

# ECODESIGN DIRECTIVE TRANSFORMERS

## SUMMARY

### The EU Ecodesign Directive for transformers takes effect from July 2015

It requires all transformers placed in the market (or being installed for the first time) to comply with strict new design specifications that specifically address transformer losses. The directive has been devised to eliminate the worst performing transformer models from being installed across the EU and is expected to save in the region of 16TWh per year from 2020 onwards. A second tier of even stricter design specifications will come into force from July 2021.

## GENERAL INFORMATION

The European Commission estimates that around 2.5% of all energy consumed in the EU is wasted through transformer losses.

Based on a preparatory study, specific Ecodesign standards for transformers were defined by the European Commission which have now been introduced in the new implementation directive.

Directive No. 548/2014 from the European Commission for implementing the Ecodesign Guideline 2009/125/EG for transformers sets new Ecodesign standards for transformers with a minimum power rating of 1 kVA used in 50Hz electricity transmission and distribution networks or for industrial applications.

Objectives of the directive include improved energy efficiency and thus the reduction of avoidable CO<sub>2</sub> emissions alongside a better visibility for performance related data.

The directive is expected to save in the region of 16TWh per year from 2020 onwards (that equates to around half of Denmark's annual electricity consumption and 3.7mio tonnes CO<sub>2</sub> emissions) by ensuring that the worst performing transformer models can no longer be installed across the EEA.

For a copy of the recent legislation detailing loss requirements as published in the European Journal please click here:  
<http://bit.ly/1wuOcfy>

## FAQ'S

### WHAT IMPACT WILL THE NEW LEGISLATION HAVE ON PRODUCT PRICES?

Improving the energy efficiency of transformers is achieved by using materials with superior energetic properties and /or increasing the cross section of key components.

In either case, the cost of manufacture is likely to be increased and this would be reflected in higher product prices across our standard product range.

### ARE YOUR TRANSFORMERS ECO DESIGN COMPLIANT?

Our new Wilson e1 ecotrans range is fully Eco Design directive compliant (Tier 1) and replaces our old standard CRGO and low loss range.

The new generation of our Wilson e2 super low loss amorphous range already meets and exceeds design requirements scheduled for 2021 (Tier 2).

### WILL I BE ABLE TO PURCHASE RE-ENGINEERED TRANSFORMERS AFTER JULY 2015?

The new legislation is currently silent about applicability to refurbished transformers. Until there is further clarification /additional legislation implemented to regulate the second hand transformer market you will be able to source re-engineered transformer products from Wilson Power Solutions as normal.

### I WOULD LIKE TO CONTINUE TO BUY STANDARD LOSS TRANSFORMERS (BASED ON CURRENT INDUSTRY STANDARDS) AFTER JULY 2015 - IS THIS POSSIBLE?

From July 2015 it will be a criminal offence to place into the market or install a transformer for the first time that doesn't comply with the new Eco design specifications. We will therefore cease to offer transformers that don't meet the new design regulations from July 2015 (with exception of our re-engineered transformer products and exempt products -see list on reverse).

**FAQ'S CONTINUED****ARE ALL TYPES OF TRANSFORMERS AFFECTED BY THE DIRECTIVE?**

No. The directive doesn't apply to transformers solely designed and implemented for the following purposes:

- Instrument transformers for supplying measurement devices, meters, relays and similar devices
- Transformers with low voltage windings for use with rectifiers to deliver direct current
- Oven transformers
- Offshore transformers
- Transformers for emergency operation
- (Energy-saving) transformers for supplying trains with power
- Grounding transformers
- Transformers mounted on rail vehicles
- Start-up transformers for switching on three-phase current motors to prevent drops in voltage
- Test transformers for generating a certain voltage or amperage for testing electrical equipment
- Welding transformers for arc welding equipment or resistance welding equipment
- Transformers for deep water applications
- Transformers for explosion-protected applications in underground mining
- Medium Voltage (MV) to Medium Voltage interface transformers of up to 5 MVA
- Large power transformers, if proven that technically achievable alternatives are not available for a certain application, to fulfil the minimum energy efficiency requirements mandated by the directive.

- Large power transformers which serve as an equivalent replacement for existing large power transformers at the same physical location/in the same system, if the replacement is not possible without unreasonable costs in conjunction with the transport and/or installation.

**WHAT ARE THE LEGAL OBLIGATIONS RESULTING FROM THE DIRECTIVE?**

From July 2015, transformers put into circulation within the European Economic Area (EEA) must comply with the Ecodesign requirements detailed in the new directive (if they fall within its scope of applicability see above). It will be a criminal offence to place into the market or commission a transformer that doesn't comply.

The CE marking will be used as proof of compliance and a corresponding EU conformity certificate is to be issued.

The above guideline does not apply to products manufactured for export to countries outside the EEA. In addition, products already in operation / circulation may continue to be operated.

**WHO IS RESPONSIBLE FOR COMPLIANCE?**

The party seeking to introduce the product to the European Economic Area (EEA) is responsible for compliance with the new directive. This is either the product manufacturer, its representative i.e. reseller or the product importer /specifier. What is decisive is the introduction of the transformer or, if the transformer is not going to be installed immediately, it's commissioning.

**CAN WPS DELIVER ON THE REQUIREMENTS?**

Our unique Wilson e2 super low loss transformer range already exceeds Tier 2 design specifications that are planned for 2021 making it the most energy efficient transformer available in the UK to date.

Our new Wilson e1 ecotrans range is fully Eco Design compliant, meeting design specifications that apply from July 2015 (Tier 1).



*Join the Amorphous*  
**REVOLUTION**

**THE UK'S MOST ENERGY EFFICIENT DISTRIBUTION TRANSFORMER**

**LOWEST CORE LOSSES**

**MEETING 2021 ECO DESIGN SPECIFICATION TODAY**