

Can a city ever be truly carbon neutral?

March 20 2018, by Joe Blakey And Sherilyn Macgregor



Credit: AI-generated image ([disclaimer](#))

Upon becoming Greater Manchester's first elected mayor, Andy Burnham announced his ambition to make the city-region one of the greenest in Europe. In his [Mayor's manifesto](#), the former MP and Labour leadership candidate, committed to "a new, accelerated ambition for Greater Manchester on the green economy and carbon neutrality". If achieved, Manchester would be transformed from one-time poster city for Britain's dirty past to a decarbonised oasis in the post-industrial north-

west of England. What it will take to realise this vision is the topic of a "Green Summit" to be held in Manchester on March 21.

The [Green Summit website](#) claims the best minds from Greater Manchester's universities and businesses, local activists and residents will be brought together to debate how to "[achieve carbon neutrality as early as possible](#)", ideally by 2050. Leading up to the summit, expert workshops and "listening events" were held across the region, in order to inform a forthcoming [Green Charter](#), the plan for how the city will become "[carbon](#) neutral".

We argue that the concept of "[carbon neutrality](#)" is a lofty ambition, but it needs unpacking before anyone gets too excited about its potential. The idea that a zero carbon target is the best driver for creating a city-region and planet that's inclusive and liveable for all raises important questions.

Understanding carbon

Carbon neutrality, or "zero-carbon", is a curious term. [NASA remarks that](#) "carbon is the backbone of life on Earth. We are made of carbon, we eat carbon, and our civilisations – our homes, our means of transport – are built on carbon". Even [our bodies are 18.5% carbon](#). Ridding our cities of carbon suddenly seems absurd. Removing the "backbone of our life on Earth" is surely not on Burnham's eco-agenda. So what does "carbon neutral by 2050" actually mean? Understanding a little about carbon footprinting helps to expose the nuances and silences behind the ambition.

Carbon is emitted at various points within the production, transportation and consumption of goods and services, but establishing responsibility for these emissions depends on your standpoint. Is it the consumer, the manufacturer, the haulage firm, the investor, the source country or the

destination country? Our actions and impacts do not respect political boundaries.

Governments typically count carbon emissions following guidelines from the [Intergovernmental Panel on Climate Change \(IPCC\)](#). Taking a "territorially-based" approach, only the direct carbon emissions (and removals) taking place within a certain city or a country are counted, along with those from the production of the energy consumed. "Carbon" stands for a whole raft of greenhouse gases, including CO₂. This approach underpins [declarations of successes](#) and failures worldwide, but it's just one way to allocate carbon [emission](#). And herein lies the issue.

An alternative "consumption-based" accounting is more often used by environmental NGOs such as the [WWF](#) or [some parts](#) of the [UK government](#). This approach counts the total emissions from goods and services (including travel) consumed by a person, city or country, regardless of where they occurred. Under consumption-based accounting, eating an imported steak means factoring in shipping emissions, the plastic used in packaging, and the [emissions from the cow itself](#) – all of which take place far outside of the typical "footprint". One recent analysis found a group of large cities across the world [emitted 60% more carbon](#) when considered like this.

But will Greater Manchester, the aspiring "Northern Powerhouse", really want to include emissions from such key drivers of economic growth? The city-region has a [busy airport](#), for instance, that it might be convenient to exclude under "zero carbon". Greater Manchester's ambition may be laudable, but the zero-carbon definition risks sidelining much-needed action in other areas.

There is some degree of hope. Greater Manchester is implementing [a new standard](#) which extends the IPCC's approach, also considering emissions from residents' travel beyond Greater Manchester and waste

disposed of beyond the city-region. This is significantly more ambitious than a territorial-based approach. But, even if "zero-carbon" was defined under this approach, there would still be difficult questions as to what extent aviation emissions would be included – if at all – not to mention other consumption-based emissions, such as those from imported food.

Cleaner, greener, and lower carbon

In any case, the city [needs environmental policies](#) beyond the focus on becoming "carbon neutral". Litter is one of the top resident concerns about environmental quality, for instance, while a [recent study by MMU's Gina Cavan](#) found many people in the city have limited access to green and blue spaces. Research by [our colleagues](#) found the greatest level of microplastics ever recorded anywhere on the planet in Manchester's very own River Tame.

No doubt the mayor and his team will be concerned about these other problems too. But the pollution crises and the lack of access to green spaces are questions of environmental injustice, and their root causes will not necessarily be addressed by carbon neutrality. To avoid obscuring other areas of action, it's vital that claims about a "carbon neutral" future clearly state what they are referring to.

Carbon neutrality doesn't cover everything – it might only be concerned with decarbonising energy and in-boundary emissions. If Greater Manchester is serious about becoming greener, cleaner and inclusive, then there needs to be accountability for other perspectives on emissions responsibility, including those associated with consumption and aviation.

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