

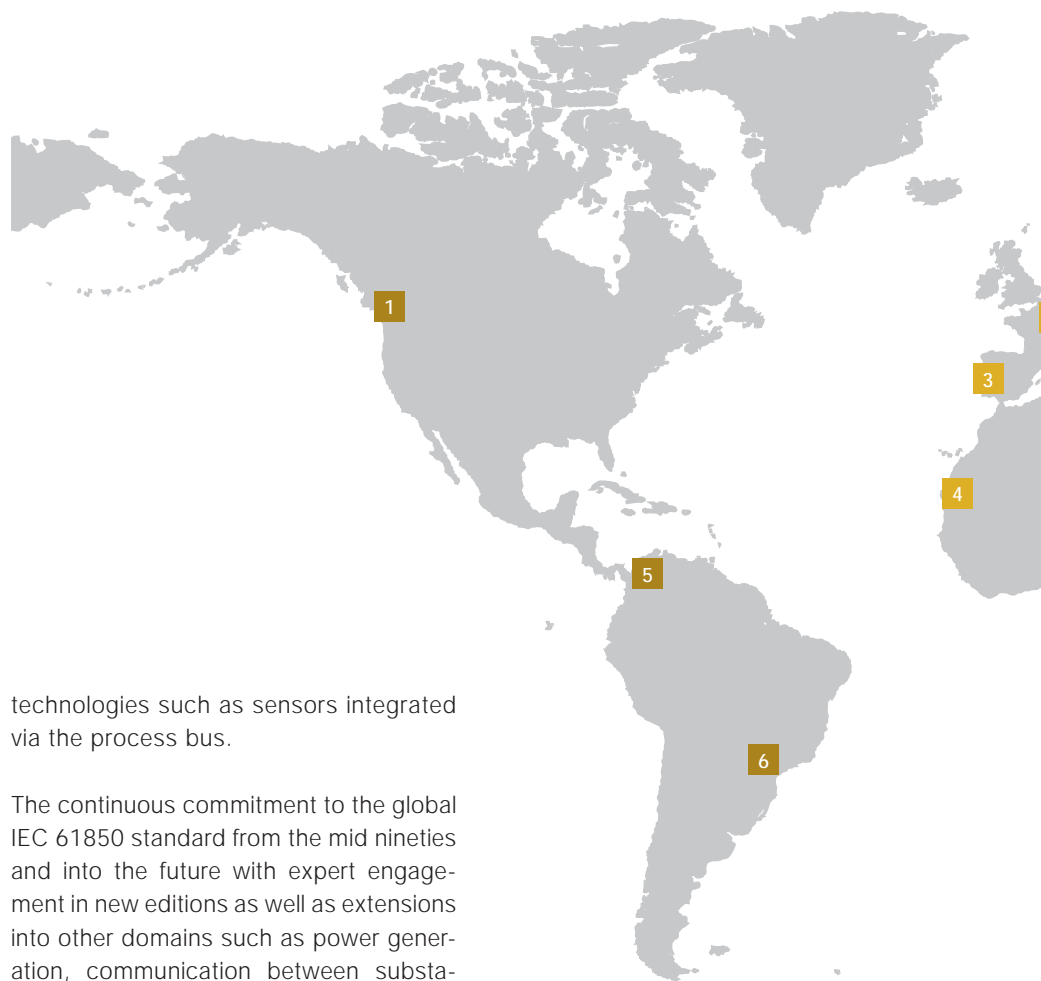
IEC 61850 – a success story around the world

Substation automation systems pave the way to a smarter grid

PETRA REINHARDT – Since the publication of the IEC 61850 standard and the commissioning of the world's first multi-vendor project in Laufenburg in 2004, ABB has supported numerous customers in accomplishing the paradigm change associated with introducing IEC 61850 substation automation systems. Meanwhile, more than a thousand systems and a vast number of products have been delivered to around 70 countries resulting in comprehensive experience with new installations, retrofit and migration projects.

The development of powerful tools and efficient processes simplifies the implementation of IEC 61850 across the portfolio of products, applications and systems. Full compliance to the standard is verified by an in-house system verification center, the world's first vendor-owned test laboratory to earn qualification by the UCA International Users Group.

The state-of-the-art product portfolio along with proven system integration capabilities enables ABB to realize the standard's full potential in substation automation systems. This is equally ensured in systems with centralized and decentralized architectures, GOOSE-based and distributed functions as well as multi-vendor integration and latest



technologies such as sensors integrated via the process bus.

The continuous commitment to the global IEC 61850 standard from the mid nineties and into the future with expert engagement in new editions as well as extensions into other domains such as power generation, communication between substations and to network control centers allows ABB to support customers wanting to benefit from these developments.

Offering its comprehensive domain knowledge both of the power value chain and industrial processes, ABB provides utility and industry customers with SA systems leveraging both current and future perspectives and benefits of the standard. Facilitating enterprise-wide data integration, the IEC 61850 automation systems

enable efficient power system management and integrate substations that are reliably supplying energy from conventional and renewable resources to millions of people or are powering industrial productivity, into the smart grid.

This map shows a selection of IEC 61850 implementations around the world with ABB participation.

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- 1 Teck Cominco's Waneta 230/63 kV S/S, Canada
- 2 EGL's Laufenburg 380 kV Substation, Switzerland
- 3 EDP Distribuição Energia's six HV/MV stations, Portugal
- 4 Senelec's Hann 90/30 kV S/S, Senegal
- 5 ENELVEN's and ENELCO's Soler & Médanos S/Ss, Venezuela
- 6 Eletrosul's three 230/69 kV S/Ss, Brazil
- 7 EWA's Financial Harbour, Sitra & Buquwwah S/Ss, Bahrain
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