Future Requirements to Electrical Equipment
Enviromental Sustainability and Digitalization

Reliable Power Supply
Network availability
Sustainability
Safety
HVDC - Transmission

Environmental Protection
Water protection (oil leakage)
Climate protection (CO2 emissions)
Alternative insulating gases to SF6 in order to reduce its deployment and emissions during manufacturing

Economic Efficiency
Decentralized power supply
Life cycle cost (investments, service, maintenance, recycling)
Digital Substation

Trench proposes a pioneering innovation:
Non Conventional measuring Instrument Transformers
suitable for digital substations, based on the optical principle.

Trench Optical Current Transformers do not contain electronic parts and do not need oil or SF6 as insulation media.
Long term sustainability and No environmental compromises.

Our Optical Current Transformer is now tested and available for worldwide applications.

PRODUCT DESIGN
Applicable for voltage level from 72 to 800 kV
No environmental compromises and never subjected to gas taxation
Galvanic separation between primary and secondary side
Single fiber-optic cable instead of several copper cables with large cross-sections
Internal insulation is made by clean air, thus:
F-gas free insulation with lowest requirements on training, transport, installation, operation, reporting and recycling
C-gas free with no risk of C-decomposition

CUSTOMER BENEFITS
ENVIRONMENTAL BENEFITS
No Global Warming Potential: GWP = 0
No Ozone Depletion Potential: ODP = 0
No reporting or emission costs during operation and recycling:
No SF6- or F-gas tax or future risk,
No CO2 emission compensation or future risk

TECHNICAL BENEFITS
Small and light-weight units compared to conventional CT design
No magnetic losses and no ferro-resonance effects
No electronic components within the optical CT
Wide dynamic range due to saturation-free measurement principle
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