

Technical Bulletin

TB 0327 - TX Re-use Sustainability Initiative

Date: 26/05/2023

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Purpose

To outline the change in policy to drive sustainability improvements allowing the re-use of used transformers in new substations on Endeavour Energy's network.

Background

As part of Endeavour Energy's sustainability journey, we are committed to maximising the useful life of our assets and resources in a sustainable and circular way. Circularity means that wherever possible we will reuse, recycle, or keep within the economy and at the end of life, recycle the products components and materials.

Due to above average customer load growth in some areas, Endeavour Energy will often need to upgrade transformers resulting in the original transformer being returned from the field before the end of its typical life expectancy. Endeavour Energy attempts to re-use these returned transformers wherever possible in fault and emergency situations, but typically these opportunities are less frequent than the rate at which these transformers are returned creating surplus stock of serviceable equipment.

To enable a sustainability and circular economy improvement, Endeavour Energy has developed a process that will allow these transformers to be re-used within new substations including for those that are provided to Accredited Service Providers by Endeavour Energy approved assemblers.

These used transformers must be returned to Endeavour Energy and tested and pass relevant commissioning tests as outlined in SDI120 before they can be re-used in a new substation.

Accredited Service Providers will be reimbursed for re-used transformers that are commissioned on the Endeavour Energy network at the same rate as a new transformer.

Actions

1. For **padmount substations** only transformers with HV bushing inserts can be used (as this excludes old generation transformers that do not meet the profile of current padmount cubicle).

For **pole mounted transformers** only transformers with a manufacture date from the year 2000 onwards are acceptable (as this excludes old generation transformers that do not meet current mounting designs).

2. The first batch of transformers targeted for re-use will be inspected and test and have test certificates issued during May 2023.

3. When this first batch is ready, an email will be issued to interested assemblers providing them with photos (including nameplate information and serial number) and copies of test certificates and advising the purchase price should they wish to buy 1 or more of this first batch.
4. The re-used transformers will be shared equitably amongst interested assemblers based on the volume of transformers they confirm they wish to purchase.
5. The first email to interested assemblers (listing the transformer details available for purchase) will likely go out in late May 2023.
6. A listing of serial numbers for all re-used transformers will be maintained to assist with any warranty/defect issues with the re-used transformers as outlined below in 'Key Points of Note'.

Implementation

Step 1.

Any transformers returned to Endeavour due to uprate (ie. they weren't replaced based on condition assessment) that meet our age/oil content criteria will undergo electrical testing in accordance with SDI120, and if they pass, these transformers will be made available for purchase by interested substation assemblers.

Step 2.

The transformers will be offered to substation assemblers to utilise in padmount substation locations where the developer is expected to be fully reimbursed for the transformer cost by Endeavour Energy under its existing reimbursement process.

Step 3.

The ASP/Developer will be reimbursed the normal amount for the TX in accordance with current processes.

Key Points of Note

If one of the re-used transformers arrives at a substation assembler's facilities after purchase and fails the assembler's post-assembly testing after it has been assembled with other components, and that failure is due to a defect in the transformer, Endeavour Energy will provide a replacement transformer and freight it to the assembler and take the faulty transformer for disposal.

In the event that a re-used TX fails on commissioning and that failure was due to a defect in the re-used TX itself, as opposed to any mishandling or misuse by the assembler, Endeavour Energy will repair or replace that TX and any associated damaged equipment at our cost. In these circumstances, Endeavour Energy would also meet any freight costs directly incurred by the assembler as a result of the defective TX (e.g. cost of shipping the replacement TX to the relevant site if that activity fell to the assembler). Endeavour Energy would be responsible to arrange any subsequent outages and carry out replacement and commissioning of any replacement TX.

Impacted Standards

The standards impacted by this change are:

- MDI0028 'Underground distribution network design' and
- MDI0031 'Overhead distribution: Design standards manual'

Contacts

For further information contact:

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