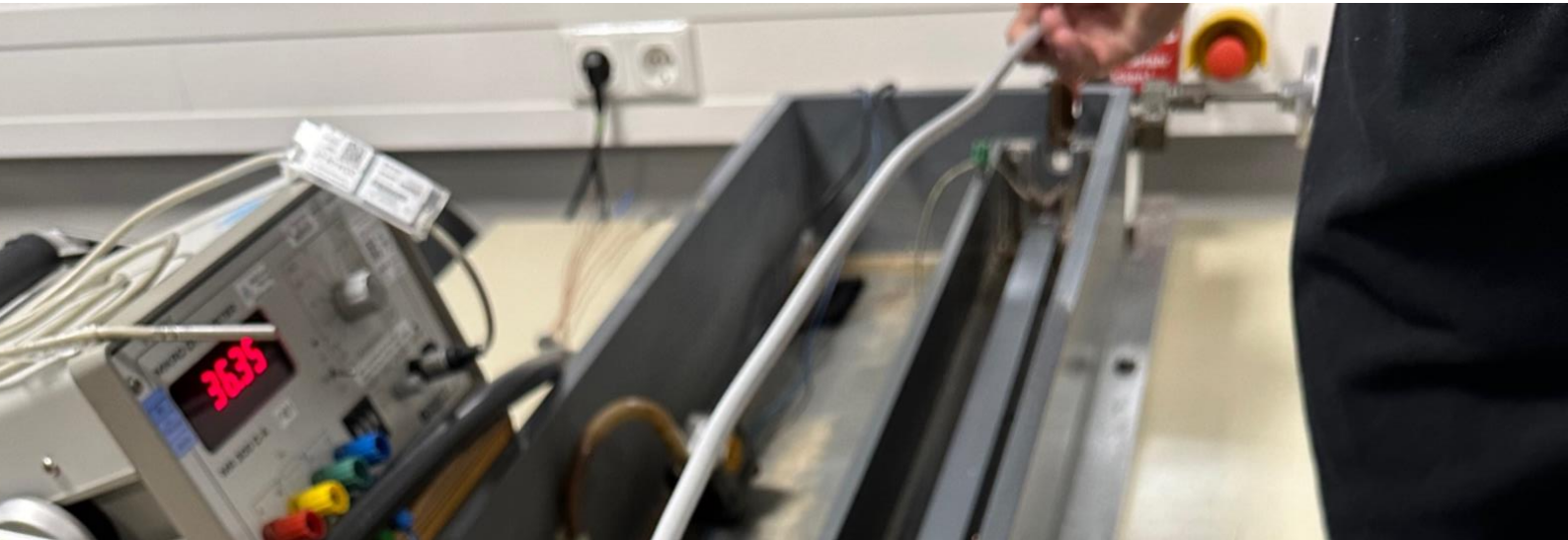


Calidena Process in the Project “Quality Standards for Increased Trade in the Eastern Partnership Countries”

Value Chain: Low-Voltage Cables (Ukraine)



Low-voltage electric cable testing in VDE laboratory, Germany. Photo: Ulrich Harmes-Liedtke

Context and rationale for the selection of the value chain in Ukraine

Cable manufacturing is a comparatively highly developed sector in Ukraine. All types of modern cable products are manufactured domestically with low-voltage (LV) cables predominant in the spectrum of cable commodities. A considerable part of cables export statistics (up to 70 % according to various estimates) refers to wire harness products for the automotive industry, which are manufactured in Ukraine within tolling scheme operations.

The value chain of low-voltage cables was selected for the Calidena process in Ukraine due to its significance for technical harmonisation with the EU, its growth potential and the relatively high number of people employed in cable manufacturing.

Ukraine is in the process of establishing an equivalent legal and administrative framework under its EU accession process. Low-voltage equipment was identified alongside electromagnetic compatibility and machinery as one of the priority sectors for harmonization of Ukrainian technical regulations with the EU. Electric cables were selected as a representative product for the implementation of the EU Low Voltage Directive and the Construction Materials Directive.

While price volatility of raw materials restrains growth, demand will also come from the IT and telecommunication sector for data cables and other users of cables for transmitting information. The aerospace, automotive and defense segments also contribute to the rise in demand due to a wide range of individual and commercial car fleets, military and civic air fleets, military ground vehicles and other applications.

Cable manufacturing also has significant implications for the Ukrainian labor market, providing jobs for more than 60.000 people. Labour-intensive wiring harness production, which uses LV electric cables, is one of the main activities for cable producers located in Ukraine.

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Identified gaps

A kickoff workshop was held online on 20-21 September 2023. Representatives of relevant Ukrainian regulatory authorities, quality infrastructure institutions, cable manufacturers and associations, and consumer protection organisations attended the workshop.

During the workshop, an informal poll rated the quality of low-voltage cables between good and excellent. Expert presentations also revealed that there is already a substantial degree of conformity between Ukrainian and EU regulatory frameworks in this value chain.

Nonetheless, gaps were identified, including problems with the availability of technical standards and testing facilities. The current suspension of market surveillance due to Russia's war on Ukraine and the resulting lack of data on non-conformities were also recognized.

Calidena activities

A joint action plan for addressing some of the identified gaps was developed as an outcome of the kickoff workshop. Planned activities include:

- Defining technical specifications for testing laboratories, developing a business plan and securing initial funding
- Improving in-house laboratory capabilities for manufacturers by developing a list of necessary equipment based on HARmonization Mark (HAR) and IEC-EE and conducting a needs assessment of lab equipment and capabilities
- Capacity building for a selected Proficiency Testing (PT) provider and conduct of a proficiency test for one cable requirement
- Translation of a testing standard
- Training on market surveillance
- Exchange of information between Ukrainian Conformity Assessment Bodies (CABs) and VDE about the interest in recognition of Conformity assessment certificates
- Setting up of networking opportunities between Ukrainian stakeholders and European counterparts

Expected outcomes

The outcomes expected from the Calidena process in Ukraine on low-voltage cables include:

- Progress toward re-introducing third-party testing services and improving in-house testing capabilities
- Improving the availability of proficiency testing services
- Addressing gaps in standardization and market surveillance
- Better integration of Ukraine in the HAR system
- Establishing relations with European cables manufacturers

Leading Organisations

Host: [Ministry of Economy of Ukraine](#)

Co-host: [UKRELECTROKABEL, Association of Ukrainian Cable Manufacturers](#)

Links to Green Transformation

In the European Union, the sustainability of cable products throughout their entire life cycle plays a decisive role. The EN 50693:2019-08 standard is relevant for life cycle analyses. Product category rules for life cycle assessments of electronic and electrical products and systems are applied. The IEC 62125:2019-09 standard defines environmental considerations specific to insulated electrical power and control cables. Europacable is also developing product-specific rules for life cycle assessment of insulated conductors, cables and flexible cords and their accessories (NWI TC20/Sec2097/CD). There are also environmental regulations for installation, utilisation and recycling at the end of the life cycle. The Ukrainian cable manufacturers are familiarising themselves with these sustainability requirements as part of the Calidena process.

Contacts

Stefan Wallerath, PTB Project Coordinator: stefan.wallerath@ptb.de

Ulrich Harmes-Liedtke, Facilitator: uhl@mesopartner.com

Julia Bliusovych, Facilitator: julia.bliusovych@gmail.com

What is Calidena?	Calidena in the Eastern Partnership (EaP) countries
Calidena is a participatory approach developed and applied by the Physikalisch-Technische Bundesanstalt (PTB) to stimulate quality in value chains. Its toolset can be used in cooperation projects that aim to strengthen the user orientation of the Quality Infrastructure (QI) of partner countries and in value chain initiatives that aim at closing quality-related gaps. For more information on the Calidena process, visit the Calidena website .	In 2022, a Calidena process was launched in each of the five partner countries participating in the PTB project “Quality Standards for Increased Trade in the Eastern Partnership Countries.” A different value chain was selected for each EaP country depending on local circumstances and needs to be identified based on a “QI market potential rapid assessment” study conducted in the framework of the EaP project.