

# Information guide v3.0

## Recertification of category 2 “interim certified” installations

This information guide outlines a methodology on how a category 2 “interim certified” installation can be recertified under the Electricity Governance Rules 2003 (Rules).

*There are between 20,000 and 30,000 category 2 metering installations that have interim certification that expires on 1 April 2010. Category 2 metering installations must, therefore, be recertified prior to this date, under rule 6.6 of code of practice (COP) D3 of part D of the Rules.*

The general approach set out in this information guide in no way reduces the requirement upon participants to know and comply with their obligations under the Rules. Neither should it be interpreted as reflecting the Electricity Commission’s (Commission) view on Rules.

### Abbreviations used in this guide sheet

Rules	Electricity Governance Rules 2003
COP	Code of Practice
CTs	Current Transformers

### Introduction

- Rule 6.1 of COP D3 of the Rules outlines the methodology to be undertaken to recertify category 2 metering installations. Current practice is to negotiate a shutdown time with the customer and, if necessary for switching purposes, with the lines company. All three current transformers (CTs) are normally replaced or certified by means of injection during the shutdown. A generator is required to provide light and power to the test equipment. The shutdown duration varies from one hour to four hours on average and the direct costs for the equipment owner, and eventually the end user, is on average about \$600 per site. This is a cost of between \$12m and \$18m for the industry every 10 years.
- An application to vary these requirements was received (under rule 4.3 of COP D3 of part D of the Rules) by the COP D5 Review Panel. This application outlined an accuracy test of the entire installation in-situ with prevailing load and environment. It is proposed that the accuracy of the measuring transformers be determined by in-situ testing with the results being recorded in an auditable database. This methodology proposes that a metering installation should be tested as a total system and in as non-invasive manner as possible.
- The COP D5 Review Panel consulted on the methodology with market participants. The remainder of this guide outlines the methodology.

## Testing methodology for recertifying category 2 installations

There are two methods for recertifying category 2 'interim certified' installations:

- The first method is for installations where rigid, clamp-on or split core, high accuracy measuring transformers can be connected around the cables or bus-bars supplying the installation.
- The second method is for installations where rigid clamp-on measuring transformers cannot physically be fitted to the installation. Flexible, less accurate CTs are utilized to confirm site integrity. This method involves certification of the measuring transformers by a statistical sampling process.

### Method one

Category 2 installations where high accuracy clamp-on measuring transformers can be used:

#### *Step 1*

Meter must have current certification.

#### *Step 2*

Test the installation by connecting a parallel test metering circuit of high accuracy to the primary cables/busbar supplying the total installation, and compare the energy registrations between the test equipment and the meter. Use appropriate load current to ensure a meaningful test result.

#### *Step 3*

Certify the components and the installation if their measured accuracy is equal to or better than that prescribed in the relevant IEC standards. If the accuracy is not within this range, the measuring transformers will require replacement.

#### *Step 4*

Confirm the integrity of metering components through a visual non intrusive check, confirming wiring setup, impact or evidence of corrosion, vibration or incorrect equipment ratings, and the presence of any unmetered supplies. Check and document the metering design. Record make, model, ratings, and identify any hazards that may affect the metering system.

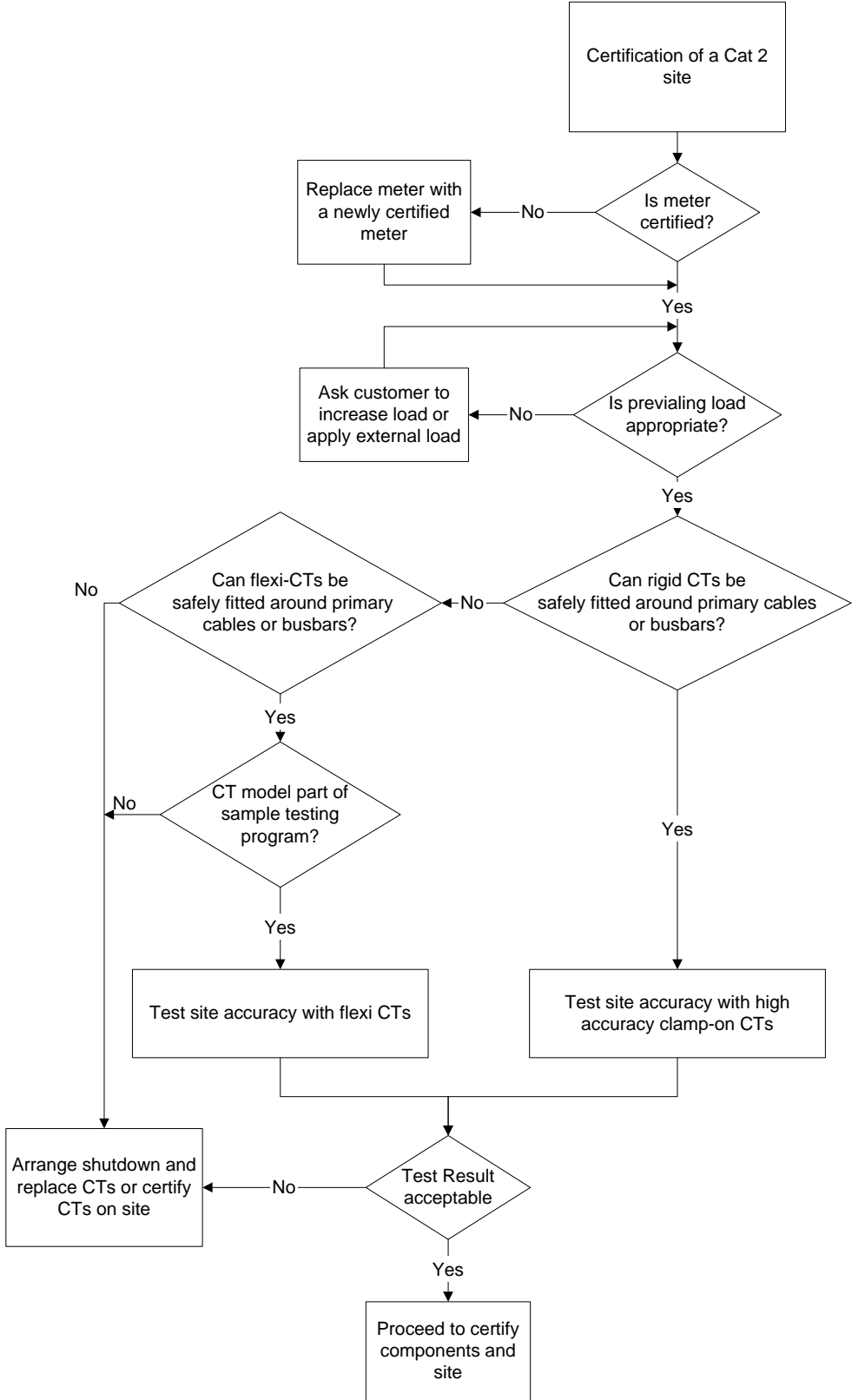
#### *Step 5 (For half-hour-metered sites only)*

Contact the site Data Administrator and perform a half hour load check.



Examples of typical high accuracy test sets with their pulse/disk pickup unit.

# Proposed Cat 2 Certification Process



## Method two

Category 2 installations where rigid measuring transformers cannot be used:

### Step 1

Meter must have current certification.

### Step 2

Identify the make and model of the measuring transformers, and confirm that they are included as part of an appropriate statistical sampling program. If “yes” move to step 3; if “no” the measuring transformers will require replacement or calibration in-situ.

### Step 3

Conduct commissioning tests by connecting a parallel test metering circuit using flexible measuring transformers to the whole installation and compare the energy registrations between the test equipment and the meter. Use appropriate load current to ensure a meaningful test result.

### Step 4

Certify the components and the installation if the requirements of rule 6.4 are met.

In situations where neither of these methods can be used, e.g. for reasons of access or safety, then measuring transformers will need to be either replaced or calibrated in-situ during a customer shutdown.

### Step 5

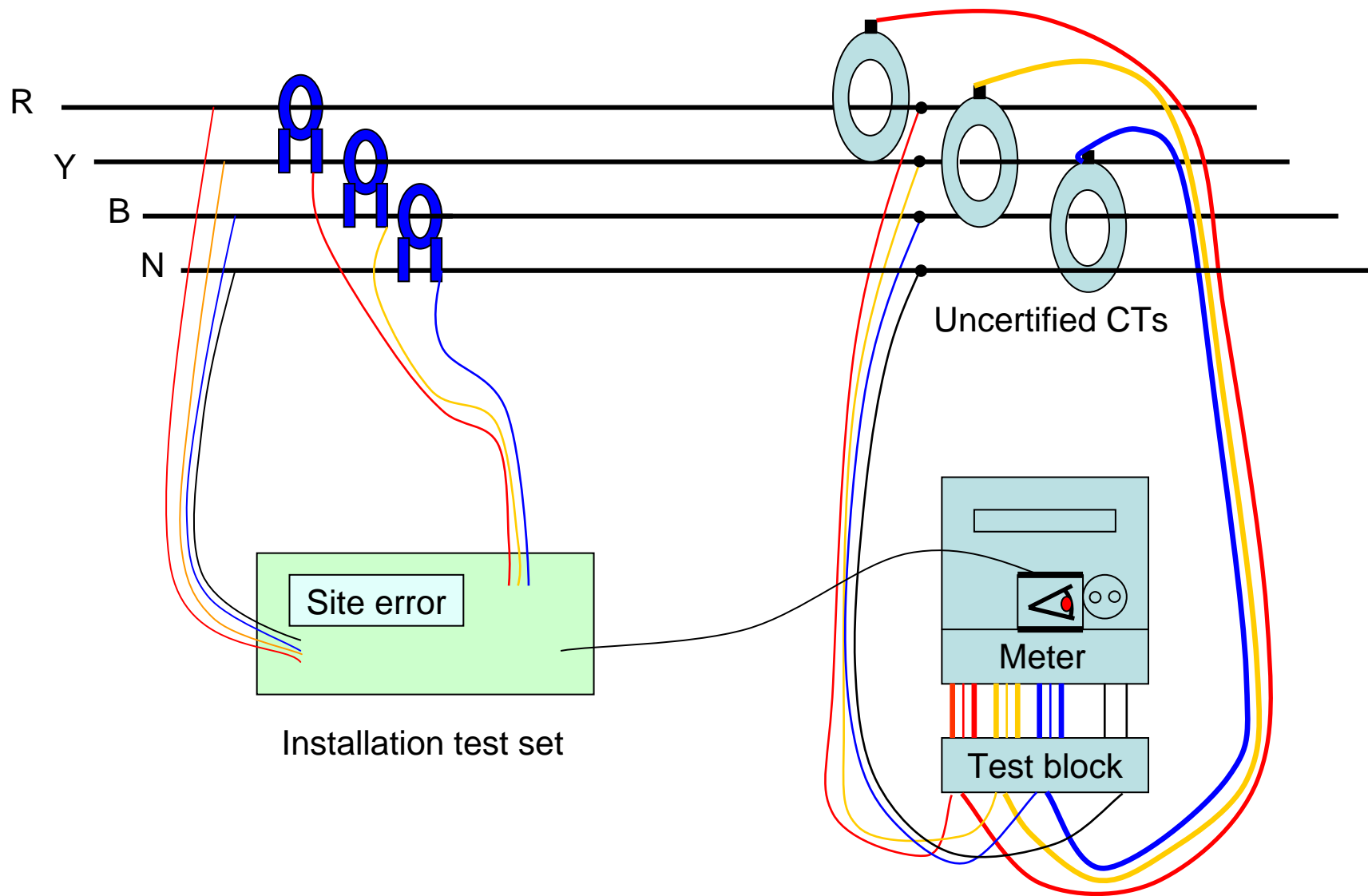
Confirm the integrity of metering components through a visual non intrusive check, confirming wiring setup, impact or evidence of corrosion, vibration or incorrect equipment ratings, and the presence of any unmetered supplies. Check and document the metering design. Record make, model, ratings, and identify any hazards that may affect the metering system.

### Step 6 (For half-hour-metered sites only)

Contact the site data administrator and perform a half hour load check.



Example of a test set utilizing flexi CTs



## Additional information

- If you require additional information on the recertification methodology for category 2 'interim certified' installations, please contact:

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