

March 2010



**Friends of
the Earth**

Briefing

In defence of feed-in tariffs: Friends of the Earth response to George Monbiot

This briefing is a response by Friends of the Earth to a recent column by George Monbiot, "Are we really going to let ourselves be duped into this solar panel rip-off?", published in the Guardian 2nd March 2010. The full original article and the debate between George Monbiot and Jeremy Legett of Solarcentury can be found here:

<http://www.guardian.co.uk/commentisfree/2010/mar/01/solar-panel-feed-in-tariff>

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Introduction

Friends of the Earth has for the past four years been a leading advocate of introducing a feed-in tariff scheme in the UK. Along with the Renewable Energy Association, Alan Simpson MP and many others we led the campaign to include feed-in tariff legislation to support small-scale renewables in the Energy Act 2008. Since then we have continued to call for improvements to the Government's chosen scheme.

George Monbiot's attack on the UK feed-in tariff¹ is disappointing, poorly targeted and we believe contains some important inaccuracies. The UK feed-in tariff is far from perfect and needs reform but it is a real chance for households, businesses, communities, local authorities, farmers and others to take some degree of control over their energy supply away from the energy companies, to cut their carbon emissions, protect themselves against future fossil fuel price rises and gain a stake in creating a low-carbon economy. It should be welcomed and improved.

One reason why Friends of the Earth is so disappointed by Mr Monbiot's article is that it fails to set out clearly exactly what it is he is attacking. Is it the feed-in tariff in principle or is it the UK feed-in tariff specifically (which supports renewable electricity installations below 5MW^[i]) or is it the support of the UK feed-in tariff for solar PV or is it just solar PV regardless of how it is supported? Careful reading would seem to indicate that the objective of his assault is the support of the UK FIT for solar PV. If this is the case not only do we disagree with him but he has subjected other small-scale renewable electricity technologies to considerable collateral damage in the process.

The UK feed-in tariff does not just support solar PV (and onsite wind), it also covers hydro generation, community-scale wind, anaerobic digestion (and did originally cover biomass) up to 5MW^[ii] - roughly the size of two commercial scale onshore wind turbines. While Friends of the Earth welcomes the support the scheme gives to PV and small-scale wind we believe that these other technologies could be much better supported. George Monbiot's column was a real missed opportunity to make the case for better supporting all these vital technologies at a range of scales rather than taking a columnist's rhetorical shotgun to the feed-in tariff.

Friends of the Earth believes that George Monbiot is incorrect or gives a misleading impression of the scheme in four key areas:

- The overall cost of the scheme.
- The contribution that small-scale renewable electricity technologies (including solar PV) can make to the UK's energy mix.
- The potential for low-income communities to benefit from the scheme.
- His assessment of the German experience of feed-in tariffs and the effectiveness of the policy generally.

“The government is about to shift £8.6bn from the poor to the middle classes.”

The overall impression George Monbiot gives of the cost of the UK's feed-in tariff scheme and how this cost is distributed is misleading. The cost to consumers of the UK FIT scheme is £6.7bn not £8.6bn^[iii] (£8.6bn is the resources cost – the overall cost is based on an assumption of a cost of capital of 10% across all investors. In reality many investors will invest for a lower return so the actual subsidy cost to the consumer cost is lower than the resource cost). This £6.7bn cost to consumers is the cumulative cost to 2030 ie over the next two decades - a period of time which doesn't quite match the impression of immediacy of George Monbiot's 'about to' claim.

Furthermore the cost to all consumers is not the same as the cost to households. George Monbiot has confused the two. The Government is expecting 66% of the cost of the scheme to fall on businesses with households paying the other 34%. This figure isn't in the Impact Assessment so Mr Monbiot couldn't have been expected to have taken it into account. It has however been published in Friends of the Earth's briefing on the UK scheme and is included in our calculations for the cost of improving the scheme^[iv]. Assuming this division stays constant until 2030 this means the cost to all households of the FIT is an average of £2.28bn over 20 years. DECC's Impact Assessment estimates that the average impact on a household electricity bill is just £6.50 in 2015 or an average of £8.50 (70p per month) over the whole period 2011-2030^[v].

This is the average cost across all households regardless of income so it is difficult to describe it purely as a transfer from the 'poor'. However because the cost of the scheme will – just like other Government schemes such as the Renewables Obligation or CERT – be placed on bills, it is regressive compared with paying for the scheme through taxation, and the potential impact on the fuel poor must be very carefully considered. This is definitely not an issue unique to the FIT but one that runs across virtually every policy to tackle climate change. There is no reason the FIT should be singled out instead of, say, the Renewables Obligation. The assertion that the scheme transfers money to “the middle classes” is based on assumptions about who will take advantage of the scheme and therefore receive the tariff payments.

Issues of the impact on the fuel poor and who will take up the scheme are entirely legitimate ones to interrogate and have been foremost in the minds of those who campaigned for the legislation in the first place, and who have more recently demanded a more ambitious scheme than the one being introduced by the Government. There are several features of the current scheme, explored in more detail later, which will help enable lower-income communities to receive the benefits of the scheme but we have made it clear to Government that more must be done to ensure this happens.

Alan Simpson MP has been the feed-in tariff's strongest champion in Parliament. He is also the Chair of the Parliamentary Warm Homes Group which campaigns among MPs for action to tackle fuel poverty. Like Friends of the Earth he sees no contradiction between calling for a more ambitious feed-in tariff scheme and promoting energy efficiency. In his response to George Monbiot's article he sets out how one inner-city community in Nottingham has ambitions to use the tariff to deliver the benefits of renewable electricity to the homes, schools and community buildings on their estate.

<http://www.guardian.co.uk/commentisfree/cif-green/2010/mar/05/solar-panel-feed-in-tariff-benefits>

It is also worth noting that the cost of the scheme does not take into account some very substantial benefits which, while difficult to quantify, are no less real. The DECC Impact Assessment lists these so-called 'non-monetarised' benefits as^[vi]:

- Consumer engagement (including greater energy awareness potentially leading to demand reduction),
- Diversifying the energy mix;
- Reducing dependence on (imported) fossil fuels;
- Greater energy security at the small scale;
- Business and employment opportunities in developing and deploying renewable energy technologies;
- Avoidance of / reductions in losses through transmission/distribution networks;
- Innovation benefits and potential reductions in technology costs as a result of roll-out.

It is also important to look at who is getting paid. Unlike subsidy to large scale renewables through the Renewables Obligation money spent on the FIT will be paid to households, farmers, community wind groups, local businesses and social landlords among others. This is money that will circulate in the local community.

“The people who sell solar photovoltaic (PV) panels and micro wind turbines in the UK insist that they represent a good investment.”

That is the point of the scheme - to make them a good investment so that people invest in them and cut carbon emissions. As George Monbiot says “you’d be crazy not to cash in.” Assuming Mr Monbiot doesn’t have a problem with policies supporting renewable energy (or even the feed-in tariff as a policy in principle, though his article does not make this clear either way) then his charge is that the cost of supporting solar PV (and perhaps other smaller and community scale renewable technologies) is too high and we should spend the money on something else instead. Friends of the Earth disagrees on both counts.

“The government wants everyone to get the same rate of return.”

The Impact Assessment states that the return on investment ranges from 5-8% a year^[vii].

“So while the electricity you might generate from large wind turbines and hydro plants will earn you 4.5p per kilowatt hour, mini wind turbines get 34p, and solar panels get 41p. In other words, the government acknowledges that micro-wind and solar PV in the UK are between seven and nine times less cost-effective than the alternatives.”

“It expects this scheme to save 7m tonnes of carbon dioxide by 2020⁽⁵⁾. Assuming, generously, that the rate of installation keeps accelerating, this suggests a saving of around 20m tonnes of CO₂ by 2030. The estimated price by then is £8.6bn⁽⁶⁾. This means it’ll cost around £430 to save one tonne of carbon dioxide.”

In the Impact Assessment the Government calculated the cost per tonne of carbon dioxide saved is £460.^[viii] Friends of the Earth believes that the amount of carbon dioxide saved by the scheme is much too low (it is unclear whether George Monbiot would like it to save more carbon or none at all). However it is worth noting that 7m tonnes is the amount saved to 2020. A solar PV array or wind turbine installed under the scheme in 2019 will not stop generating one year later but continue for decades. Strangely the Impact Assessment records the cost to 2030 but not the carbon saved.

Friends of the Earth and others have called for a much greater level of ambition.^[xiv] The current scheme will only generate an additional 3 terrawatt hours (TWh) annually or 0.8% of UK electricity by 2020^[ix]. It will take the total amount of renewable electricity generated from small scale renewable electricity (defined as installations below 5MW) to just 2% of UK electricity in that year^[x]. The Government’s own modelling showed that with tariffs set to give a higher return on investment (10%) we could see 25TWh annually or 6% of UK electricity generated by small-scale renewables electricity schemes.^[xi] This is the equivalent of the massive Drax power station (25.4TWh in 2008)^[xii] or two and a half times Sizewell B (9.8TWh in 2008)^[xiii] – a significant contribution to the UK’s energy security and contradicting the impression often given that small-scale renewables have little role to play in the UK’s energy mix.

The Government should give greater support to anaerobic digestion, community wind schemes between 1.5 and 5MW (though we favour pushing up the cap on the scheme to 10MW as soon as legislation can be passed), hydro schemes (and deal with the problem of the lack of accredited hydro installers) and, once a strong sustainability regime has been developed, return biomass generation to the scheme.

The support the scheme offers to PV and small-scale wind is very welcome. But as it stands it does not give enough support to larger technologies and installations. The impact of this is to drive up the cost per tonne of CO₂. The changes we propose would have the effect of driving down the cost per tonne of CO₂ of the policy while increasing the overall carbon saved and renewable electricity generated.

The reason the scheme supports some domestic scale installations is because there are substantial numbers of households who are prepared accept returns on investment of less than 8%.^[xv] DECC’s own modelling shows that businesses demand a higher rate of return to invest in their own clean generation capacity. Increasing tariffs would bring in businesses. This would raise the cost of the scheme as more renewable electricity would be generated, but because they would tend to invest in much larger projects the overall cost effectiveness of the scheme would increase.

Friends of the Earth believes it is a good sign that there are large numbers of households that are prepared to spend a significant sum of their own money to pay for solar PV panels based on a return that most businesses would find unacceptable. Surely no one would rather

that these householders behaved more like companies and demanded commercial rates of return on their investment before spending their money to help save the planet?

The problem is not the middle class households that might take up the scheme, it is the poor households that might not. The question then becomes ‘what is necessary to help low-income households and poor communities get the benefit of lower fuel bill and energy security?’

Two preconditions have already been met. The first was to have a scheme that allowed the use of the generated electricity onsite first as well as paying a tariff for generation^[xvi]. This means that a housing association could pay for an installation and receive the tariff while the tenant gets the benefit of reduced bills (this applies to any technology but PV is likely to be the one that it is most widely applicable and easily installed on social housing). The second precondition was setting tariffs high enough so that social landlords could justify and finance the investment. Initial feedback to Friends of the Earth from social landlords about the increase in PV tariff rates from those originally proposed in last year’s draft scheme is positive and could allow them to install PV as part of wider energy efficiency retrofit programmes.

More needs to be done: greater support for community wind, allowing local authorities to sell electricity they might generate, low-interest loans for households without money in the bank – but we are moving in the right direction.

“Last year the consultancy company McKinsey published a table of cost comparisons(7). It found that you could save a tonne of CO2 for £3 by investing in geothermal energy, or for £8 by building a nuclear power plant. Insulating commercial buildings costs nothing; in fact it saves £60 for every tonne of CO2 you reduce; replacing incandescent lightbulbs with LEDs saves £80 per tonne. The government predicts that the tradeable value of the carbon saved by its £8.6bn scheme will be £420m(8). That’s some return on investment.”

Marginal Abatement Curves can be useful in policy appraisal but using them in this way is crude. The curve does not account for the policy cost required to deploy each technology. McKinsey warn that: “the costs calculated are different from the costs a consumer or company would see, as these ...would include taxes, subsidies, and different interest rates in calculations. Therefore, the curve cannot be used for determining switching economics between investments”^[xvii]. It is also noticeable that coal Carbon Capture and Storage is higher up the McKinsey cost curve than solar PV.

Small hydro schemes, which will rely on the UK FIT for support, comes out of the curve at negative cost.

No one is pretending that PV is not currently more expensive than onshore wind but that doesn’t make it not worth supporting and unable to play a role in cutting UK emissions. Cost curves are static snapshots of a certain year (in this case 2030), they don’t tell you where a technology might be on the curve five or ten years later with support. Wave generation is

currently expensive yet everyone rightly considers it worth supporting to encourage investment in innovation and to get it to commercial scale deployment. Simply letting technologies fight it out based on their current cost is not a sensible strategy for ensuring we develop a diverse renewable energy mix and support emerging technologies.

With investment in innovation and new manufacturing capacity - thanks to a large degree to the German FIT – the cost of PV has been coming down rapidly. The UK FIT has cutting the cost of technologies hardwired into its design through something called tariff degression which applies particularly strongly to solar PV^[xviii]. Each year new installations start on a lower tariff than an installation installed the previous year.

“Solar PV is a great technology - if you live in southern California. But the further from the equator you travel, the less sense it makes(9). It’s not just that the amount of power PV panels produce at this latitude is risible, they also produce it at the wrong time. In hot countries, where air conditioning guzzles electricity, peak demand coincides with peak solar radiation. In the UK peak demand takes place between 5 and 7 on winter evenings. Do I need to spell out the implications?”

It is unclear what implications George Monbiot means. Given the very small amounts of solar electricity that will be produced under FITS it is difficult to imagine how it would have a disastrous impact on the UK’s ability to balance the grid. The FIT scheme expects to see less than 2TWh of PV generation annually by 2020^[xix] against a total expected UK electricity demand of 386TWh annually^[xx]. Is Mr Monbiot suggesting that in summer UK electricity demand drops so low that this tiny amount of PV addition to the grid will blow the national fusebox?

In fact with developments in dynamic demand, smart grids and electric plug in cars (which will not all get charged at night) it is easy to imagine how quite substantial amounts of daytime generation could be useful.

“We have plenty of ambient energy, but it’s not to be found on people’s roofs. The only renewables policy that makes sense is to build big installations where the energy is - which means high ground, estuaries or the open sea - and deliver it by wire to where people live. But the government’s scheme sloshes money into places where resources are poor and economies of scale impossible.”

Friends of the Earth strongly agrees that we need to support wind, wave and tidal power. We have the best resources for these technologies in Europe. In fact because of the high levels of security it provides to investors the FIT could play a very useful role in helping to support marine technologies make the transition from Research and Development across what is widely known in academic and industry circles as “the valley of death^{[xxi][i]}” to commercial scale deployment. We have called for marine technologies to be included in the scheme.

Friends of the Earth disagrees with the claim that there is not a significant solar resource in the UK which could be put to good use. A report commissioned by DECC from Poyry and Element Energy to help them design the FIT estimates that the maximum technical potential for roof based solar PV installations below 5MW in the UK is 52TWh annually (about twice the output of the massive Drax power station^{[xxii][ii]} or 13% of the UK's estimated electricity requirements in 2020. The model used by Element Energy takes into account the proportion of unusable roof space, roof orientation and solar insolation levels (ie sunlight).^[xxiii]

Obviously there is no way that this full technical potential could be exploited by even the most successful incentive but it contrasts with George Monbiot's suggestion that PV (let alone solar thermal which wasn't discussed) can't make a significant contribution to the UK's electricity requirements.

At a household level the EST estimates that 2 kWp system could provide around 40% of a household's annual electricity needs^{[xxiv][iii]}. The argument therefore becomes one of relative cost rather than potential.

“We don't need to guess the results: the German government made the same mistake ten years ago. By 2006 its generous feed-in tariffs had stimulated 230,000 solar roofs, at a cost of E1.2bn. Their total contribution to the country's electricity supply was 0.4%(10).”

According to the German Government Ministry of the Environment in the period 2007/2008 the proportion of electricity provided by PV had risen to 0.7%^[xxv].

“Their total contribution to carbon savings, as a paper in the journal Energy Policy points out, is zero. This is because Germany, like the UK, belongs to the European Emissions Trading Scheme. Any savings made by feed-in tariffs permit other industries to raise their emissions. Either the trading scheme works, in which case the tariffs are pointless, or it doesn't, in which case it needs to be overhauled. The government can't have it both ways.”

Friends of the Earth believes the EUETS is deeply flawed. This is not an argument against feed-in tariffs at all. Much more detail on our analysis of the EUETS, its failing and why proven policies such as FITs are a much better route to reduce emissions can be found in our report, Carbon Trading: A Dangerous Obsession.^{[xxvi][iv]}

“A week ago the German government decided sharply to reduce the tariff it pays for solar PV, on the grounds that it's a waste of money. Just as the Germans have begun to abandon their monumental mistake, we are about to repeat it.”

The report referenced by George Monbiot does not seem to support the claim that PV rates have been cut because they are “a waste of money”. It is simply a report of the reduction in tariffs and that shares in solar companies have risen because it was less than was earlier expected.

Another way to look at it is as a success. According to a report by Reuters: “Last year, Germany added a record 3 gigawatt of new [solar PV] capacity to bring its total of installed capacity to about 9 gigawatts.

“The centre-right government wanted to cut the FIT further in 2010 because an overall decline in prices outpaced the annual FIT cut of 8-10 percent in recent years due to the rapid growth of the industry and a global oversupply of solar panels.”^{[xxvii][v]}

Prices are coming down so fast that it has been possible to reduce the FIT. This is good news.

It is also crucial to clarify that the feed-in tariff has been established as the most effective and cheapest policy to promote renewable electricity. According to the Stern Review of the economics of climate change, comparing the FIT with the UK’s Renewables Obligation (p366)

"Both sets of instruments have proved effective but existing experience favours price-based support mechanisms. Comparisons between deployment support through tradable quotas and feed-in tariff price support suggest that feed-in mechanisms achieve larger deployment at lower costs. Central to this is the assurance of long-term price guarantees. The German scheme...provides legally guaranteed revenue streams for up to twenty years if the technology remains functional. Whilst recognising the importance of planning regimes for both PV and wind, the levels of deployment are much greater in the German scheme and the prices are lower than comparable tradable support mechanisms (though greater deployment increases the total cost in terms of the premium paid by consumers). Contrary to criticisms of the feed-in tariff, analysis suggests that competition is greater than in the UK Renewable Obligation Certificate scheme. These benefits are logical as the technologies are already prone to considerable price uncertainties and the price uncertainty of tradable deployment support mechanisms amplifies this uncertainty. Uncertainty discourages investment and increases the cost of capital as the risks associated with the uncertain rewards require greater rewards."

During the campaign to introduce feed-in tariff legislation to the UK a group of eight leading energy academics wrote to the Guardian. They stated: “Both academic studies and the practical experience of those countries that have adopted it show that a feed-in tariff supports the development of a greater volume of renewable energy at lower cost than the UK’s renewables obligation policy.”^{[xxviii][vi]}

According to Ernst and Young’s quarterly renewable energy investment attractiveness index: “Feed-in tariffs have the benefit of curbing the cost to the energy consumer of renewables in the context of rising oil prices.”

This also calculated that the unit cost to consumer per kWh renewable electricity was 2.6p/kWh in Germany compared with 3.2p/kWh in the UK^{[xxix][vii]}

Of course these positive assessments of FITs are for the policy overall and not necessarily for the UK scheme.

“Had this money been spent instead on insulation or double glazing, it could have helped relieve fuel poverty at the same time as cutting emissions. But the feed-in tax is both wasteful and regressive. The government has now decided not to oblige people to improve the efficiency of their homes before they can claim a tariff: you’ll be paid to put a solar panel on your roof even if the roof contains no insulation.”

Friends of the Earth has been one of the strongest campaigners for tougher action to tackle fuel poverty and insulate the nations homes. We even took the Government to the High Court to get them to meet their legal commitments in this area.^{[xxx][viii]} Our most recent briefing calls for mandatory minimum standards to be set for the energy efficiency of private rented homes.^[xxxi]

For us there is no contradiction between support for energy efficiency and small-scale renewables. Both are needed. We believe it will not be possible to achieve the level of cuts needed in carbon emissions from the built environment based on energy efficiency measures alone.

Birmingham City Council is going one step further to establish a scheme installing PV panels on roofs in working class areas of the city, where the revenue from the FIT will feed back into a revolving fund to pay for more panels and deliver energy efficiency advice to local homes in the neighbourhood.^{[xxxii][ix]} Alan Simpson MP is has responded to George Monbiot citing the inspiring example of the community energy cooperative established in The Meadows, a poor area of Nottingham, which has plans for a community owned wind turbine and PV panels, with the FIT income being recycled within the community. Other social landlords are looking at how the scheme can work for their tenants. These exciting projects, bringing benefits to low-income communities, are exactly the reverse of the picture painted by George Monbiot of a policy for the middle classes.

The point that if you are being paid to generate energy, then this energy should not be wasted otherwise taxpayers are footing the bill for no positive outcome, is an entirely legitimate one in principle but in practice it doesn’t really apply here. The feed-in tariff is a payment for generating electricity (rather than heat) so unless you install solar panels or another renewable electricity technology on one of the small proportion of homes with storage heaters, insulating your home won’t make any difference. Really we are talking about installing efficient lighting and appliances, and good energy behaviour such as turning off the TV.

The UK FIT scheme also includes an innovative element - an export bonus, where generators get paid for everything they export to the network in addition to a payment for everything they generate – which encourages energy efficiency. Unfortunately the Government reduced the payment from the planned 5p per kilowatt hour to 3p, thus reducing the incentive for using as little energy internally as possible and exporting as much as possible.

Nevertheless, making those electricity using fixtures in a house (eg low-energy lights) mandatory should be introduced when the scheme is reviewed in 2013. Friends of the Earth's initial view was that as the scheme is to promote renewable electricity rather than heat and because it could have delayed the scheme's start, this was something to come back to later.

However payment for wasted energy is a very big issue to be considered in the development of the close relative of the FIT the Renewable Heat Incentive which is due to come into force in April 2011.

“Though there's a system to ensure that functioning devices are installed, it can't be long before thousands of petty criminals discover the perfect carousel fraud, bypassing their solar panels by connecting the incoming wire to the outgoing wire. By buying electricity for 7p and selling it for 44p (if you sell power to the grid rather than using it yourself, you get an extra 3p(17)), they'll make a 600% profit. Amazingly the government has decided not to measure how much electricity people are selling, but “to pay export tariffs on the basis of estimated (deemed) exports.”(18) Elsewhere in its report it boasts of “encouraging a risk-based approach to audit and assurance”(19). Come on in you crims, the door is wide open. “

Regardless of whether this is easy to do or not, George Monbiot is arguing that it is possible to find a way to divert imported electricity and make it count as generation and therefore defraud the scheme.

It is difficult to see that this is an argument against the feed-in tariff. An unscrupulous green grocer could mark normal courgettes as organic and rip off their customers. This not an argument against organic vegetables. It's an argument for trading standards!

Even if it is physically possible the scam would have to be disconnected every sunset and reconnected again every morning otherwise the energy company could notice that the solar panels are generating electricity at night and call the police.

Finally on this section George Monbiot writes: “Amazingly the government has decided not to measure how much electricity people are selling, but “to pay export tariffs on the basis of estimated (deemed) exports.”” However the full quote is: “We have also decided that, strictly as an interim measure, for domestic scale generators, it will be possible to pay export tariffs on the basis of estimated (deemed) exports.^[xxxiii]” On page 36 of the same document they set out the conditions for this deeming while they finalise the specification of smart meters. The full quote and context gives a very different impression from the one Monbiot gives.

“There appears to be a cross-party agreement to squander the public's money. Why? It's partly because many Tory and LibDem voters hate big, efficient windfarms, and this scheme appears to offer an alternative. But it's mostly because solar panels

accord with the aspirations of the middle classes. The solar panel is the ideal modern status symbol, which signifies both wealth and moral superiority, even if it's perfectly useless."

The assumption that only the middle classes are interested in generating their own electricity is incorrect. Friends of the Earth, the Renewable Energy Association and the Co-operative Bank commissioned a YouGov poll which showed that 68% of homeowners in the C2DE social grade would be consider installing renewable energy systems such as solar panels in their properties compared with 72% of homeowners in the ABC1 social grade. A marginal difference which shows that solar panels are just as desirable to working class people^{[xxxiv][x]}.

For Friends of the Earth the small-scale renewable technologies covered (in some cases entirely inadequately) by the current scheme are not an alternative to large scale windfarms but a vital source of additional renewable electricity generating capacity (a possible 25TWh is definitely not insignificant), to diversify our energy mix, decarbonise the built environment, deliver energy security to our communities and businesses and fight fuel poverty.

It would be a disaster in both environmental and social terms if the benefits of local renewables (including solar PV) were restricted to the wealthy. Throughout the campaign for the FIT we have been clear that giving those in low-income communities access to the scheme should be designed in from the start. Raising the PV tariff to the point where social landlords can take advantage of the scheme is a positive development but more needs to be done – local authorities need the ability to finance local renewables schemes, soft loans should be made available for households (and businesses) without money in the bank and tariffs for wind schemes above 1.5MW should be increased to give communities across the UK a chance to own their own large wind turbine.

The Renewables Obligation which supports large scale renewables is levied on bills just as the FIT is, yet those getting paid are the large energy companies. The FIT represents the best opportunity for the public as households or as communities to get paid for generating renewable electricity.

"If people want to waste their money, let them. But you and I shouldn't be paying for it. Seldom has there been a bigger public rip-off; seldom has less fuss been made about it. Will we try to stop this scheme, or are we a nation of dupes?"

The prospect of housing associations reducing their tenant's electricity bills, engineer-environmentalists bringing disused water mills back to life, farmers turning organic waste into bio-methane and communities coming together to own wind turbines is not a scandal. It is something we should be excited about. We need to make the scheme bigger, better and more equitable – not scrap it.

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- [iii] Table 1, Impact Assessment of Feed-in Tariffs for Small-Scale, Low Carbon, Electricity Generation, DECC, 1 February 2010
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