - without any power loss.



**UL-cable ladder**

- + Corrosion resistant GRP
- + Easily adaptable to different requirements



**U-profile**

- + Made from GRP or stainless steel
- + For guiding medium to heavy cables



**L-profile**

- + Heavy duty support profiles
- + Available in standard and customized lengths



**GRP-cable duct**

- + Special protection due to closed cable routing



**MTC-wire mash tray**

- + Fast installation over long distances
- + Assembly without screws



**2996Z C-profile**

- + Fixable on all four sides
- + Extensive range of accessories available



# Cooperation of supreme quality

## An interview with Gerard Opsteyn from Smulders Projects

Pioneers go hand in hand. In collaboration with Smulders Projects, a global market leader for steel structures with a focus on offshore wind farms, the Niedax Group sets new standards in plant construction. Gerard Opsteyn, project manager at Smulders Projects, provides a deeper insight into the “Dogger-Bank”-project.

### What is unique about the Dogger-Bank-project?

The Dogger-Bank-project will be the largest wind farm in the world. Apart from that, a Transition-Piece-project (TP) is always something unique. Since these projects require series production with a rate of three to four TPs per week. Accordingly, a somewhat different approach is necessary. The engineering must be worked out to the smallest detail, i. e., the procurement, logistics as

well as the installation of all materials and electrical equipment must be perfectly coordinated. Otherwise, a technical malfunction could affect not only one TP, but all those already produced. This subsequently requires a lot of costly rework. So, it is important to minimize this risk as much as possible and to ensure that errors and misunderstandings with the customer, subcontractors, or other parties involved in the production process are kept as low as possible.



*“Throughout the entire implementation process, the Niedax Group proved to be a first-class and valuable partner for us.”*

Gerard Opsteyn, project manager at Smulders Projects

### Could you tell us about your experience with the Niedax Group?

The cooperation with the Niedax Group was excellent. From the very first day it was clear to everyone involved that this project depends primarily on the preparation! The documentation met the requirements so that everyone in the production process always knew exactly what they had to do. Starting with the logistics up to the final installation in the TPs. Niedax has proven that they can perfectly organize and align a TP-project on the Dogger-Bank-scale. Throughout the implementation process, Niedax has proven to be a first-class and valuable partner for us. Even when minor adjustments were needed on rare occasions, the response time was amazing, and things were adjusted immediately. Smulders appreciates this kind of service a lot. That is exactly what we aim for.

### Where was the Niedax Group involved?

In the case of the Dogger-Bank-project, the Niedax Group was mainly involved in the installation of all the cable support systems inside the TP. Right from the design phase and manufacturing, through the procurement of all necessary cable trays and assembly materials, to the actual delivery as part of the production process.

It was this 360-degree-expertise that ultimately made the difference – and was exactly what we needed to fine-tune and specify the final design. This was the only way to ensure that the installers outside always knew how to assemble what and where. And so far, there has not been a single complaint from the shipyard. To conclude: Goal achieved to the fullest satisfaction!



# The Niedax Group for Equans

## Full wind power ahead off the coasts of France and Germany!

The Belgian company Equans is a leading player in the construction of high-voltage substations and in the monitoring and maintenance of offshore wind farms. The construction Group is currently implementing two highly complex wind farm projects in Europe: “St. Brieuc” in Brittany and “Baltic Eagle” off the coast of Rügen. As a strategic partner, the Niedax Group supports in planning, consulting, and the delivery of individually designed electrical installation solutions.

### The first offshore wind farm in Brittany: St. Brieuc

Off the coasts of France and Germany, two large wind farms are being built to meet the demand for renewable energies and thus to reach the ambitious climate goals of the United Nations.

Around 16 kilometers off the coast of St. Brieuc, the first large-scale offshore wind farm in Brittany is being constructed. With aspirations to produce an estimated 1,820 gigawatt-hours per year and supply energy to 835,000 people once it is commissioned in 2023. For this purpose, more than 60 turbines are to be built – each of them over 200 meters high! These turbines convince with the latest direct drive technology. In addition, with their almost 82-meter-long wings, they cover an area that is 18 percent larger than that of the predecessor model.

This will increase annual energy production by a full 20 percent. The Niedax Group is supplying around 6,000 meters of wire mesh trays and more than 12,000 meters of stainless-steel C- and U-profiles for this project.



### Wind energy off the coast of Rügen: Baltic Eagle

About 30 kilometers northeast of the island of Rügen, the “Baltic Eagle” project is being constructed, the second largest offshore wind farm in Germany. Along with the “Viking” and “Viking South” wind farms, it will be the largest wind farm complex in the Baltic Sea. It will cover an area of 40 square kilometers with over 50 turbines. Each of these turbines features a rotor blade diameter of 174 meters, the largest commercially proven rotor size, so the new 476-megawatt turbine will power 475,000 households with renewable energy in the future. Combined with the “Viking” wind farm, Baltic Eagle will be able to cover 45 percent of the electricity consumption of the federal state of Mecklenburg-Western Pomerania. As a result, around 1.65 million tons of CO<sub>2</sub> can be avoided. The Niedax Group is supplying around 10,000 meters of wire mesh cable trays and over 18,000 meters of stainless-steel C- and U-profiles for the project.



*“As a strategic partner, the Niedax Group provides support for planning, consulting and delivering individually designed electrical installation solutions.”*

Akshay Deo, Lead Buyer at Equans Belux



**Scan the QR Code for the reference video**

<https://bit.ly/3O8oCDH>



# Niedax Group

## For a safe electrical world

The Niedax Group is one of the world's leading experts in cable support systems. We offer unique technology, customized planning and design, on-site production and worldwide distribution wherever safe and high-quality electrical installation solutions are needed. As a family-owned company with German roots, we have developed into a global specialist for cable laying systems since our foundation over 100 years ago. Our goal is to make the electrical world safer. Now and in the future!

With a total of over 2,350 employees in more than 30 countries and offers from a single source, we are always at our customers' side as a reliable partner. Your success is our strongest impulse – together we master all challenges of a future-oriented electrical installation.



### In budget

Our customers only ever pay exactly what has been agreed on in advance. You can rely on that!



### In time

Plan with us – we will realize your project on time. Guaranteed.



### Customer-centered

Always in focus: the project-specific requirements of our customers.



*„As a global player, we take responsibility for our environment. The wind energy sector is one of our most important business areas. In this way, we ensure a safe electric world – now and in the future!“*

Bruno Reufels, CEO Niedax Group



### Represented everywhere

No matter where you want to build: We are on site with our experts.



### Everything from a single source

In addition to planning, consulting, and design, we also take care of on-site production, packaging and delivery of the products.



### 100 years of experience

Niedax quality stands for proven quality made by experts.







Niedax GmbH & Co. KG  
Asbacher Str. 141 | D-53545 Linz/Rhein  
PO box 1286 | D-53541 Linz/Rhein  
Germany  
Tel: +49 (0) 2644/5606-0  
info@niedax-group.com  
www.niedax-group.com

