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Policy Brief

Rising block tariffs: aligning affordability with the low carbon heat transition

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The policy challenge

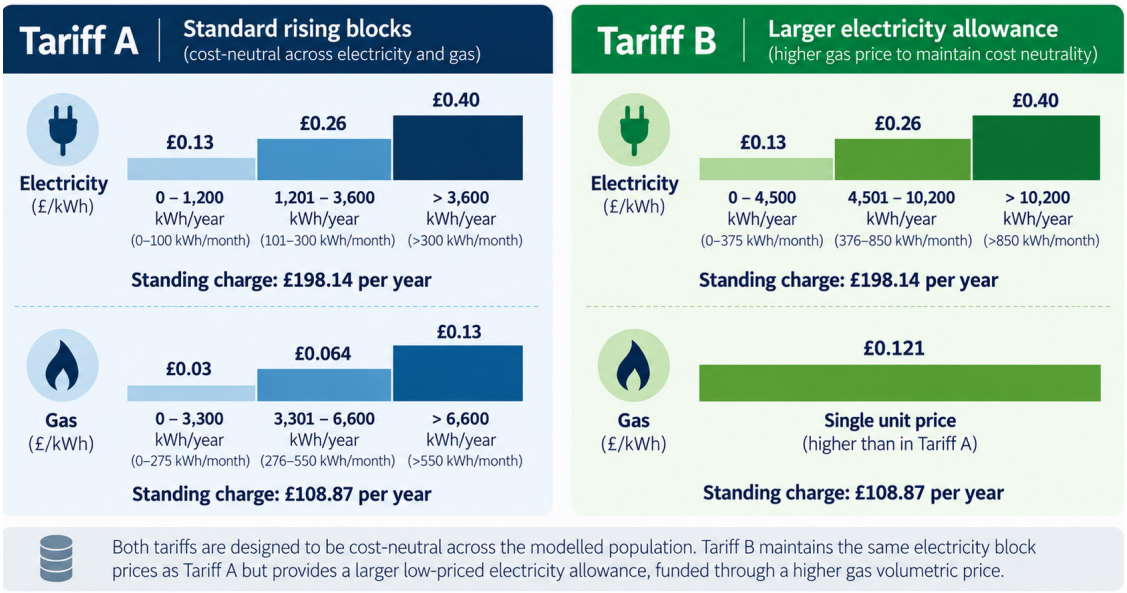
UK energy policy needs to simultaneously address affordability, fuel poverty and heat decarbonisation challenges. Rising block tariffs could improve the affordability of energy and promote efficient energy use in a way that redistributes rather than increases overall costs. However, higher energy consumption does not necessarily mean greater ability to pay; it can reflect inefficient homes, electric heating or other essential energy needs. We modelled two cost-neutral rising block tariffs (Figure 1) using English Housing Survey data, testing how their effects vary across income, fuel poverty and heating systems (see results in Figure 2).

What we find

■ **The broadly progressive approach of a block tariff can mask distributional problems such as those driving fuel poverty.** Our results show that relative to a standard flat tariff, Tariff A substantially reduces average bills for lower-income households. However, households living in fuel poverty often have high energy needs (e.g. due to low energy efficiency housing, health needs, etc.). This group sees bills rise by 5.5%, compared with a 6.7% reduction for non-fuel-poor households.

Figure 1. Rising block tariff designs modelled

Both tariffs are cost-neutral, but differ in the size of the electricity block allowance and how costs are shared between fuels.

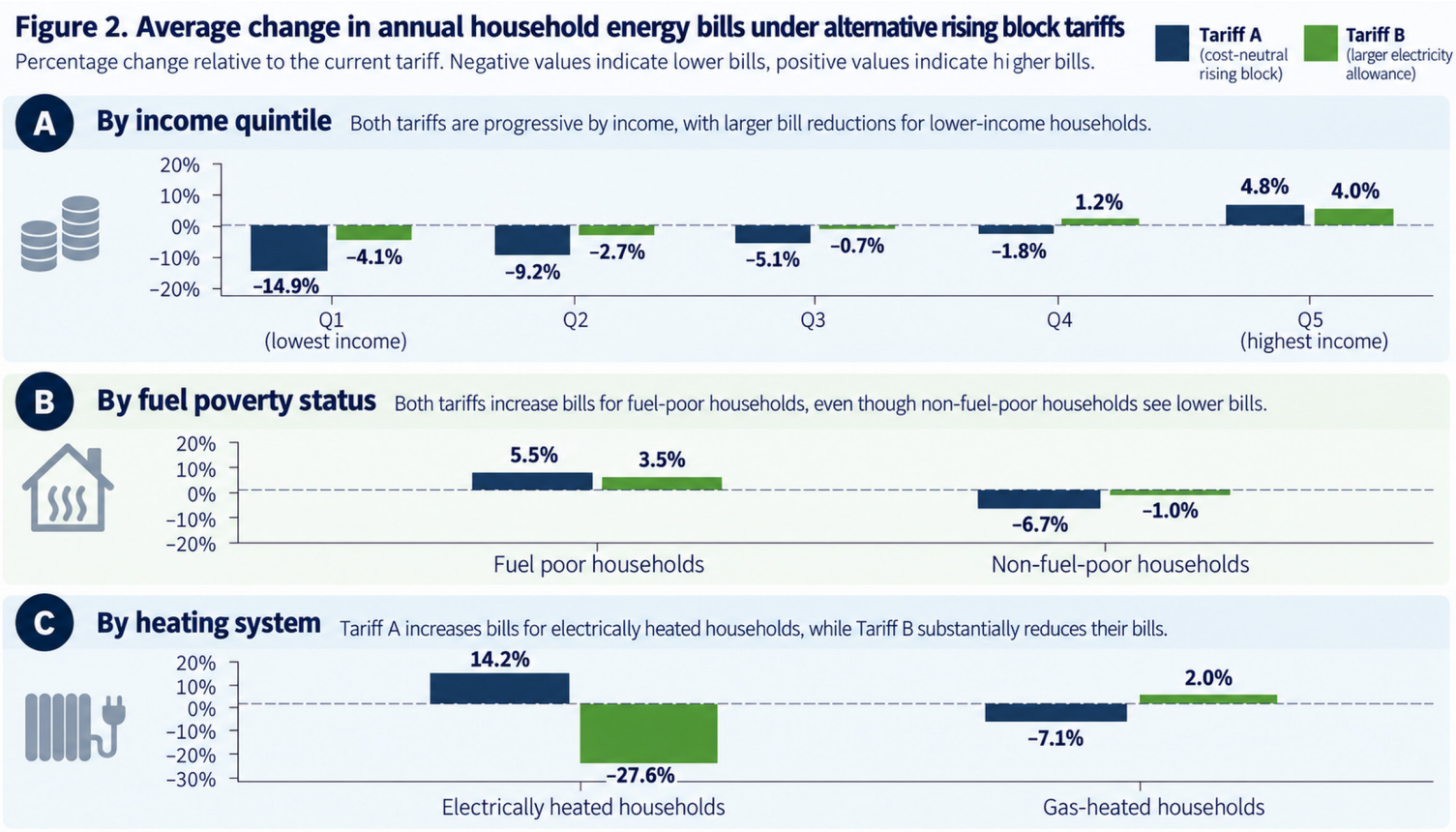


■ **Heating technology matters.** Under Tariff A, households with electric heating need to use more eletricity, forcing them into higher tariff blocks. This leads them to a 14.2% increase in bills, while gas-heated houses enjoy a 7.1% reduction due to more use in the lower blocks. Thus, a conventional rising block tariff could weaken incentives to electrify heating.

■ **Tariff design can support decarbonisation.** Tariff B provides a much larger low-priced electricity allowance, funded through a higher gas price. Relative to a standard flat tariff, bills for electrically heated households fall by 27.6%, while the increase for gas heated households is relatively small at 2.0%. However, fuel-poor households still face higher bills, albeit with the average bill increase of 3.5% being lower than under Tariff A.

Figure 2. Average change in annual household energy bills under alternative rising block tariffs

Percentage change relative to the current tariff. Negative values indicate lower bills, positive values indicate higher bills.



1. Block tariffs should be designed to support electrification.

Rising block tariffs need not penalise higher electricity use. A more generous low-priced electricity allowance, partly funded through higher gas prices, can substantially reduce bills for electrically heated households. In our modelling, this design reduces bills for electrically heated households by 27.6%, while increasing bills for gas-heated households by only around 2%. Because all households use electricity, lower electricity prices can unlock a wider spread of benefits, while strengthening the incentive to switch to efficient electric heating, including heat pumps.

2. Tariff reform should be combined with targeted support.

Even a tariff that supports electrification can leave fuel-poor households worse off, particularly those with high essential energy needs. Rising block tariffs should therefore complement, not replace, targeted discounts or direct support for vulnerable households. Assessment of need based on income alone are not sufficient to identify who needs protection.

3. Sustained policy action is required to reduce the underlying need for energy.

Enabling action to invest in insulation, home energy efficiency and low-carbon heating can reduce the amount households need to spend to stay warm. This makes affordability less dependent on tariff design and helps align fuel poverty reduction with decarbonisation.

Key policy takeaway

Rising block tariffs can help support the transition to low-carbon heat if designed around electricity affordability rather than consumption alone, but must be paired with targeted protection for fuel-poor households and investment in energy efficiency.

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