POWER GRIDS

SUSTAINABLE HIGH POWER TRANSMISSION

PIONEERS IN ELECTRIC POWER

VISION[®] ELECTRIC Super Conductors



THE CHALLENGE

The raising demand for electricity leads to a broad usage of high voltage technology for the transmission of high power (GW-Scale). On the other side high voltage technology is facing increasing technical limitations, as well as an increase in complexity and expenses, especially for HVDC cables.

Rising requirements for space, environmental protection and efficiency makes upcoming projects more complex and lead to increasing erection times and costs.





THE SOLUTION

Now, there is a mind-breaking and game-changing technology available that combines MV-level transmission and high power (GW-Scale) without electrical losses and the negative aspects of HVDC:

ICE® GRID

ICE[®] **GRID** is a superconducting system that delivers high power with medium voltage and without electrical losses.

Superconductors are future-proof, sustainable and open up new opportunities for you.

Superconductors gives you many advantages to expand high power grids. Superconducting cables have much lower space requirements and thus a much lower impact on the environment and lead to decreasing construction time and costs. They transport the same capacity like HVDC lines on a medium voltage level and therefore are easier to connect and to handle.

Compared to conventional technologies superconductors have a much higher efficiency – without electrical losses and much lower material use which reduces the CO2 footprint tremendously. A quick construction and low environmental impact leads to higher social acceptance and may reduce planning and approval processes.

ICE[®] **GRID** makes it easy to extend and improve existing power grids for meeting the rising demand on electricity.



Superconducting Cable 6 GW capacity

Superconductors are smaller, lighter and more efficient compared to conventional technologies.

They offer economic advantages, have a low environmental impact and no energy losses.

SIZE MATTERS -COMPARISON OF CURRENT CARRYING CAPACITY:



Normal conducting aluminium busbar 20 kA

Superconducting Busbar 20 kA

SUPERCONDUCTORS DON'T WASTE ENERGY

Below their critical temperature superconductors carry very high currents without electrical losses.

This property allows the design and construction of highly efficient, ultra compact and lightweight energy transmission systems.

Comparing an entire conventional busbar system with a superconductor system, up to 90% of the energy can be saved.

BENEFITS



Build your power grid system faster with modular elements



Reduce environmental impact and CO_2 footprint



Reduce your logistics efforts and save material



Use existing infrastructure, save space and costs

ABOUT VISION ELECTRIC SUPERCONDUCTORS

We are pioneers in the field of efficient power transmission. We are curious, brave and sustainable.

VISION ELECTRIC SUPER CONDUCTORS is the avantgarde in the development of industrial applications based on superconductor technology. Our core competence is the loss-free and safe transport of high currents.

We take care of your whole project: starting from the design and construction to the commissioning and maintenance, we deliver turnkey solutions.

We have decades of experience in the field of plant engineering. We deliver best quality – made in Germany.



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