

**EXPLANATORY MEMORANDUM TO**  
**THE ELECTRICITY SAFETY, QUALITY AND CONTINUITY**  
**(AMENDMENT) REGULATIONS 2009**

**2009 No. 639**

1. This explanatory memorandum has been prepared by the Department of Energy & Climate Change and is laid before Parliament by Command of Her Majesty.
2. **Purpose of the instrument**
  - 2.1 These amending Regulations ensure that the requirements in the Electricity Safety, Quality and Continuity Regulations 2002 (SI 2002/2665) (ESQCR) to comply with British Standard Requirements for Electrical Installations (BS7671), refer to the latest version of that British Standard, which was published on 1<sup>st</sup> July 2008.
3. **Matters of special interest to the Joint Committee on Statutory Instruments**
  - 3.1 None
4. **Legislative Background**
  - 4.1 These Regulations amend the ESQCR, which came into force on 31 January 2003. The ESQCR have since been amended by S.I. 2006/1521.
  - 4.2 They are made under section 29 Electricity Act 1989.
  - 4.3 They were notified in draft to the European Commission and Member States in accordance with the Technical Standards Directive (98/34/EC, as amended by 98/48/EC).
5. **Territorial Extent and Application**
  - 5.1 This instrument applies to Great Britain.
6. **European Convention on Human Rights**
  - 6.1 As the instrument is subject to negative resolution procedure and does not amend primary legislation, no statement is required.
7. **Policy background**
  - 7.1 The ESQCR regulate power quality and supply continuity requirements, to ensure an efficient and economic electricity supply service to consumers, as well as specifying safety standards which are aimed at protecting the general public and consumers. Amongst other things they require compliance with British Standard

BS7671 (BS7671: 2001 IEE Wiring Regulations 16<sup>th</sup> Edition ISBN 0 85296 988 0, 2001). This British Standard has now been revised with the publication on 1<sup>st</sup> July 2008 of a new edition (BS7671: 2008 IEE Wiring Regulations 17<sup>th</sup> Edition ISBN 978-0-86341-844-0), and thus there is a need to amend the ESQCR to incorporate this latest edition. The amendment will maintain consistency between the ESQCR and British Standards which will continue to aid any enforcement requirements. Should the ESQCR not be amended to reflect the latest British Standard there is a risk of inconsistency as stakeholders may work to differing standards

## **Consolidation**

7.2 Given the limited nature of the amendments to the ESQCR to date, consolidation is not considered necessary

## **8. Consultation outcome**

8.1 With the agreement of the Better Regulation Executive these Regulations have not been subject to public consultation. This is because BS 7671 was revised by the British Standards Institute (BSI) and the Institution of Engineering & Technology (IET) on a fully consultative basis (the process for developing BSI standards involves consultation with relevant bodies so that consensus can be reached on what standards are appropriate).

Required notification under the Technical Standards Directive (98/34/EC) has been completed and confirmation has been received that no objections from the Commission or Member States have been raised.

## **9. Guidance**

9.1 There is guidance available on the current ESQCR on the BERR website at:

[www.berr.gov.uk/files/file26709.pdf](http://www.berr.gov.uk/files/file26709.pdf)

[www.berr.gov.uk/files/file30696.pdf](http://www.berr.gov.uk/files/file30696.pdf)

Although at present these documents are held within the BERR website it is envisaged that these documents will migrate to the DECC website in due course.

## **10. Impact**

10.1 The impact on business, charities or voluntary bodies is insignificant.

10.2 The impact on the public sector is insignificant.

10.3 An Impact Assessment is attached to this memorandum (Annex 1).

## **11. Regulating small business**

11.1 The legislation applies to small business.

11.2 The Impact Assessment identifies that there is no significant impact on small firms and thus no additional measures need to be taken.

## **12. Monitoring & Review**

12.1 It is not proposed that this amendment relating to BS7671 is to be formally reviewed, as the impact from the amendment is considered to be insignificant and the risks are low. There is no intention that existing installations be retrospectively changed to accommodate the updates incorporated within BS 7671 17th Edition.

## **13. Contact**

**Tim Wickes** at the Department of Energy & Climate Change Tel: 020 7215 2667 or e-mail: [tim.wickes@decc.gsi.gov.uk](mailto:tim.wickes@decc.gsi.gov.uk) can answer any queries regarding the instrument.

## Summary: Intervention & Options

<b>Department /Agency:</b> <b>Energy &amp; Climate Change (DECC)</b>	<b>Title:</b> <b>Impact Assessment of THE ELECTRICITY SAFETY, QUALITY &amp; CONTINUITY (AMENDMENT) REGULATIONS 2009</b>	
<b>Stage:</b>	<b>Version:</b> 1	<b>Date:</b> 2 March 2009
<b>Related Publications:</b>		

**Available to view or download at:**

<http://www.To be advised>

**Contact for enquiries:** Tim Wickes

**Telephone:** 020 7215 2667

What is the problem under consideration? Why is government intervention necessary?  
 The Electricity Safety, Quality & Continuity Regulations 2002 (ESQCR 2002) improve safety and supply reliability standards of electricity networks. Regulations 21, 22 and 25 require compliance with the British Standard (BS7671: 2001 IEE Wiring Regulations 16th Edition ISBN 0 85296 988 0, 2001). Regulation 35 makes non-compliance a criminal offence.  
 This British Standard has now been revised with the publication of a new edition: BS7671: 2008 IEE Wiring Regulations 17th Edition ISBN 978-0-86341-844-0 and thus there is a need to update ESQCR 2002 to incorporate this latest edition.

What are the policy objectives and the intended effects?  
 The new edition of BS7671 will enable ESQCR 2002 to keep pace with changes in best practice for electrical installations.  
 The intended effect is to maintain consistency between the ESQCR 2002 and British Standards. The revision enhances the requirements for protection for persons and livestock against injury, and property against damage caused by voltage disturbances and electromagnetic influences as well as added requirements for safety services such as emergency escape lighting and fire protection applications.

What policy options have been considered? Please justify any preferred option.  
 Implement the change - The preferred option is to implement as it will provide consistency between the ESQCR 2002 and British Standards and thus aid any enforcement requirements.  
 Should the change not be implemented there is a risk of differing standards being used, leading to inconsistencies.

When will the policy be reviewed to establish the actual costs and benefits and the achievement of the desired effects? It is not proposed that this amendment relating to BS7671 is to be formally reviewed, as the impact from the amendment is very likely to be insignificant.

**Ministerial Sign-off** For SELECT STAGE Impact Assessments:

***I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.***

Signed by the responsible Minister:

Mike O'Brien

.....Date: 9 March 2009

## Summary: Analysis & Evidence

<b>Policy Option:</b>	<b>Description:</b>

<b>COSTS</b>	<b>ANNUAL COSTS</b>	Description and scale of <b>key monetised costs</b> by 'main affected groups'				
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%; padding: 5px;"><b>One-off</b> (Transition)</td> <td style="width: 30%; text-align: center; padding: 5px;"><b>Yrs</b></td> </tr> <tr> <td style="padding: 5px;">£ 0</td> <td></td> </tr> </table>		<b>One-off</b> (Transition)	<b>Yrs</b>	£ 0	
	<b>One-off</b> (Transition)		<b>Yrs</b>			
	£ 0					
<b>Average Annual Cost</b> (excluding one-off)						
£ 0	<b>Total Cost (PV)</b>	<b>£ 0</b>				
Other <b>key non-monetised costs</b> by 'main affected groups'						

<b>BENEFITS</b>	<b>ANNUAL BENEFITS</b>	Description and scale of <b>key monetised benefits</b> by 'main affected groups'				
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%; padding: 5px;"><b>One-off</b></td> <td style="width: 30%; text-align: center; padding: 5px;"><b>Yrs</b></td> </tr> <tr> <td style="padding: 5px;">£ 0</td> <td></td> </tr> </table>		<b>One-off</b>	<b>Yrs</b>	£ 0	
	<b>One-off</b>		<b>Yrs</b>			
	£ 0					
<b>Average Annual Benefit</b> (excluding one-off)						
£ 0	<b>Total Benefit (PV)</b>	<b>£ 0</b>				
Other <b>key non-monetised benefits</b> by 'main affected groups'						

Key Assumptions/Sensitivities/Risks Majority of stakeholders will be working to the revised BS7671 from its publication date of 01.07.2008.

Price Base Year	Time Period Years	<b>Net Benefit Range</b> (NPV) <b>£ 0</b>	<b>NET BENEFIT</b> (NPV Best estimate) <b>£ 0</b>
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What is the geographic coverage of the policy/option?	Great Britain
On what date will the policy be implemented?	06.04.2009
Which organisation(s) will enforce the policy?	HSE
What is the total annual cost of enforcement for these organisations?	£ TBC
Does enforcement comply with Hampton principles?	Yes
Will implementation go beyond minimum EU requirements?	N/A
What is the value of the proposed offsetting measure per year?	£ 0

What is the value of changes in greenhouse gas emissions?			£ 0	
Will the proposal have a significant impact on competition?			No	
Annual cost (£-£) per organisation (excluding one-off)	Micro N/A	Small N/A	Medium N/A	Large N/A
Are any of these organisations exempt?	No	No	N/A	N/A
<b>Impact on Admin Burdens Baseline</b> (2005 Prices)			(Increase - Decrease)	
Increase of £ N/A	Decrease	£ N/A	<b>Net Impact</b>	£ N/A

Key:

Annual costs and benefits: Constant Prices

(Net) Present Value

## Evidence Base (for summary s

[Use this space (with a recommended maximum of 30 pages) to set out the evidence, analysis and detailed narrative from which you have generated your policy options or proposal. Ensure that the information is organised in such a way as to explain clearly the summary information on the preceding pages of this form.]

As there is no intention that existing installations be retrospectively changed to accommodate the updates incorporated within BS 7671 17th Edition, the cost on existing installations is minimal.

**Please refer to Annex 1**

## Specific Impact Tests: Checklist

Use the table below to demonstrate how broadly you have considered the potential impacts of your policy options.

**Ensure that the results of any tests that impact on the cost-benefit analysis are contained within the main evidence base; other results may be annexed.**

<b>Type of testing undertaken</b>	<b><i>Results in Evidence Base?</i></b>	<b><i>Results annexed?</i></b>
Competition Assessment	No	Yes
Small Firms Impact Test	No	Yes
Legal Aid	No	No
Sustainable Development	No	No
Carbon Assessment	No	No
Other Environment	No	No
Health Impact Assessment	No	No
Race Equality	No	No
Disability Equality	No	No
Gender Equality	No	No
Human Rights	No	No
Rural Proofing	No	No

## Annexes

Annex 1

FULL IMPACT ASSESSMENT  
THE ELECTRICITY SAFETY, QUALITY & CONTINUITY (AMENDMENT)  
REGULATIONS 2009

Energy Resilience, DECC  
2 March 2009

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## 1. EXECUTIVE SUMMARY

1.1 The Electricity Safety, Quality and Continuity Regulations 2002 (SI 2002/2665) [the ESQCR] came into force on 31 January 2003 and replaced the Electricity Supply Regulations 1988 (as amended). The ESQCR were subsequently amended by SI 2006/1521.

1.2 The ESQCR specify safety standards, which are aimed at protecting the general public and consumers from danger. In addition, the Regulations specify power quality and supply continuity requirements to ensure an efficient and economic electricity supply service to consumers. The requirements of the ESQCR apply to public and private operators and to electricity networks used to supply consumers in England, Scotland and Wales.

1.3 Since the last amendment came into force (31<sup>st</sup> January 2006) an issue has arisen that necessitates a further amendment:

### 1. BS7671 (16th Edition) – British Standard Requirements for Electrical Installations

There are several references to this standard within the ESQCR (in Regulations 21, 22 and 25). As this British Standard has been updated, the preferred option would be for ESQCR to reflect this.

1.4 The analysis detailed later in this Impact Assessment document has led to the following recommendations:

### 1. BS7671 17th Edition

It is recommended that the proposal associated with the publication of a new edition be adopted as the costs and risks are not considered to be significant and it will enable the ESQCR to keep pace with changes in best practice for electrical installations.

## 2. PURPOSE AND INTENDED EFFECT OF MEASURES

### 2.1 OBJECTIVE

There is one area that the proposed amendment to the Electricity Safety, Quality and Continuity Regulations 2002 (ESQCR) seeks to address:

- To update references to BS7671

The latest revision of BS7671 aims to standardise the UK standard with the Harmonised Documents produced by the European Committee for Electro-technical Standardisation (CENELEC).

The fundamental principles of the changes are to enhance requirements for protection of persons and livestock from injury as well as protecting property against damage caused by voltage disturbances and electromagnetic influences.

More specifically, the changes include enhanced circuit disconnection methodologies with a more extensive use of Residual Current Devices (RCD's), increased depth of unprotected cables buried in a wall or partition and a permitted volt drop within the installation of 3% for lighting and 5% for all other applications.

## 3. BACKGROUND

The ESQCR specify safety standards, which are aimed at protecting the general public and consumers from danger. In addition, the Regulations specify power quality and supply continuity requirements to ensure an efficient and economic electricity supply service to consumers. The requirements of the Regulations apply to public and private operators and to electricity networks used to supply consumers in England, Scotland and Wales.

The ESQCR replaced the Electricity Supply Regulations 1988 (as amended) and came into force on 31 January 2003. Since the last amendment in January 31st 2006 came into force, an updated new edition update to BS7671 has been published (17th Edition) necessitating an amendment to ESQCR:

### 3.1 BS7671 17th Edition

Throughout the Regulations there are several references to 'British Standard Requirements'. These are, in fact, references to the British Standard Requirements for Electrical Installations BS7671<sup>(1)</sup>. In light of evolving design and installation requirements for electrical installations a new updated edition has been published (17th Edition). The Institution of Engineering & Technology (formerly the Institution of Electrical Engineers) and the British Standards Institute have worked jointly on this 17th edition.

## 4. RATIONALE FOR GOVERNMENT INTERVENTION

### 4.1 Safety

Typically there are 3 to 4 fatalities each year in the UK<sup>(2)</sup> associated with electrical installations in buildings. These are generally associated with householders making contact with live parts either as a result of DIY repairs or picking up severed flexible cables. This would suggest that within electrical installations in buildings the UK is operating from a very safe base and care has to be taken to maintain this. The incorporation of this revised standard aims to maintain the low risk level of fatalities associated with working on electrical installations. Should the ESQCR not be amended to reflect this latest British standard there is a risk of inconsistency as stakeholders may work to differing standards and therefore increased risk of danger to the public.

## 5. CONSULTATION

5.1 No further consultation was considered necessary. BS7671 has been revised by the British Standards Institute (BSI) on a fully consultative basis (BSI standards are written through a formal prescribed process which involves consultation with relevant bodies and reaching consensus across all interested parties so that the final document meets the needs of business and society).

(1) British Standard Requirements for Electrical Installations BS7671: 2001 IEE Wiring Regulations 16th Edition ISBN 0 85296 988 0, 2001 (as amended by Amendment No1 (AMD 13628) February 2002).

(2) <http://www.theiet.org/publishing/wiring-regulations/colour/col-impact.cfm>, Section 8

## 6. OPTIONS

### 6.1 BS7671 17th Edition

The two main options for this proposal are either to reflect the 17th Edition in the ESQCR or 'do nothing'. The latter option is rejected on the basis that there are no significant risks associated with reflecting the latest edition of BS7671, it will standardise the UK standard with CENELEC standards in terms of format and the ESQCR will reflect

the latest British Installation Standards. Previous Impact Assessment completed by the Institution of Engineering & Technology (IET)/BSI <sup>(1) (Section 8)</sup> show that the UK is working from a very safe base.

## 7. COSTS AND BENEFITS

### 7.1 BS7671 17th Edition

There is no intention that existing installations be retrospectively changed to accommodate the updates incorporated within BS 7671 17th Edition. Where there is an extension or alteration to an existing installation the installer will need to assess any whether the installation can readily be adapted to the 17th Edition requirements. As an example, if a circuit extension was undertaken the existing cable would not need to be extracted and re-laid at the required 50mm depth as this would not be practicable. However, the circuit that was extended could possibly be protected with an individual Residual Circuit Device (RCD) therefore mitigating the depth requirement and thus complying with the 17th Edition requirements.

As there is no intention that existing installations be retrospectively changed to accommodate the updates incorporated within BS 7671 17th Edition, the cost on existing installations is minimal. Any 'new' works undertaken to the 17th edition requirements will have some additional costs either in labour or materials but these are not considered to be significant.

### 7.2 BUSINESS SECTORS AFFECTED

The businesses most affected by this particular proposal will be those that are engaged in the electrical installation industry. This can range from large electrical contractors to individual sole traders.

### 7.3 BENEFITS

The measures are primarily aimed at continuing to improve the safety of electrical installations. The 17th edition is the latest development of a continuing evolving document which tracks the technology changes within the electricity installation industry and adapts this improving technology to best practice guidance. It is not possible to quantify the exact benefit in terms of fatalities as the existing profile is very low. However, it is considered that the 17th edition further enhances the safety culture that is prevalent.

(1) [www.theiet.org/publishing/wiring-regulations/colour/col-impact.cfm](http://www.theiet.org/publishing/wiring-regulations/colour/col-impact.cfm)

## 7.4 ECONOMIC, SOCIAL & ENVIRONMENTAL IMPACTS

When considering the likely costs of this proposal, current guidance on Impact Assessments also require that environmental and social impacts be explicitly considered in addition to economic impacts. It is not considered that there are any economic, environmental and social impacts of any significance.

## 8. SMALL FIRMS IMPACT TEST

8.1 The likely burden on small firms is not considered to be significant (no economic impact worth noting).

## 9. COMPETITION ASSESSMENT

9.1 The option discussed earlier in section 6 would not impact on the extent of competition within the electrical contractors' industry since the amendment is applicable to all stakeholders within the electrical installation industry.

## 10. ENFORCEMENT, SANCTIONS & MONITORING

10.1 Taking account that the ESQCR are made under the Electricity Act 1989 it is appropriate for DECC to amend ESQCR rather than HSE.

10.2 However, as the document is safety related any enforcement, sanction or monitoring would be undertaken, when and where appropriate, by the Health & Safety Executive (HSE).

***“Regulation 35 provides that persons who fail to comply with regulations 21, 22 and 25 shall be liable on summary conviction to a fine not exceeding level 5 on the standard scale (currently £5000).”***

## 11. IMPLEMENTATION AND DELIVERY PLAN

11.1 It is proposed that the Electricity Safety, Quality and Continuity (Amendment) Regulations 2009 come into force on 6th April 2009.

## 12. POST IMPLEMENTATION REVIEW

12.1 It is not proposed that this amendment relating to BS7671 be formally reviewed, as the impact from the amendment is very likely to be insignificant. There is no intention that existing installations be retrospectively changed to accommodate the updates incorporated within BS 7671 17th Edition.

## 13. GUIDANCE

13.1 There is guidance available on the current ESQCR on the BERR website at:

[www.berr.gov.uk/files/file26709.pdf](http://www.berr.gov.uk/files/file26709.pdf)

[www.berr.gov.uk/files/file30696.pdf](http://www.berr.gov.uk/files/file30696.pdf)

Although at present these documents are held within the BERR website it is envisaged that these documents will migrate to the DECC website in due course.

The proposed amendments to the ESQCR will require slight amendment to the guidance documents. The current guidance document will be updated once the amendments come into force. These amendments will be published on the Department of Energy & Climate Change (DECC) website as well as contact numbers for both DECC and the HSE.

## 14. MINISTERIAL DECLARATION

Declaration: I have read the Impact Assessment and I am satisfied that the benefits justify the impacts of which it is considered none are significant.

Signed by the Minister of State for Energy and Climate Change

Mike O'Brien

Date

## 15. CONTACT POINT

Mr T J Wickes      Email – [tim.wickes@decc.gsi.gov.uk](mailto:tim.wickes@decc.gsi.gov.uk)

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