

# Bulletin 6



August 2004

## Proposed revisions to Building Regulations Part L

### In Summary

**Changes to Part L of the Building Regulations for England and Wales have recently been proposed by the government. Although there are no significant changes to the current window U values, there are a number of innovations which will be of great interest to the glazing industry and which are likely to make the use of low E glass much more widespread. This Bulletin summarises those proposed changes which are relevant to glazing. They are planned to come into effect about the beginning of 2006.**

On 21st July 2004, the government's Office of the Deputy Prime Minister (ODPM) published proposals for amending Part L of the Building Regulations for England and Wales. Part L of course covers all aspects of a building and its services, not just glass and windows. The previous amendment to Part L in 2002 introduced radical changes for fenestration, and in recognition of the major adjustments made by the industry ODPM is now proposing that window U values remain largely unchanged. However, the proposals still contain some significant innovations. This Bulletin summarises the parts of the proposals that are directly relevant to glazing.

### Headlines

U value for replacement windows is 2.0.

Window Energy Ratings are introduced as an alternative to U values.

Conservatories are brought within the Regulations: the required glazing U value to be 2.0.

For new build, the only way of complying will be by meeting a total building CO<sub>2</sub> target. There is freedom on window specification, as long as the average window U value is no worse than 2.2.

### Replacement windows

For both housing and non-housing the proposed requirement for replacement windows is a maximum U value of 2.0 (irrespective of frame type). The option of complying through a centre-pane U value of 1.2 will remain. Another alternative has been introduced; that of Window Energy Ratings. Compliance would be achieved if the window achieves a Rating of -40 or better (which is in band E). More information on Window Energy Ratings can be obtained from our recent Bulletin on the topic, or by visiting [www.bfrc.org](http://www.bfrc.org)

This means that the key U value for PVC-U and timber windows is unchanged. The current U2.2 for metal windows will become 2.0 as well. The reason metal windows were allowed a higher U value in the current Part L was to acknowledge the greater solar gains achieved due to their slimmer frames. However, Window Energy Ratings take solar gains fully into account, so metal window companies will have the benefit of that option; the required Rating of -40 should be achievable in many aluminium systems with hard coat low E.

### Conservatories

ODPM propose that conservatories should be covered by Part L. Their glazing requirements would be exactly the same as for replacement windows, namely U2.0, or Window Energy Rating -40, or centre-pane U1.2.

## Extensions

The proposed requirement for extensions is for a maximum window U value of 1.8, or a Window Energy Rating of -30 (which is band D). There is also a maximum window/door area; for extensions to dwellings this is 25%, for non-housing it is 40%. However, "trading off" is permitted, which means that if window areas are lower than these maxima the U value can be relaxed in proportion. Alternatively window U values can be traded off against wall, floor and roof U values/areas.

25% is quite a generous allowance, so in practice there should be plenty of opportunity to trade off. For example, a 22.5% window/door area would permit a U value of 2.0. A 20.5% window/door area would permit a U value of 2.2. Having said that, an increasing number of PVC-U systems have been tested and achieved 1.8 with Pilkington K Glass™. And a Window Energy Rating of -30 is eminently achievable with hard coat glass.

## New build

The most radical and significant proposal is the dropping of individual U value requirements. The only way of complying with the energy requirements would be to calculate the CO<sub>2</sub> emissions for the proposed building as a whole, and to show that these meet the prescribed level. As the proposals say: "The Elemental Method and Target U value Method will no longer be permissible as a way of showing compliance."

In the case of dwellings, the calculation methodology will be the government's Standard Assessment Procedure (SAP). Solar gains and daylighting are incorporated into the calculation, so there are rewards for the positive aspects of glazing, particularly hard coat low E. The target CO<sub>2</sub> level for a particular house will be dependent on its size and shape.

For non-housing, again the requirement will be to meet a specific calculated CO<sub>2</sub> target, which will depend on the building type. The calculation method is still being developed. Although not directly comparable, a building designed to meet the proposed target would use about 28% less energy than one just meeting the current Part L. So the new targets are quite demanding.

Having said all this, certain back-stop U values will be required. For windows, the maximum average U value will be 2.2. This means that housing developers will no longer be able to get away with using standard double glazing through the trade-off options that are open to them at present. It will, in effect, be impossible to avoid the use of low E. Display windows will continue to be exempt from this requirement, so single glazing can continue to be used in shop fronts.

## Timings

Following a period of consultation, which ends on 22nd October, ODPM will publish the new Part L in the summer of 2005. It is expected to become law about the beginning of 2006.

## Implications for glazing

It is of course possible that some or all of the proposed measures could change as a result of the consultation process. However, as things stand, they are extremely encouraging for those who wish to see a continuation of current window specification and practice.

Most significantly, the proposals gives the lie to those who have forecasted ever-tightening window U values (remember those uninformed predictions of U1.5 about six months ago?). The crucial U value of 2.0 for PVC-U replacement windows is retained. The introduction of Window Energy Ratings and whole-building CO<sub>2</sub> targets rewards solar gains and makes the precise U value of an IGU less relevant.

The introduction of conservatories into Part L, and of a back-stop U value of 2.2 for all new build, means effectively that every IGU will need to contain low E glass.

It is clear that ODPM recognises the major adjustments made by the fenestration industry as a result of the 2002 Part L changes, and it is widely acknowledged that our industry responded positively to the challenge and has delivered a sizeable proportion of the carbon savings resulting from the 2002 Part L. It appears the government believe we are due a period of consolidation and stability; the proposals mean that IGUs with hard coat low E are likely to remain the standard glazing solution.

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**PILKINGTON**

Prescot Road St Helens WA10 3TT  
Telephone 01744 692000 Fax 01744 692880  
[www.pilkington.com](http://www.pilkington.com)