



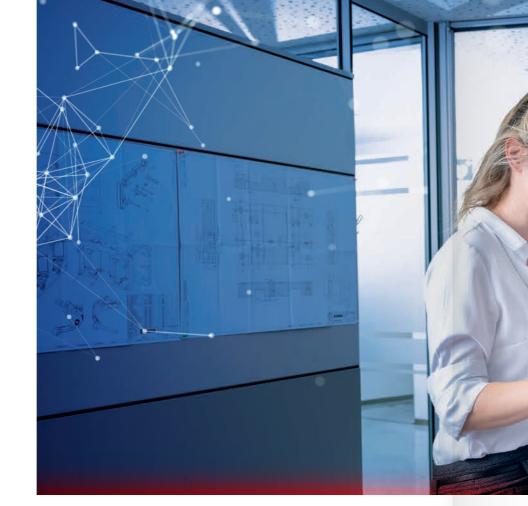
Expertise and stability count when our future is at stake.

# THE DRIVING FORCE.

Electrical energy is the driving force of the future. It ensures connectivity, communication and mobility. Smoothly functioning energy systems, structures and technologies are what keep our modern life in motion. Values such as safety and stability are therefore decisive factors in the selection of appropriate products and services.

As a strategic partner of the energy industry, "Energy Systems" a business unit of the Knill Gruppe, meets these high requirements. The companies of this division ensure efficient power distribution worldwide from power plants to individual households. In the past, now and in the future. With around 1,100 employees around the world, the companies of Energy Systems make a significant contribution to the safe and efficient transmission and distribution of electricity. The fittings, damping and monitoring systems for overhead lines and the highly specific components for substations and railway fittings are developed and produced entirely in-house and sold worldwide. Everything from a single source.





## ENHANCING QUALITY.

#### The energy market never stops.

The same applies to our products and services. Engineering, new and advanced technological developments, quality control, tests and field trials are all carried out in-house to ensure complete transparency and traceability. For advanced developments, we use the expertise of our local project teams as well as external experts from research institutes and universities who think outside the box.



This is how innovation with quality standards works. Functionality, reliability and the fulfilment of all standards and legal requirements have top priority for the Energy Systems' companies!

The ISO 9001 quality standard is the certified standard at all locations. We are also certified to ISO 14001 and ISO 45001.

From complete systems and customised single components to individual new developments.



The reliability of the power supply is directly related to the quality of the relevant systems and components. The solutions of the Energy Systems' companies are used worldwide for safe and efficient power transmission and distribution. For good reason.



## SAFE POWER TRANSMISSION AND DISTRIBUTION.



String systems for high-voltage overhead lines up to 1,200 kV

Damping systems for vibration protection of overhead conductors Low and medium voltage fittings up to 45 kV



Components in substations have to ensure reliable power transmission.

The Energy Systems' companies develop and produce such highlydeveloped components for the construction or modernisation of substations. Naturally, in accordance with the highest international standards.



## **RELIABLE COMPONENTS FOR SUBSTATIONS.**



For systems up to 1,000 kV.



## MONITORING AND ANALYSIS IN REAL TIME.



The digital services of Energy Systems' companies monitor and analyse the condition of overhead lines, exposed to the highest loads. The OTLM system makes a significant contribution to identifying possible weak spots in good time and preventing damage. Monitoring in real time promotes a network's safety and flexibility, thus increasing its dynamic availability in an international context. The digital services are constantly being further developed and optimised. Today's dreams are tomorrow's reality.

The installation, use and servicing of networks is being revolutionised intelligently.



## UP-TO-THE-MINUTE RAILWAY MATERIAL.

Railway infrastructure is one of the most important mobility networks of the modern world.

The Knill Energy Systems' companies produce overhead contact wire products for the reliable electrification of railway and underground systems. This railway material is used where electricity is the driving force: a crucial point indeed.



Proven quality connects the world.

## LOCAL THE WORLD OVER.

As a global company network, the Energy Systems division is optimally positioned.

In the interests of uncompromising quality assurance, the company has various sites where flexible, fast, high-quality production is assured. This geographical diversification also enables us to be where our customers are.



Nove Mesto nad Vahom, Slovakia

Nashik, India

Bangkok<u>, Thailand</u>

All products, components and services are developed and produced entirely in-house and sold worldwide.

PRODUCTION SITES WORLDWIDE

> OUTPUT PER YEAR

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The reliability of the products and services of the Energy Systems' companies is something to be proud of! The expertise relating to fittings, damping and monitoring systems, railway fittings and components for substations is in international demand. These reference projects give an impression of the scope of services relating to the development and expansion of energy systems, structures and technologies. In keeping with the motto: Think globally and act globally.

## MARKET PRESENCE ON ALL CONTINENTS.



#### Europe

**380 kV Styria line, Austria** Length of line: 100 km Year of construction: 2009



#### Americas

**735 kV Lower Churchill Fall Project, Canada** Length of line: 203 km Year of construction: 2015

500 kV Trujillo-Chiclayo-La Niña, Peru Length of line: 327 km Year of construction: 2010



## India

765 kV S/C Jabalpur Bina T/L and 765 kV D/C Dharamjaigarh Jabalpur T/L - JTCL Length of line: 616 km Year of construction: 2012

# Located in Austria, active worldwide. Our Styrian roots give us the energy for these entrepreneurial developments.



### Middle East

380 kV SEC-COA 4000055251 D/C OHTL between Qassim-2 BSP #9025 - Madinah East BSP #21900 (CKT 3 & 4), Saudi Arabia Length of line: 420 km Year of construction: 2019



### Africa

400 kV OHTL El Affroun - Hassi Ameur, Algeria Length of line: 320 km Year of construction: 2006



#### South-East Asia

500 kV PLN Project Grati-TX Kalanganyar, Indonesia Length of line: 60 km Year of construction: 2018



#### Australia

66 kV TL for Salt Creek Windfarm in Victoria Length of line: 55 km Year of construction: 2018



## THE POWER OF THE GROUP.

**Energy Systems is a central division of the global Knill Gruppe. All companies have common standards for thinking and acting.** This applies across all divisions and hierarchies. It includes, for example, the irrevocable commitment to using valuable environmental resources sparingly and carefully. In addition, we work every day on rekindling the motivation of our employees in order to impress our customers with outstanding performance. As a corporate group, this is how we develop collective strength. We also harness valuable synergies.

#### Knill Gruppe:

Energy, Communication, Mobility 340 million euros annual sales 2,300 employees 27 companies in 17 countries COUNTRIES

COMPANIES



## ENERGY SYSTEMS

FACTS AND FIGURES





SALES PER YEAR

"We think and act in generations, not in quarterly reports."

Christian Knill Owner

Erich Kaltmann CSO

John Morris СРО

Ivan Kramer coo

## FOR MORE THAN **300 YEARS.**

Today, the corporate group is still family-run, now in the 12<sup>th</sup> generation.

This fact alone proves that safeguarding the future long term is more important than maximising earnings short term. We are bound by tradition and as a result we have worked unfailingly on our corporate future development since 1712.

Klaus Urwanisch CFO



