

Trivial Tips Cause Carbon Complacency: Prioritise Carbon Actions Now!

A Carbon Focus Publication
carbon focus

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Summary

NGOs, local authorities, central government, the media and others advising consumers to reduce carbon dioxide emissions are wasting precious time and resources by not distinguishing between big and small savings.

The promotion of tips with unquantified and uncontextualised benefits is leading to a 'carbon complacency' where consumers feel they are doing good by doing actions that are actually trivial. Many people recognise that small improvements don't make much difference and use that as a reason to justify doing nothing at all.

Consumers need to know where their biggest emissions come from. Edwin Datschefski and Katharine Harborne have identified that very few actions by householders actually make a real difference. These are the ones that should be focused on and high rates of uptake of these actions should be the aim.

Introduction – Act now before the lights go off!

According to the New Economics Foundation we now have just less than 90 months to prevent a sudden and irreversible shift in the planet's climate.

Awareness of human induced climate change is very high: 97% of people in the UK "know something or a great deal about it" according to a recent Gallup poll. However, depressing and trivial government climate change campaigns only serve to alienate target audience and make them feel overwhelmed and powerless.

The challenge of climate chaos is so great we all need to work together with a combination of individual behaviour change, businesses developing innovative low carbon products and services and governments investing in technologies to decarbonise society and building low carbon infrastructure.

Recent research from the Stockholm Environment Institute (July 2009) found that the average household in Britain produces around 28 tonnes of carbon per year. Analysis by postcode revealed wealthy inhabitants of Rickmansworth have an average CO₂ of over 36 tonnes per year closely followed by Chiltern, South Bucks and Surrey Heath have the largest average household carbon footprint. In contrast, the same survey revealed households with the smallest carbon footprints of around 14 tonnes were inner city areas where people cannot afford to consume as much, do not take foreign holiday and use public transport are Sunderland, Middlesbrough and Barking & Dagenham.

Fortunately, the most affluent areas frequently have the highest proportion of people willing to take action to stop climate change so that targeting the worst polluting households and persuading them to making larger effective savings is vital.

The UK Climate Change Act requires that carbon emissions are reduced by at least 80% by 2050, compared to 1990 levels. This means a target reduction of 5 tonnes per person by 2050. On the 11th July 2009, the G8 also recognised the need for drastic action: "We have agreed as G8 that we want to cut our emissions by 80 per cent by 2050 and we believe that this will allow the world to reduce its emissions by 50 per cent."

Governments, NGOs and media can and should do much more but currently they are promoting trivial and unprioritised measures which are alienating their citizens. A much more effective use of time and resources is for people focus their efforts on makes the most difference.

We aren't going to achieve these targets by small insignificant actions. Each household needs to save 4 tonnes of CO2 per year.

Many Carbon Saving Actions Are Trivial

Individual householders are increasingly being given advice to reduce carbon dioxide emissions in the form of tips or suggested actions.

Many of these are trivial in terms of the amount of CO2 that they save.

By trivial we mean saving less than half a percent (0.5%) of a household's 28 tonne average total emissions – ie less than 0.14 tonnes CO2 per year.

For example:

- Switching off TV at the mains with no standby (0.07 tonnes)
- Boil only what you need in your kettle (0.04 tonnes)
- Refusing plastic carrier bags (0.02 tonnes)
- Using cloth nappies (0 tonnes)
- Heat up meals in a microwave rather than a conventional oven (0.018 tonnes)
- Listen to the radio one hour a day switching to wind up radio (0.0025 tonnes)

We estimate that there are about two hundred of these tips being circulated as serious advice and our analysis shows that only a couple of dozen save more than 0.1 tonne and only a dozen or so save one tonne or more. So we can argue that over 75% of carbon saving tips are trivial.

We are not implying that these actions are not worth doing, but when they are not put into proper context, they distract people from seeing what the most important and effective actions are.

Most Households will only do up to five carbon actions

There is an argument that people have to start somewhere so small easy steps are all steps in the right direction. However, some of the big savings actions are not that hard, and the problem with starting with small actions is that people dip their toe in the water but then go no further.

People feel that have done their bit if they do a few things (5 things seems like quite a lot to most people) but when the carbon savings are analysed they may well have achieved almost nothing in terms of their overall carbon performance.

Trivial-scale tips encourage '**carbon complacency**'. An example of this would be "I cook my potatoes more efficiently now in the microwave, so it's OK to still run my old 4x4", or "Yes I'm flying to Australia but I only boil as much as I need in my kettle."

Making each of the small number of changes that people are willing to make be big changes is essential.

Many householders still see dealing with environmental problems as something other people do, as a minority activity, or as some kind of unilateral sacrifice of no benefit to themselves.

Effective change has to be possible and practical for any household to achieve. The actions we have identified are not complicated, and people can do them with confidence that they are really making a significant difference.

These actions don't need someone to come in and carry out an audit to tell them what to do, or require someone to calculate their carbon footprint before they can take action.

Actions have to be worthwhile and effective to engender the positive feedback and enthusiasm that gets this behaviour to spread and become commonplace.

Practical and Achievable Actions to Save 4 Tonnes

We need to do more than change a few light bulbs and refuse a few carrier bags. Why stop at changing a few light bulbs when you can by making a few key changes can save tonnes of CO₂ every year and buy much needed time for world leaders and government and businesses to tackle the strategic challenges of decarbonising electricity generation.

Carbon Focus set out to identify effective worthwhile actions that would save 1 tonne or more per year. Our analysis found very few.

We have selected these as being effective and widely achievable and that do not require a change in habitual behaviour. For example we looked at wood-burning stoves which have excellent carbon performance but are not practical for everyone owing to their cost of installation, availability of wood supplies, and clean air zoning.

We believe any household can do four of these things which gives a 4 tonne saving.

If one third of the UK population saves 4 tonnes apiece it would save 80 million tonnes of CO₂, that's 8th of the nation's emissions and a good start towards the UK target of 5 tonnes per person.

See the next page for our list of the one-tonne carbon actions.

The One Tonne Carbon Actions

The only widely achievable actions we found that each save 1 tonne of carbon dioxide per year are:

Travel

- Fly one less long haul trip (Intercontinental)
- Fly three less short haul (Europe) trips
- Get a better car: a 40mpg car instead of a 30mpg one; or a 60mpg car instead of a 40mpg one
- Drive 3000 less miles per year

Food

- Have 75% of your food be UK-grown AND Seasonal
- Reduce Meat and Dairy consumption by 75%

Home

- Give your house a Thermal Makeover using a combination of:
 - Use your thermostats and timers effectively (0.3t)
 - Install solar hot water panels (0.3t)
 - Insulate your roof to 30cm (0.3t)
 - Replace an old F rated boiler with an A rated one (0.6-1.2t)
 - Swap appliances older than 10 years with A rated ones (0.3t)
 - Wash clothes on cold setting and hang out to dry (0.35t)
 - Install a chimney balloon (0.25t)
- Switch your thermostat 3 degrees lower
- Share your house with an additional person like a friend, relative or lodger

Stuff

- Shift £2000 of spending from high carbon goods to low carbon goods and services, for example spend on experiences rather than physical goods.

<i>High Carbon Spend Examples</i>	<i>Low Carbon Spend Examples</i>
Electronics	Durable products
Building materials	Second hand goods
Short life products	Live entertainment
	Education, courses

Campaign Examples

A handful of campaigns are already using quantified and prioritised tips to promote their carbon-saving messages:

- SaveTonnes
<http://www.youtube.com/watch?v=4ctGtsW4Zuk>
- Bloom: Smart choices for the carbon conscious
<http://www.bbc.co.uk/bloom/sitemap.shtml>
- Energy Savings Trust
<http://www.energysavingtrust.org.uk/calculator/checklist>

However, we found many more examples of lists of tips that were unquantified and unprioritised, including:

- FoE: Climate Top Tips: 50 ideas for how to reduce your own greenhouse gas emissions
- Women's Institute: WI Carbon Challenge
- Prevent Climate Change: Green Driving Tips
- BBC Ethical Man: Ethical Man's top ten tips for ethical living
- Direct Gov: Environment and greener living: Top tips on saving energy
- Winchester Action on Climate Change: Top Tips
- Which? Advice: Carbon-saving tips
- EDF: Energy efficiency tips
- npower : Go Green

Conclusion

NGOs, local authorities, government, the media and others giving carbon advice need to revise their current communications to householders to reflect the priority areas of action.

They can do this by:

- **Quantifying the amounts of CO₂ each suggested action will save**
- **Always including the Priority Actions listed in this report**
- **Stating the savings in tonnes rather than kilogrammes**
- **Include actions which save indirect energy use or embergry**
- **Emphasising the actions that make the most difference**

Only with this basic prioritisation with we be able to fight the growing trend of ecological window dressing, sustainable lip service and greenwash.

Appendix: Savings Calculations and Sources

Switching off TV at the mains with no standby (0.07 tonnes)

15W worse case standby energy

0.537 kgCO₂ per kWh electricity standard UK fuel mix

$15 \times 24 \times 365 / 1000 = 131.4 \text{ kWh}$ or $131 \times 0.537 = 70.35 \text{ kg} = 0.07 \text{ t}$

Boil only what you need (0.04 tonnes)

Carbon Focus measurement test data: 0.03 kWh per cup

Assume 6 times a day every day

One cup too much assumed overflow of kettle

0.537 kgCO₂ per kWh electricity standard UK fuel mix

So saving is: $0.537 \times 0.03 \times 6 \times 365 = 35 \text{ kgCO}_2$ or 0.035t

Refusing plastic carrier bags (0.02 tonnes)

6kgCO₂ per kg of PE manufactured

5g each at 14 bags per week is

$(5 / 1000) \times 6 \times 14 \times 52 = 21.84 \text{ kgCO}_2$ or 0.02tCO₂

Using cloth nappies (0 tonnes)

Source: An updated lifecycle assessment study for disposable and reusable nappies Science Report – SC010018/SR2, Environment Agency – October 2008

Heat up meals in a microwave rather than a conventional oven (0.018 tonnes)

Source: Women's Institute, FoE, The Guardian

Listen to the radio one hour a day switching to wind up radio (0.0025 tonnes)

Source: Women's Institute Carbon Challenge

Fly one less long haul trip (Intercontinental)

LHR to JFK return 1.53t

Source: Climate Care Flight Calculator

<http://www.jpmorganclimatecare.com/>

Fly three less short haul (Europe) trips

LHR to Rome 0.33t

LHR to Athens 0.53t

LHR to Vienna 0.29t

LHR to Paris 0.11t

Source: Climate Care Flight Calculator

<http://www.jpmorganclimatecare.com/>

Get a 40mpg car instead of a 30mpg one; Get a 60mpg car instead of a 40mpg one

2.5kgCO₂/L of fuel (average of diesel and petrol)

4.456 Litres per gallon

approx 10,000 miles per year

10000 miles at 30 mpg = $(10000 / 30) \times 4.546 \text{ Litres} = 1515 \times 2.5 = 3788 \text{ kgCO}_2$

10000 miles at 40 mpg = $(10000 / 40) \times 4.546 \text{ Litres} = 1137 \times 2.5 = 2843 \text{ kgCO}_2$

saving = 0.95t

10000 miles at 60 mpg = $(10000/60)*4.546$ Litres = $756 * 2.5 = 1890$ kgCO₂
saving = 0.95t

Drive 3000 less miles per year

Average Diesel Car 0.3185 kgCO₂ per mile

Carbon Trust Fact sheet CTL018 Energy and carbon conversions 2008 update

Have 75% of your food be UK-grown AND Seasonal

Source: <http://www.bbc.co.uk/bloom/actions/localseasonalfood.shtml>

Reduce Meat and Dairy consumption by 75%

“By going vegan, you can slice off almost as much CO₂ in a year as skipping a single return flight to India.” LHR to Delhi is 1.88t, so about 75% cut in meat and dairy should easily save 1 tonne. Source:

<http://www.bbc.co.uk/bloom/actions/eatinglessbeef.shtml>

<http://minerva.simons-rock.edu/~geshel/SantaFe06/nutriSantaFe06.ppt>

Give your house a Thermal Makeover using a combination of:

Use your thermostats and timers effectively (0.3t)

<http://www.bbc.co.uk/bloom/actions/heatingcontrols.shtml>

Install solar hot water panels (0.3t)

<http://www.bbc.co.uk/bloom/actions/solarwater.shtml>

Insulate your roof to 30cm (0.3t)

<http://www.bbc.co.uk/bloom/actions/loftinsulation.shtml>

Replace old F rated boiler with an A rated one (0.6-1.2t)

<http://www.bbc.co.uk/bloom/actions/condensingboiler.shtml>

Swap appliances older than 10 years with A rated ones (0.3t)

<http://www.bbc.co.uk/bloom/actions/aratedappliances.shtml>

Wash clothes on cold setting and hang out to dry (0.35t)

<http://www.bbc.co.uk/bloom/actions/lowtempwashing.shtml>

<http://www.bbc.co.uk/bloom/actions/linedryingclothes.shtml>

Switch your thermostat 3 degrees lower

“Turning the thermostat by 1°C down saves 300 kg of CO₂ per year.”

<http://www.dothegreenthing.com/wiki/display/WIKI/Turn+down+thermostats+on+room+heating>.

Share your house with an additional person like a friend, relative or lodger

<http://www.bbc.co.uk/bloom/actions/lodger.shtml>

Shift £2000 of spending from high carbon goods to low carbon goods and services, for example spend on experiences rather than physical goods.

Source: Carbon DeTox, George Marshall 2007 (Figure revised for inflation)

Appendix: About Carbon Focus

Carbon Focus is a think tank run by Edwin Datschefski and Katharine Harborne which aims to inform and advise NGOs, government, local authorities, the press and media the importance of effective change and scientific accuracy in carbon communications.

We hope you find this report stimulating, engaging yet pragmatic and we welcome the opportunity to discuss it with you in more detail.



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