



Commission for Energy Regulation

An Coimisiún um Rialáil Fuinnimh

Regulation of Electrical Contractors with respect to Safety:

Consultation on the Scope of Controlled Electrical Works in relation to lifestyle choice prepayment meters

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Abstract

This consultation paper outlines the CER's proposals on expanding the definition of the scope of Controlled Electrical Works so that the installation and/or removal of lifestyle choice prepayment meters fall within the scope of Controlled Electrical Works. If this scope is expanded it will mean that these new works now covered under the scope will require certification under the regulated electrical contractors' scheme Safe Electric overseen by the CER.

Target Audience:

This consultation paper is aimed at individuals, companies and organisations operating within the electrical industry, and members of the general public.

Related Documents:

- Vision for the Regulation of Electrical Contractors with respect to safety (CER/07/203).
- Criteria for the Regulation of Electrical Contractors (CER/13/098).
- Definition for the Scope of Controlled Electrical Works (CER/09/009).
- Decision on the Scope of Restricted Electrical Works (CER/13/147).

Responses to this consultation should be returned by email, post or fax and marked for the attention of **Thomas Quinn** at the CER no later than Friday, the 3rd of July 2015.

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The CER intends to publish all submissions received. Respondents who do not wish part of their submission to be published should mark this area clearly and separately or enclose it in an Appendix, stating the rationale for not publishing this part of their comments.

Executive Summary

Under the Electricity Regulation Act 1999, as amended by the Energy (Miscellaneous Provisions) Act 2006 (the “Act”) the CER was designated with the statutory function to “regulate the activities of electrical contractors with respect to safety”.

Fundamental to the development of the regulatory system for electrical safety is the scope of those electrical works that are to be regulated from a safety perspective, as this determines the obligations to be placed on any parties carrying out such works.

Specifically, the 2006 Act introduced the concept of Controlled Electrical Works and Restricted Electrical Works, into the 1999 Act, which provided the CER with the basis for defining what electrical works would be considered for the purposes of the regulatory system (Safe Electric scheme) for Registered Electrical Contractors (RECs).

Under this function the CER defined “Controlled Electrical Works” (CER/09/009) in 2009 which are electrical works that must be certified if completed by a REC. The CER subsequently defined “Restricted Electrical Works” (CER/13/147) in 2013 which are electrical works which can legally only be carried out by a REC.

The installation of lifestyle choice prepayment meters began in late 2010. Since late 2011, early 2012 the number of these devices being installed has increased significantly with more electricity suppliers offering this service recently. The installation of these devices does not currently fall within the scope of Controlled Electrical Works and as such these works do not necessarily require a completion certificate to issue.

This consultation paper outlines CER’s proposals on whether to change the scope of Controlled Electrical Works, to include the installation/removal of lifestyle choice prepayment meters. This proposal is being made in response to the increase in the installation of lifestyle choice prepayment meters and the need to ensure such meters are installed by competent electrical contractors to the required technical standards. It is considered that bringing these works within the scope of Controlled Electrical Works would add the following benefits:

- Copies of certificates returned to the RECs safety supervisory body (SSB) for these works would be validated, providing an important safety check
- The submission of these certificates to the SSB would provide traceability to these installations

Table of Contents

Executive Summary	3
1.0 Introduction	5
1.1 The Commission for Energy Regulation	5
1.2 Purpose of this paper.....	5
1.3 Structure of this paper	6
1.4 Responding to this paper.....	6
2.0 Background of Controlled Electrical Works	7
2.1 Introduction	7
2.3 Controlled Electrical Works.....	8
2.3.1 Certification Process for Controlled Electrical Works.....	9
3.0 Proposed changes to scope of Controlled Electrical Works.....	10
3.1 Background & context to the proposed changes	10
3.2 Proposed change to scope of Controlled Electrical Works	12
3.3 Summary	13
4.0 Next steps.....	14

1.0 Introduction

1.1 The Commission for Energy Regulation

The Commission for Energy Regulation (CER) is Ireland's independent energy and water regulator. The CER was established in 1999 and now has a wide range of economic, customer protection and safety responsibilities in energy. The CER is also the regulator of Ireland's public water and wastewater system.

The CER's primary economic responsibilities in energy cover electricity generation, electricity and gas networks, and electricity and gas supply activities. As part of its role, the CER jointly regulates the all-island wholesale Single Electricity Market (SEM) with the Utility Regulator in Belfast. The SEM is governed by a decision-making body known as the SEM Committee, consisting of the CER, the Utility Regulator and an independent member. The overall aim of the CER's economic role is to protect the interests of energy customers. The CER has an important related function in customer protection by resolving complaints that customers have with energy companies.

In 2014 the CER was appointed as Ireland's economic regulator of the Irish public water and wastewater sector.

The CER's core focus in safety is to protect lives and property across a range of areas in the energy sector. This includes safety regulation of electrical contractors, gas installers and gas pipelines. In addition the CER is the safety regulator of upstream petroleum safety extraction and exploration activities, including on-shore and off-shore gas and oil.

1.2 Purpose of this paper

The purpose of this paper is to seek the views of the general public and industry stakeholders with regard to the CER's proposed change to the definition regarding the scope of Controlled Electrical Works, to include the installation and/or removal of lifestyle choice prepayment meters. This proposal is being made in response to the increase in the installation of lifestyle choice prepayment meters and the need to ensure such meters are installed by competent electrical contractors to the required technical standards.

In order to make a decision on this topic, the CER wishes to obtain and consider comments from all interested parties including members of the public, the energy industry and customers. The CER commits to considering all views, affording each respondent the opportunity to clarify any issue raised in this paper. Ultimately the CER is required to maintain appropriate levels of electrical safety in the industry evolving regulations over time, as appropriate.

1.3 Structure of this paper

This paper is structured as follows:

Section 2: Provides background information regarding the CER's role with respect to the regulation of electrical contractors, and the development of Controlled Electrical Works.

Section 3: Provides an overview of the proposed changes to Controlled Electrical Works.

Section 4: Outlines the CER's proposed next steps.

1.4 Responding to this paper

Comments should be sent to Thomas Quinn (tquinn@cer.ie) no later than Friday, the 3rd of July 2015. Comments in electronic format are preferable; however, comments may also be posted to the CER at the following address:

Thomas Quinn,
Commission for Energy Regulation,
The Exchange,
Belgard Square North,
Tallaght,
Dublin 24.

The CER intends to publish all submissions received. Respondents who do not wish part of their submission to be published should mark this area clearly and separately or enclose it in an Appendix, stating the rationale for not publishing this part of their comments.

2.0 Background of Controlled Electrical Works

2.1 Introduction

The objective of this section is to provide an overview of the present electrical safety regulatory framework in Ireland. Specifically, this section outlines the concept of Regulated Electrical Works, and the process undertaken by the CER in order to arrive at an appropriate definition for Controlled Electrical Works.

2.2 Background & Context to the Regulation of Electrical Works

Pursuant to the implementation of the Energy (Miscellaneous Provisions) Act in 2006, the CER was given the statutory authority to regulate the activities of electrical contractors with respect to safety.

In order to fulfil its regulatory obligations, the CER undertook to design and develop a regulatory framework to ensure that defined electrical installations are carried out by competent electrical contractors to the required Technical Standards.

Consequently, in November 2007, the CER published a Vision Document (CER/07/203), which provided a blueprint for the creation of the regulatory model for electrical safety. Subsequent to the publication of the Vision Document, the CER published the Criteria Document (CER/08/071) in 2008, which detailed the rules and obligations for participants operating within the electrical safety regulatory framework. Additionally, in October 2008 the CER designated the Register of Electrical Contractors of Ireland Ltd (RECI) and the Electrical Contractors Safety and Standards Association Ireland Ltd (ECSSAI) as the electrical Safety Supervisory Bodies (SSBs), with responsibility for regulating the activities of electrical contractors on a day to day basis for a period of seven years. The CER committed to evolve the electrical contractors safety scheme over time as required.

Fundamental to the development of the regulatory system for electrical safety is the scope of those electrical works that are to be regulated from a safety perspective, as this determines the obligations to be placed on any parties carrying out such works.

Specifically, the 2006 Act introduced the concept of Specified Works (hereafter referred to as “Controlled Electrical Works”) and Designated Electrical Works (hereafter referred to as “Restricted Electrical Works”) into the 1999 Act, which provided the CER with the basis for defining what electrical works would be considered for the purposes of the electrical safety regulatory system (Safe Electric scheme).

Controlled Electrical Works refer to electrical works that must be certified by a REC using a Completion Certificate. Under Sections 9D (13) and (14) of the 1999 Act (as amended by the 2006 Act), the legislation permits the certification of Controlled Electrical Works under the following circumstances:

- i. electrical works undertaken by a REC that are self-certified through the issuance of a Certificate; and

- ii. electrical works undertaken by a Non-REC that are examined and certified by an Inspector of an SSB.

Restricted Electrical Works are defined as major electrical work that legally only a REC can carry out. The scope of these works was set out in 2013 in the decision paper Decision on the scope of Restricted Electrical Works (CER/13/147).

The CER when defining Regulated Electrical Work recognised that a certain amount of Do-It-Yourself (or “DIY”) electrical installation work is a feature of electrical installations in this country and generally involves “like for like” replacements of switches, sockets, lighting fittings and/or additions to an existing circuit. This work must also be in compliance with the National Wiring Rules. These types of work are referred to as Minor Electrical Works.

2.3 Controlled Electrical Works

In order to facilitate the introduction of Controlled Electrical Works, the CER published a decision paper (CER/09/009) in 2009, which outlined the scope of Controlled Electrical Works, as follows:

- i. the installation, commissioning, inspection, and testing of a new fixed electrical installation requiring connection or reconnection to the electricity network;
- ii. the installation or replacement of a Distribution Board or Consumer Unit, or new installation in special locations as defined in Part 7 of the National Wiring Rules ET101 and ET105;
- iii. the installation or replacement of one or more extra circuits in an existing installation, including the installation of one or more additional protective devices for such circuits on a distribution board;
- iv. Subsystems installed in Commercial, Industrial, and Domestic installations where the installation falls within the remit of the National Wiring Rules;
- v. the inspection, testing and certification of existing electrical installations in accordance with Chapter 62 of the Wiring Rules (ET 101 –Fourth Edition-2008 and to conform with Regulation 89 of SI No 732 of 2007).

In arriving at a definition for Controlled Electrical Works, the CER employed a risk-based approach to assess the safety risks associated with each class of electrical works. Specifically, the scope of Controlled Electrical Works was determined by an analysis of the options of managing the specific safety risk posed by the various types of electrical work, the practicalities of enforcing the system and the need to counter against over-regulation for limited benefit.

While the primary focus of the Controlled Electrical Works decision paper is low voltage installations, it should be noted that the definition of new connections is such that it includes new connections at MV and HV (Medium Voltage and High Voltage), and therefore require certification by a REC. It should also be noted that electrical systems in Potentially Explosive Atmospheres, and Public Lighting and associated cabling (with the

exception of lighting that is operated by the DSO) are within the scope of Controlled Electrical Works as these are the subject of ET105 and ET101 respectively.

2.3.1 Certification Process for Controlled Electrical Works

In order to ensure that Controlled Electrical Works are carried out in line with the relevant technical rules and standards the CER has implemented, via the SSBs, a Certification Process (Common Procedure No. 1: Certification (CER/09/107)), which is used to record and test the safety of an electrical installation by the REC.

Certificates for Controlled Electrical Works can only be accessed for use by RECs, who are registered with either of the SSBs. The purpose of the Certification process, and the issuance of the Certificate, is to provide assurance to the customer that the installation has been carried out and tested in line with the relevant Technical Rules and standards (i.e. the REC confirms that the installation is in compliance with the relevant Technical Rules by signing the Certificate, and then provides a copy to the customer and the SSB). Furthermore, the issuance of a Certificate by a REC to the SSB also provides an audit trail for the SSBs should a problem arise with the electrical installation giving traceability and accountability.

For all new installations that require connection to the electricity network, a copy of the Completion Certificate is submitted by the REC to their respective SSB for processing and evaluation. Once approved by the SSB, the relevant details on the Completion Certificate are then submitted to the Distribution System Operator (DSO i.e. ESB Networks). The DSO, on foot of receipt of the specific details taken from the Certificate, will make supply available to the customer.

The DSO requires this Certificate in order to satisfy itself that the installation is safe before they make supply available. Therefore, this control mechanism for new connections reduces the safety risk to the customer, as it is a mandatory requirement in the case of all new connections that a Certificate is issued, thereby requiring the involvement of a REC.

However, outside of new connections to the network, there is a significant amount of electrical work that comes under the definition of Controlled Electrical Works. For all other electrical installations that a REC undertakes, a Completion Certificate must also be issued to the customer and submit a copy to their respective SSB for processing and evaluation. Once approved by the SSB, the relevant details on the Completion Certificate are archived against that REC. The CER is currently working towards the introduction of a non-DSO certificate for certifying electrical works which don't require a new connection to the network. In fact, new connections have dropped significantly over the past number of years, primarily due to the decline of new builds. The introduction of Restricted Electrical Works in 2013 means that most electrical work carried out in domestic premises must be undertaken by a REC, and in turn if this falls under the scope of Controlled Works must be certified. This means that where the scopes of Controlled and Restricted electrical works deviate, this creates a gap whereby electrical work would have to be completed by a REC but would not be required to be certified. This issue is outlined in the next section.

3.0 Proposed changes to scope of Controlled Electrical Works

The objective of this section is to provide an overview of the changes to the scope of Controlled Electrical Works being proposed in this paper. These changes to the scope of Controlled Works are being proposed in response to the installation and/or removal of lifestyle prepayment meters in homes and the CER's concerns to ensure such work is done in line with required standards.

3.1 Background & context to the proposed changes

The installation of lifestyle choice prepayment meters began in late 2010. The number of these devices being installed has increased significantly since late 2011 early 2012 as shown in figure 1 through the increased sale of Minor type certificates. The number of electricity suppliers offering this service has also increased. These devices provide customers with a pre-payment facility to purchase electricity. It should be noted that a lifestyle prepayment meter device is different from the ESB Networks (ESBN) Pay As You Go (PAYG) meter. The lifestyle choice prepayment meter device is installed by a REC, on behalf of an electricity supplier, while an ESBN PAYG meter is installed by ESBN. These ESBN PAYG meters are installed in cases where a customer is shown to be in genuine financial hardship and are not included here.

The installation of these lifestyle prepayment meter devices was not envisaged when the original scope of Controlled Electrical Works was defined. As such, the installation of lifestyle prepayment meters currently falls outside the scope of Controlled Electrical Works.

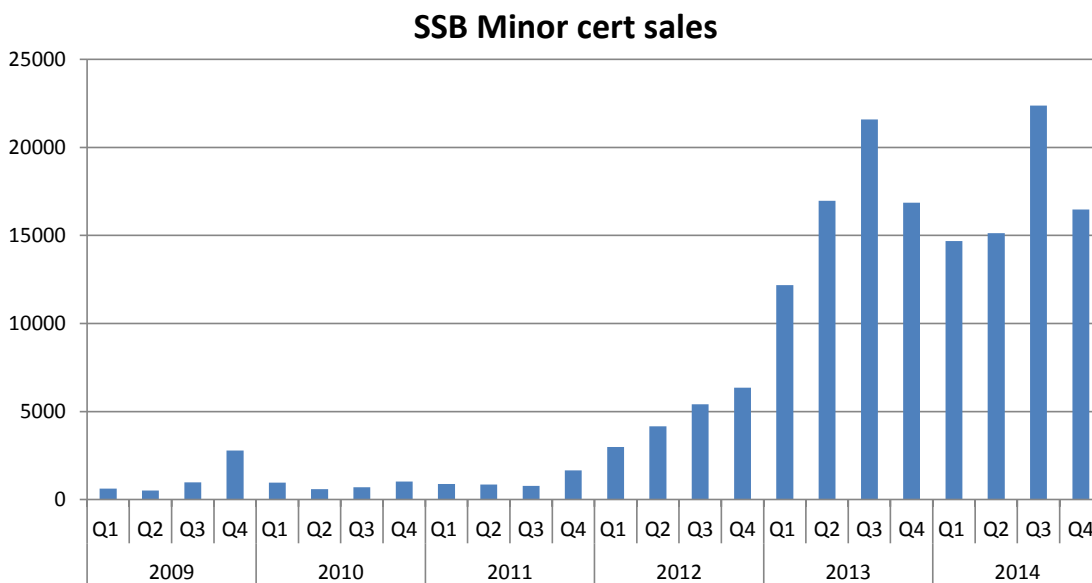


Figure 1: Minor certificate sales and lifestyle prepayment meter installations

The typical layout of where a lifestyle prepayment meter is installed is illustrated below in figure 2. The lifestyle prepayment meter is installed downstream of the customer's main isolation / over-current device inside the customer's premises.

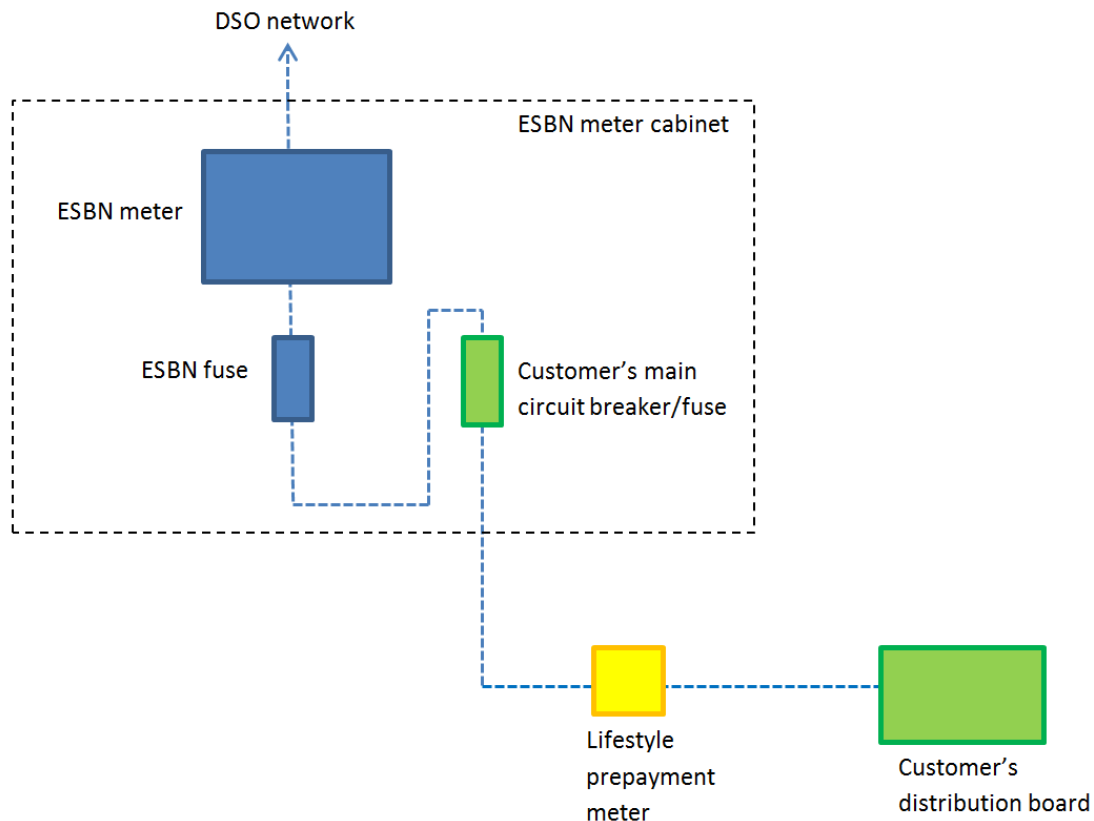


Figure 2: Typical layout of lifestyle prepayment meter installation

As this work does not fall within the scope of Controlled Electrical Works it does not require a Completion Certificate to issue. RECs have been using Minor type certificates (Declaration of Compliance with ET101 for Minor Electrical Installation Works) to certify the installation of these devices. In this scenario the REC keeps one copy of the Minor certificate and provides the second copy to its customer. As this is a Minor certificate being used there is no third copy of the certificate to be returned to the RECs SSB (ECSSAI or RECI) for validation. So in this scenario there is no easy way to follow up on a report of work by a REC which may not be considered in compliance with the National Wiring Rules (ET101). This is because there is no record of the completed certificate held within the SSBs to allow them to follow up on the REC.

The installation of lifestyle prepayment meters had not been envisaged when the scope of Controlled Electrical Works (CER/09/009) was determined in January 2009, but was captured within the scope of Restricted Electrical Works (CER/13/147) in 2013. This

means that this work can legally only be carried out by a REC but does not require a Completion Certificate to issue. As such the REC's SSB is not provided with a copy of a certificate with test values to be verified. The carrying out of electrical work in relation to lifestyle prepayment meters miss out on this important safety check, whereby the SSB validates the submitted certificate ensuring the values entered fall within the permissible ranges.

3.2 Benefits to expanding definition of Controlled Works

Electrical installations which are not installed correctly present safety risks to the users and people in the vicinity of the installation. In addition to the immediate risks the nature of electrical installations is such the faults may not present themselves until the system is stressed or changed. Thus a faulty installation, such as incorrect cable size, oversized protection, inadequate earthing system in place or poor connection which may not be apparent to the user, may allow the system to operate normally but presents a risk of fire or electrocution on a continuous basis. The submission of a certificate by the installing REC reduces these risks by ensuring that the different test results recorded are validated helping to increase the safety of installations. Also the submitted certificate provides traceability allowing the SSB identify which installations were carried out by which RECs for future reference.

3.3 Proposed change to scope of Controlled Electrical Works

In order to ensure the safety of lifestyle choice prepayment meter installations as described above the CER proposes the following as the redefined scope of Controlled Electrical Works:

“Controlled Works are major electrical installation works (including additions, alterations and/or extensions) which are covered by the National Wiring Rules and which involve:

1. the installation, commissioning, inspection, and testing of a new fixed electrical installation requiring connection or reconnection to the electricity network;
2. the modification, installation or replacement of a Distribution Board including customer tails on either side of the Main Protective Device, or new installation in special locations as defined in Part 7 of the National Wiring Rules ET101 and ET105;
3. the installation or replacement of one or more extra circuits in an existing installation, including the installation of one or more additional protective devices for such circuits on a distribution board;
4. Subsystems installed in Commercial, Industrial, and Domestic installations where the installation falls within the remit of the National Wiring Rules;

5. the inspection, testing and certification of existing electrical installations (in accordance with Chapter 62 of the Wiring Rules (ET 101 and to conform with Regulation 89 of SI No 732 of 2007).”

Any works which do not fall within the above scope are not Controlled Works and shall not necessarily require a Completion Certificate to issue. However, it is recommended that for all other works, an appropriate form of certification is used (for example, a Declaration of Compliance with ET 101 for Minor Works, where appropriate). Furthermore, all entries on the Completion Certificate or Declaration of Compliance should be filled in by the installing electrical contractor.

If the scope of Controlled Electrical Work was expanded to cover this area it would ensure that a completion certificate would need to be issued by the REC for the installation and/or removal of lifestyle prepayment meters and a copy would be returned to the REC’s respective SSB. This scenario is shown below in figure 3.

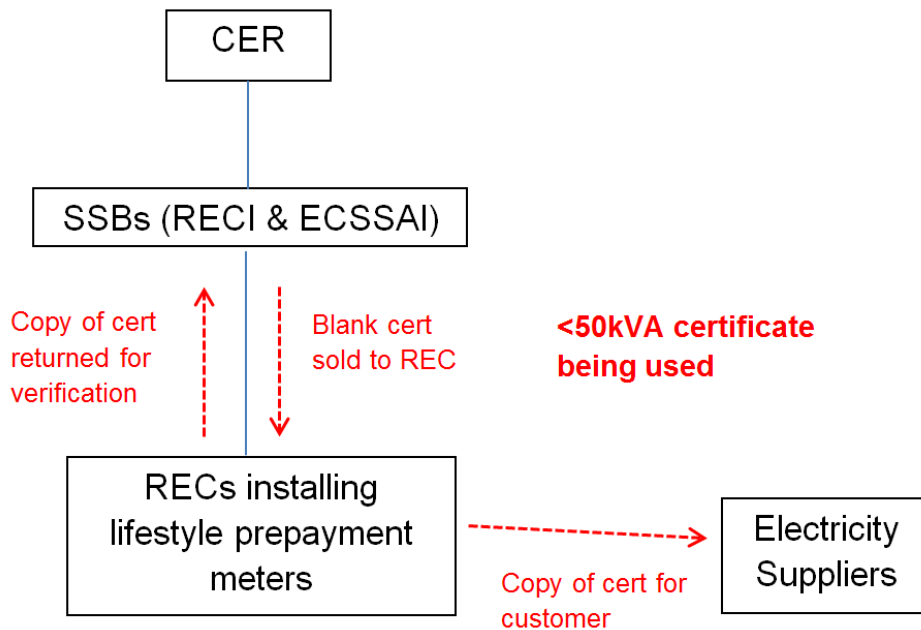


Figure 3: Scenario where Controlled Works includes installation of lifestyle prepayment meters

3.4 Summary

Section 3 outlined possible safety concerns in relation to the installation/removal of lifestyle prepayment meters due to this activity falling outside of the scope of Controlled Electrical Works and proposed changing the scope of Controlled Electrical Works to cover this activity.

4.0 Next steps

The CER invites comment on its proposed changes to the scope of Controlled Electrical Works as outlined in this consultation paper. Following a review of responses, the CER will publish a decision paper.

If it is decided to expand the scope of Controlled Electrical Works, this will mean that RECs will be required to certify these works now covered by the expanded scope.

Comments should be sent to Thomas Quinn (tquinn@cer.ie) no later than Friday, the 03rd of July 2015.