



EU Trace: From Design-to-Cost to Design-to-Sustainability – Rethinking Distribution Transformer Renovation in Europe

Prepared for CWIEME, Berlin (DE)

20th May 2026



This project has been co-funded by the European Climate Infrastructure and Environment Executive Agency under the LIFE call, LIFE-2024-CET-POLICY, with grant agreement N° 101215320. Views and opinions expressed here are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them.

Today's speakers:



Tomas Jezdinsky
International Copper
Association –Europe



Pablo Cirujano Ballesteros
Ormazabal



Wim De Maesschalck
Fluvius



Miguel Martínez Velázquez
IIT - Institute for Research in Technology
Comillas Pontifical University

EU Trace: From Design-to- Cost to Design-to- Sustainability – Rethinking Distribution Transformer Renovation in Europe

20 May 2026, 14:00-14:45

Secure your FREE ticket

CWIEME
BERLIN

19-21 MAY 2026
MESSE BERLIN

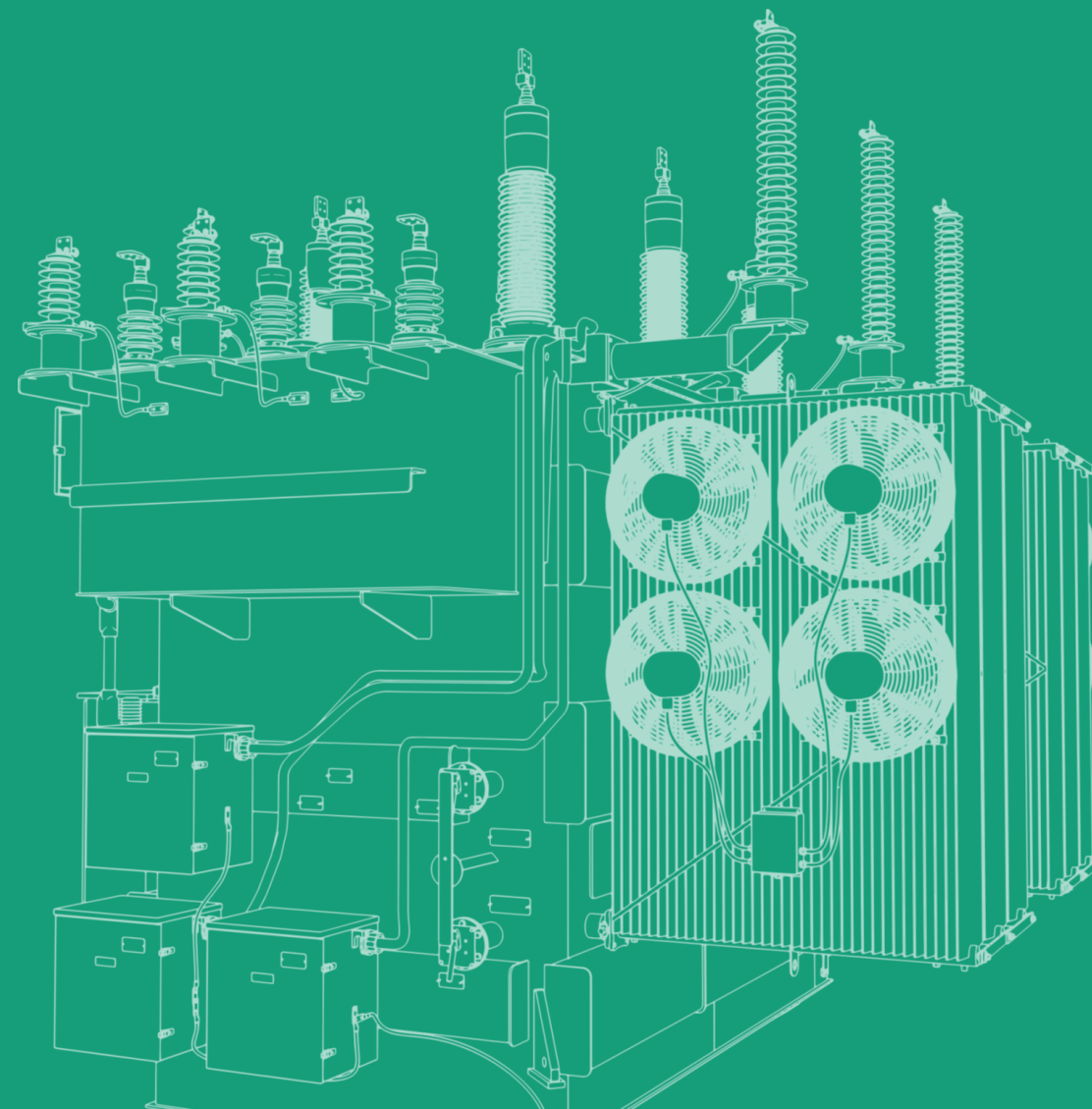
1

Project overview EU-TRACE



Tomas Jezdinsky

Freelance Market Research Consultant, **International Copper Association –Europe**



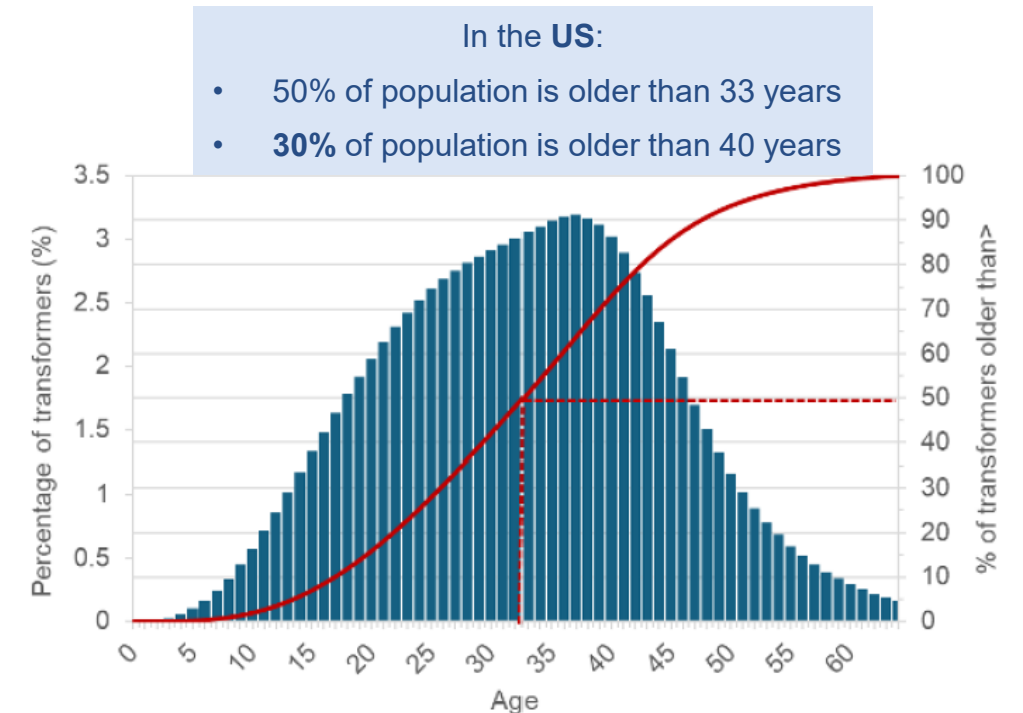
What is the problem ? Starting point...

Large number of old inefficient transformers in distribution grids & private users

- In the EU, the old inefficient distribution and industrial transformers account for 38% of the 144 TWh/year electricity losses and represent 80% of the transformers population.

Long lifetime of transformers and long replacement cycles

- Despite the introduction of stricter Ecodesign regulations (2015 and 2021), only about 25%-30% of potential energy savings have been realized through natural transformer replacement due to their long lifespan (often exceeding 40 years).



Distribution Transformer Demand: Understanding Demand Segmentation, Drivers, and Management Through 2050 – NREL November 2024
<https://docs.nrel.gov/docs/fy25osti/92076.pdf>

The opportunity: additional 2.1 TWh/year

EU-TRACE will focus on distribution and industrial transformers

- **SCOPE: small power transformers of 1 to 3150 kVA ($U_{1m} \leq 36$ kV, $U_{2m} < 1.1$ kV), regulated under EU Ecodesign, owned by Distribution System Operators (DSOs) or electricity end-users**
- The 2011 Ecodesign preparatory study* revealed that although majority of electricity losses occur in transmission-level transformers, losses in distribution and industrial transformers are also significant.
- While transmission-level transformers tend to be highly efficient, distribution and industrial transformers are less so, offering a greater potential for savings.
- Assuming that it would take about 20 more years to fully replace the old existing fleets (as depicted in the 2011 Ecodesign preparatory study) an accelerated replacement policy reducing this period to 15 years would bring an average **saving of 2.1 TWh/year of electricity over 20 years (42.5 TWh cumulative).**



*

Van Tichelen, P et al. *Ecodesign preparatory study LOT 2: Distribution and power transformers / Tasks 1-7*. Study prepared by VITO for European Commission DG ENTR unit B1, January 2011.
Available online: https://transformers.vito.be/sites/transformers.vito.be/files/attachments/EuP_TransformersTask_1_7_V60.pdf

Specific objectives of the EU-TRACE project



1) Gather data on EU transformer fleets and sales analysing different scenarios of policy implementations and their outcomes



2) Develop a model to analyse different scenarios of policy implementations and their outcomes in terms of energy savings



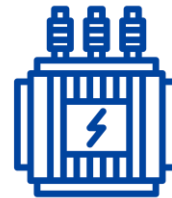
3) Promote knowledge exchange, both for regulated assets level (DSOs, NRAs, CEER) and for privately owned assets (industry users, national energy agencies, European Energy Network)



4) Propose appropriate policies aimed at improving the uptake of energy efficient transformers. These can assist Member States in achieving their energy saving targets



5) Analyse the impact of replacement policies on the EU circular economy goals. Promote design for recycling and recovery policies at end of life



6) Analyse the impact of replacement policies on the transformers market, involving the value chain (OEMs, raw material providers)



7) Develop a policy support package for accelerating the distribution and industry transformers renovation rate built upon previous experience at European and international level

Main contacts



Ivana Rogulj, IEECP (coordinator)
ivana@ieecp.org



Tomas Jezdinsky, for ICA-Europe (communication & dissemination)
tj.eucopper@gmail.com



Website [EU-TRACE – IEECP](https://ieecp.org/projects/eu-trace/) (<https://ieecp.org/projects/eu-trace/>)



LinkedIn [EU-TRACE LIFE project: Overview | LinkedIn](#)