UNIVERSITY OF YORK
Social Policy Research Unit

EXPLORING SOCIAL TARIFFS FOR ENERGY

Antonia Keung and Jonathan Bradshaw

Summary
A social tariff that reduces the cost of fuel for low-income households could more than halve the fuel poverty rate. This is much more than the existing cost-of-living payment achieve. It would cost more than the existing cost-of-living mitigations being paid to social security recipients, but it would be much more costs effective.

The big question that remains to be answered is how to operationalise it? How can the energy companies and the government know which households have low incomes?

Background

OFGEM and BEIS are currently reviewing the prospects for introducing a social tariff to reduce fuel poverty among vulnerable energy consumers to be introduced from April 2024. This paper is a contribution to their review.

A social tariff as defined by the Chief Executive of OFGEM "is a tariff that is set at a different rate for vulnerable customers and protects against the impact of extremely high prices. If it can be made to work, this could tackle the root cause of this issue and the distress that many customers are in this Winter."[1]

After April 2023 when the £400 rebate to all households runs out Table 1 shows that the mean weekly household expenditure on fuel will rise from £32.67 per week to £48.05 per week for those not eligible for a cost of living payment and £42.81 for those which are.

Table 1: Mean and median weekly household expenditure over time.

	Actual 20/21	Oct 2022 (with rebate)	April 2023 (before CoL)	April 2023 (after CoL)
		EPG cap: £2500	EPG cap: £2500	EPG cap: £2500
Mean £	23.5	32.67	48.05	42.81
Median £	20.77	27.09	42.47	37.75

We have shown in an earlier paper that if there had been no mitigations for social security recipient households, with the Energy Price Guarantee (EPG) remains at the level of £2500 for typical households' consumption, 20.0% of households would be fuel poor (spending more than 20% of net disposable household income after housing costs) from April 2023. Table 2 shows the mitigations (for pensioners of £300, people with disability benefits of £150 and £900 for people receiving means-tested benefits) will reduce that by 5.2 percentage

[1] https://www.ofgem.gov.uk/news-and-views/blog/tackling-inappropriate-energy-supplier-prepayment-meter-practices

points or 26%. 68% of all fuel poor households will be receiving these cost-of- living payments but that leaves 32% (or 1.77 million) of them not receiving the payments.[2]

Table 2: Fuel stress and fuel poverty rates before and after mitigation after April 2023.

	Before cost-of-living mitigations	After cost-of- living mitigations	Effect of mitigations
Fuel stress: spending more than 10% of net income on fuel	54.6%	45.6%	- 9% points
Fuel poverty: spending more than 20% of net income on fuel	20.0%	14.8%	-5.2% points

Social tariffs

Social tariffs have been advocated by the NGOs with interest in fuel poverty as a way of tackling fuel poverty better.

Since August 2022 we have been producing papers on household fuel poverty based on the secondary analysis of the ONS Living Costs and Food Survey.[3] Among these was a paper on social tariffs which compared the impact of a simple progressive social tariff (lower tariffs for smaller consumers paid for either by higher tariffs for larger consumers or by the taxpayer) with policies providing direct support by increasing the incomes of social security recipients. Broadly we concluded that enhancing social security incomes was a better strategy, though far from perfect.[4]

To summarise: the problems are not all the fuel poor are small consumers; not all social security recipients are in fuel poverty; not all households in fuel poverty are social security recipients; and neither the government nor fuel providers know who the 'vulnerable customers' are.

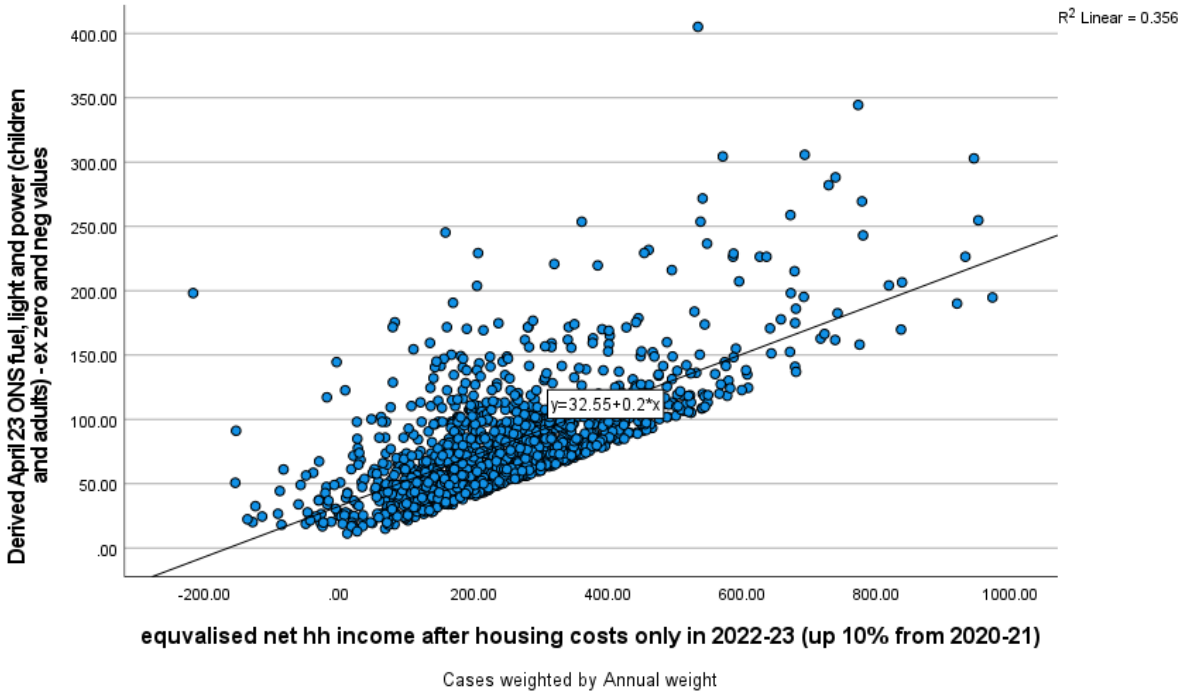
Figure 1 illustrates the problem. It shows the relationship between the fuel bills and the net incomes of households who are in fuel poverty (spending more than 20% of net income on fuel). Net income only explains 36% of the variation in household fuel expenditure.

[2] https://cpag.org.uk/policy-and-campaigns/briefing/who-are-fuel-poor-post-budget-update

[3] https://askcpag.org.uk/content/208471/rising-fuel-poverty
https://cpag.org.uk/news-blogs/news-listings/fuel-poverty-estimates-april-2023-following-autumn-statement-including

[4] https://www.york.ac.uk/business-society/research/spsw/cost-living-crisis-fuel-poverty/#d.en.924667

Figure 1: Scatterplot of household fuel expenditure by household net income. Households in fuel poverty.



Figures 2 and 3 show the relationship between fuel poverty and income decile. We use two definitions of fuel poverty – the traditional spending more than 10% of net income on fuel (fuel stress) and a harsher spending more than 20% of net income on fuel (fuel poverty).

Figure 2 shows that if we seek to mitigate 50% of fuel stress it would be necessary to extend mitigation to 70% of household incomes. Figure 3 shows that we could mitigate 50% of fuel poverty by subsidising the bottom 20% of households.

Figure 2: Fuel stress by income decile

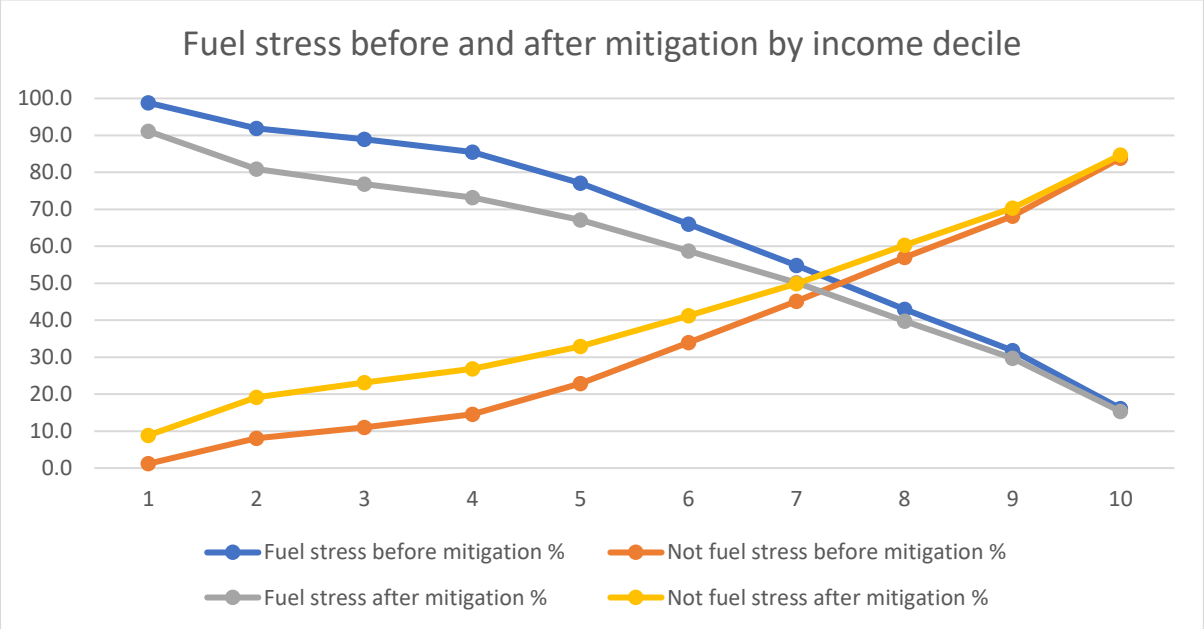
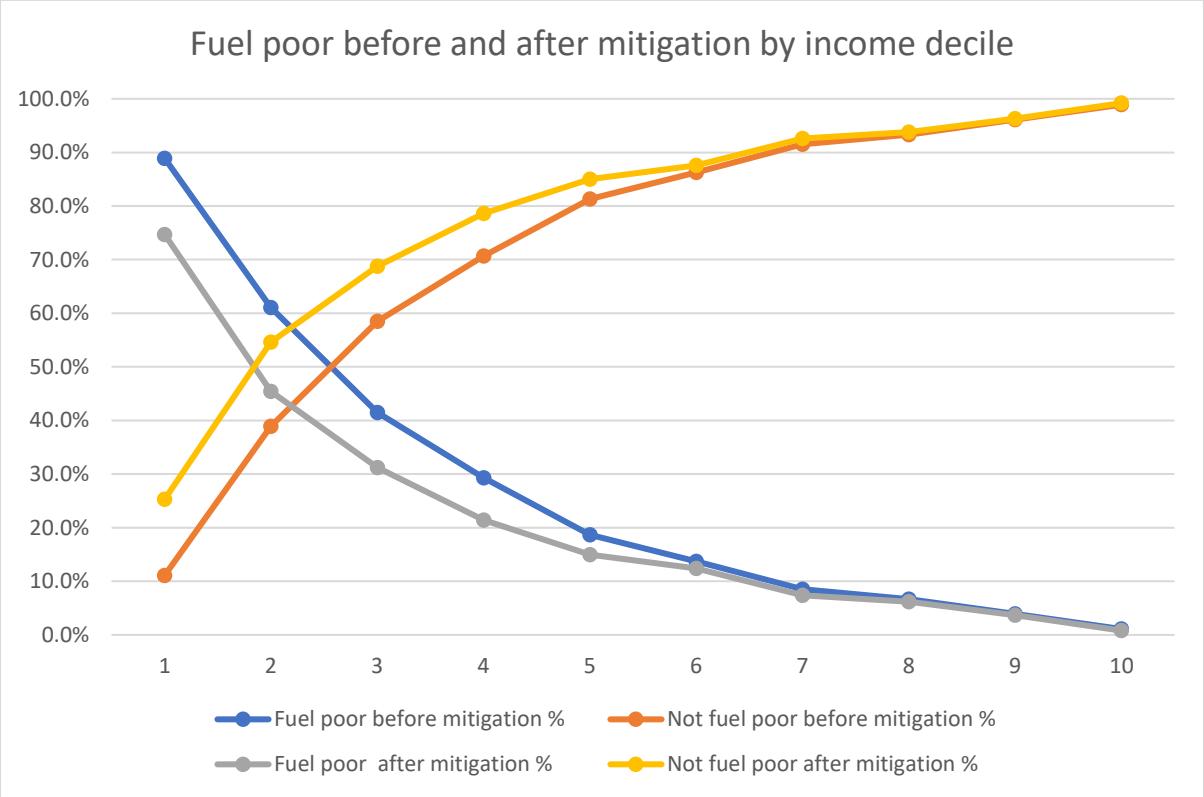


Figure 3: Fuel poverty by income decile



In this paper we update and extend our analysis of social tariff options.

Options

No one has yet specified what a social tariff for the UK might look like. There appear to us to be three main options

1. £x off all bills (say equivalent to abolishing the standing charges/prepayment premiums).
2. £x off bills of low consumers (where to draw the line?). These are the options we tried in our earlier analysis[4].
3. Reducing bills by a % for lower income households which declines as income rises. We have not tried this before on the grounds mentioned above – that we did not think energy suppliers or the indeed the government knew enough about household incomes. But it has been suggested that they may be able to – government already informs suppliers whether households are eligible for the Warm Homes Discount Scheme, though that is only available to households on means tested benefits.

Having consulted National Energy Action (NEA) we decided to review the impact of six variations which reduced the fuel bills of households in the lower deciles of the distribution of net household income by varying percentages. Table 3 compares the impact on fuel from poverty rates of each of these options (proposals). We found that option 3 had the biggest impact reducing the fuel poverty rate from 20% to 9.2%. The impact of the social tariff was considerably more than the social security mitigations.

So in the rest of the paper we focus on social tariff 3.

Table 3: The impact of a variety of social tariff models on fuel poverty rate

	EPG £2500 Before CoL mitigation		**EPG £2500 After CoL mitigation**		**Social tariff models**					
Decile	**fuel poverty gap as a % of energy bill**	**Fuel poverty rate**	**fuel poverty gap as a % of energy bill**	**Fuel poverty rate**	proposal 1 [STM1]	Proposal 2 [STM2]	Proposal 3 [STM3]	Proposal 4 [STM4]	proposal 5 [STM5]	proposal 6 [STM6]
1	54%	83%	31%	64%	reduce 50%	reduce 50%	Reduce 60%	reduce 50%	reduce 50%	reduce 50%
2	29%	48%	9%	31%	reduce 30%	reduce 30%	Reduce 40%	reduce 40%	reduce 40%	reduce 50%
3	23%	27%	12%	21%	reduce 20%	reduce 20%	Reduce 30%	reduce 30%	reduce 30%	reduce 50%
4	15%	18%	11%	12%		reduce 10%	Reduce 20%		reduce 20%	
5	13%	10%	8%	6%					reduce 10%	
6	16%	7%	13%	6%						
7	13%	4%	11%	3%						
8	27%	3%	22%	3%						
9	19%	3%	19%	3%						
10	3%	1%	3%	1%						
All	30%	20%	29%	15%	**12.6%**	**12%**	**9.2%**	**11.3%**	**9.9%**	**10.2%**
N	5,560,000		4,100,000		**3,496,000**	**3,326,000**	**2,543,000**	**3,132,000**	**2,743,000**	**2,828,000**

First in Table 4 we show that if the cost-of-living social security mitigations were included with the social tariff it would only reduce overall fuel poverty by an extra two percentage points which indicates that the social tariff is pretty well targeted on the fuel poor. However the cost-of-living mitigation as expected gives bigger extra reductions in fuel poverty for the lowest decile groups. This is an argument for increasing the level of social security benefits levels generally.

Table 4: Impact of social tariff 3 with and without social security mitigation

	EPG £2500 Before CoL mitigation Fuel poverty rate	EPG £2500 After CoL mitigation Fuel poverty rate	**Social Tariff Proposal 3** [EPG £2500, **before** CoL mitigation] Fuel poverty rate	**Social Tariff Proposal 3** [EPG £2500, **after** CoL mitigation] Fuel poverty rate
Decile				
1	83%	64%	34%	26%
2	48%	31%	15%	10%
3	27%	21%	9%	7%
4	18%	12%	7%	6%
5	10%	6%	10%	6%
6	7%	6%	7%	6%
7	4%	3%	4%	3%
8	3%	3%	3%	3%
9	3%	3%	3%	3%
10	1%	1%	1%	1%
All	**20%**	**15%**	**9%**	**7%**
N	5,560,000	4,100,000	**2,543,000**	**1,900,000**

How much would a social tariff cost the taxpayer (assuming it is funded from general revenue) compared with the existing cost-of-living payments?

In table 5 we show the costs of the cost-of-living payments total about £136 million per week. Most of that expenditure is focussed on lower income households but because richer pensioners receive cost-of-living payments expenditure also benefits households in the top deciles of net income.

Table 5: Estimates of the costs of cost-of-living payments by decile of net household income.

Decile	Median weekly fuel cost with EPG£2500	Median CoL payments weekly sum	Eligible number of household (thousand)	Sub-total
1	38	17	1,999	33,983,000
2	39	17	2,067	35,139,000
3	40	9	1,775	15,975,000
4	40	9	1,643	14,787,000
5	43	6	1,487	8,922,000
6	43	6	1,143	6,858,000
7	43	6	1,025	6,150,000

8	44	6	918	5,508,000
9	46	6	715	4,290,000
10	50	6	713	4,278,000
Estimated total cost of CoL payments				135,890,000

How much would Social Tariff proposal 3 cost to the taxpayers? In Table 6 we present an estimate of the costs to the taxpayer of social tariff 3. The total is more than the cost-of-living payment £160 million per week but all that support is concentrated on households at the lower end of the income distribution.

Table 6: Estimates of the costs of social tariff option 3.

Decile	Median weekly fuel cost with EPG£2500	Social tariff 3	Social Tariff 3 estimated median weekly cost per household to the taxpayers	Number of household (thousand)	Sub-total
1	£38	Reduce 60%	£22.8	2,702	61,605,600
2	£39	Reduce 40%	£15.6	2,777	43,321,200
3	£40	Reduce 30%	£12	2,758	33,096,000
4	£40	Reduce 20%	£8	2,792	22,336,000
Estimated total cost of social tariff 3					160,358,800

Cost-effectiveness of CoL payment vs Social tariff 3

Cost-effectiveness can be calculated by dividing the cost of mitigation by the number of fuel poor households lifted out of fuel poverty. Using this formula, Table 7 shows that the average cost of lifting an extra fuel poor household out from fuel poverty on the Cost-of-living payments scheme is approximately £93 per week per household, this is compared to £53 per week per household on the Social tariff 3 model. [5]

Table 7: Estimates of the cost effectiveness of reducing child poverty of social tariff 3 and the cost-of-living payment

	EPG £2500 and after COL payments	**EPG £2500 and Social tariff 3 only**	**EPG£2500 and after COL mitigation and Social tariff 3**
Cost of mitigation	135,890,000	160,358,800	296,248,800
Number of households lifted out of fuel poverty	1,460,000	3,017,000	3,660,000

[5] Although we must acknowledge that the estimate performed here is very crude, as we have not taken into account the relevant administrative cost for each approach.

Cost-effectiveness ratio	93	53	81

Conclusion

Social tariff 3 would help to bring the fuel poverty rate down from 20% to 9% (or reduce the scale of fuel poverty by 54%) and it costs the taxpayers £160 million a week. This compares to the cost-of-living payments which cost £136 million a week but can only bring the fuel poverty rate down to 15% (or reduce the scale of fuel poverty by 26%). Our analysis suggests that the proposed social tariffs not only can reach out to more fuel poor households but also appear to be more cost-effective than cost-of-living payments. That being said, as long as there is no reliable way to identify low-income households it is not operational.