



CUTTING CARBON IN LONDON

**2015
Update**

November 2015

About this update

In 2014, we reported¹ that the Mayor of London was behind schedule with his plans to cut London's carbon emissions. Since then, more recent data have been published², and we have met with the following expert guests³:

- **Patrick Feehily** - Greater London Authority
- **Andrew Richmond** - Greater London Authority
- **Peter North** - Greater London Authority
- **Pedro Guertler** – Association for the Conservation of Energy
- **Syed Ahmed** – Energy for London
- **Will Dawson** – Forum for the Future
- **Tony Glover** – Energy Networks Association



The Environment Committee examines all aspects of the capital's environment by reviewing the Mayor's strategies on air quality, water, waste, climate change and energy. It considers what additional measures could be taken to help improve Londoners' quality of life.

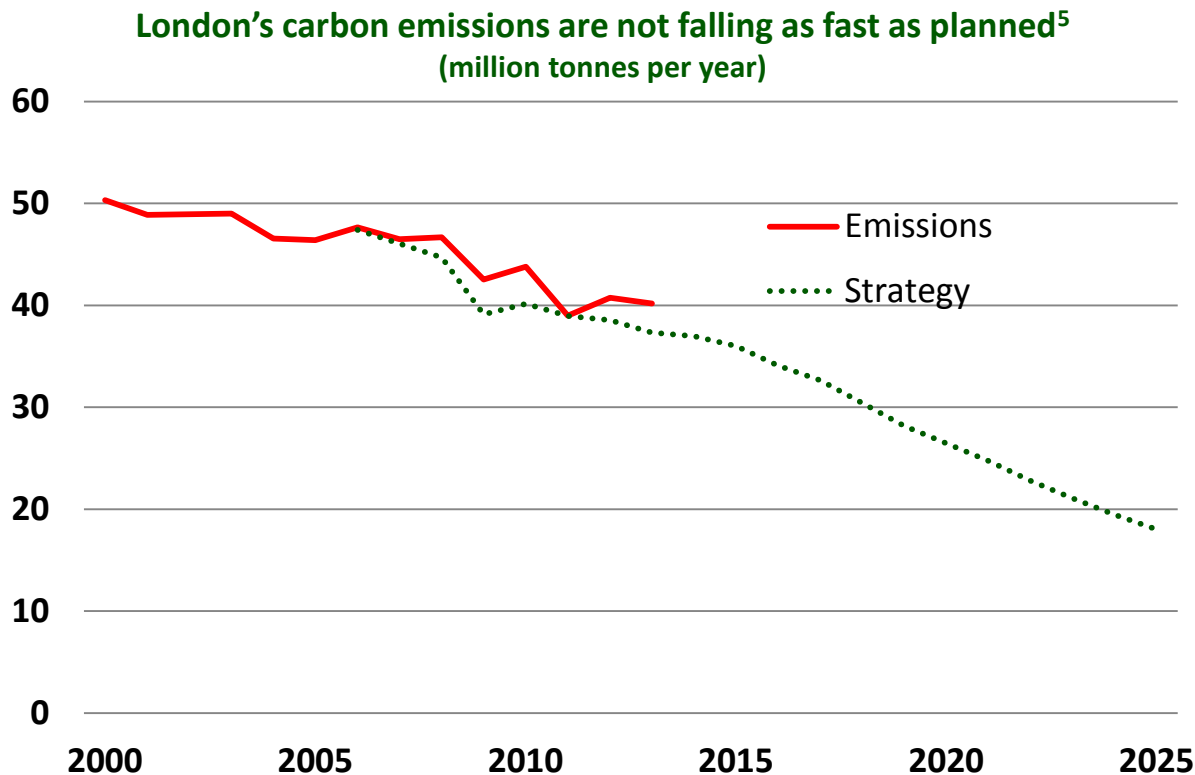
The Committee Members are:

- Darren Johnson (Chair)
- Murad Qureshi (Deputy Chair)
- Jennette Arnold
- James Cleverly
- Nicky Gavron
- Stephen Knight
- Steve O'Connell

London's carbon emissions

The Mayor has pledged to reduce carbon emissions by 60% by 2025. His Climate Change Mitigation and Energy Strategy (CCMES) shows the emissions expected each year on the way to this goal.⁴

Actual emissions are reported yearly.



From 2006 to 2013, London put into the atmosphere nearly 15 million tonnes more CO₂ than if emissions had fallen in line with the strategy.

This publication coincides with the start of the United Nations conference on climate action in Paris, the COP21.

The Mayor of London is to attend and has an opportunity to say how London will deliver the carbon reductions it has committed to. He can also say what national and international action is needed.

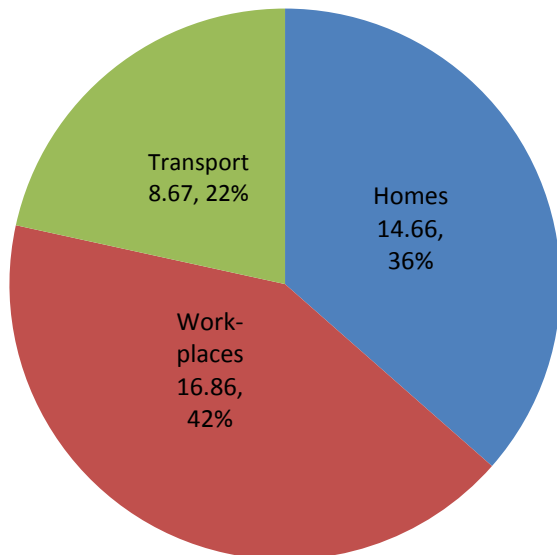
In May 2016, a new Mayor will be elected. The election campaign will give Londoners a chance to debate how the next Mayor should reinvigorate London's carbon reduction strategy in this crucial next four years.

London's carbon emissions

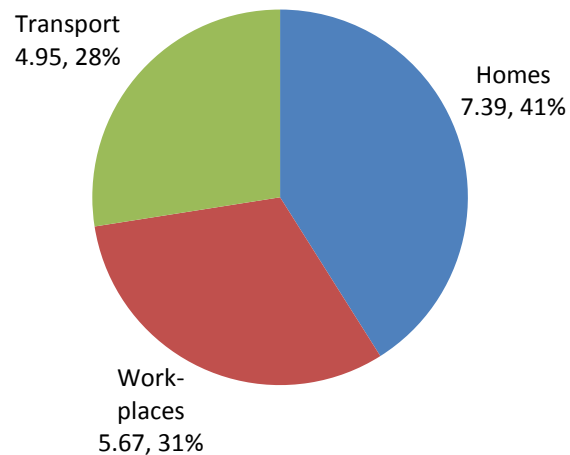
London's CO₂ emissions come from homes, workplaces and transport.

Currently, workplaces are London's biggest-emitting sector, and less than a quarter of emissions are from transport. In the CCMES, all sectors must reduce emissions but workplaces are to reduce the most, leaving homes the biggest-emitting sector, with transport to reduce the least.

2013 emissions²
(million tonnes)



2025 emissions⁴
(million tonnes)



HOMES

Homes use energy, and emit carbon, for heating, cooling, lighting and running appliances. New homes can be built to energy-efficient standards, but existing homes require retrofitting with efficiency measures.

Slides 5-7

WORKPLACES

Workplaces have similar uses including heating, cooling and running equipment. Likewise, existing workplaces require energy efficiency retrofit.

Slides 8 and 9

TRANSPORT

More efficient vehicles are reducing energy use, and a shift is beginning from fuel combustion to electric power.

Slide 10

ENERGY SUPPLY

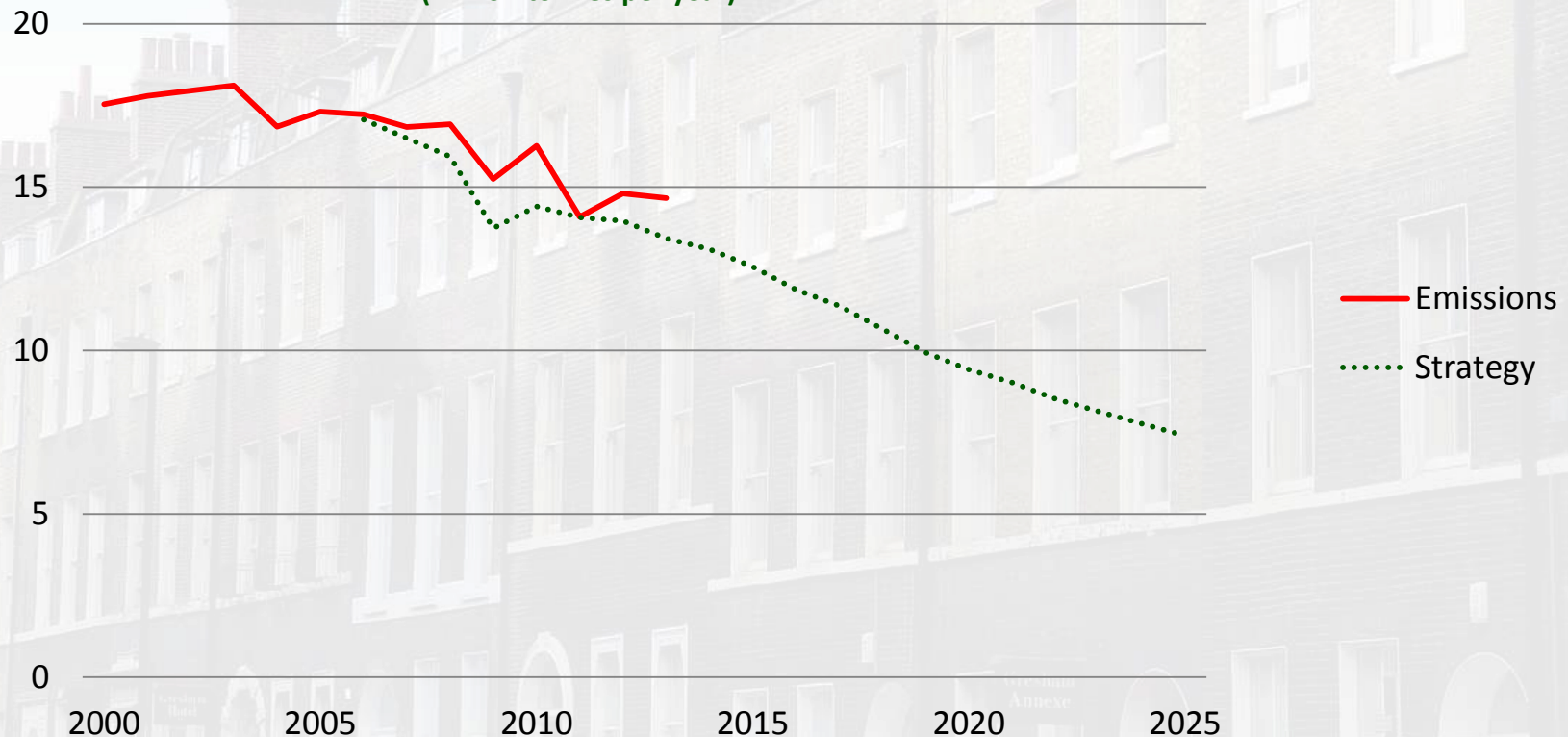
All sectors depend on energy supply. Getting cleaner electricity in the grid would help reduce emissions from all electricity uses.

Slide 11

Homes

According to the CCMES, emissions from London's homes need to fall by about 53% by 2025. 2013 figures show a reduction of 7%, against 15% that had been expected by then. Excess emissions from 2006 to 2013 totalled nearly 7 million tonnes.

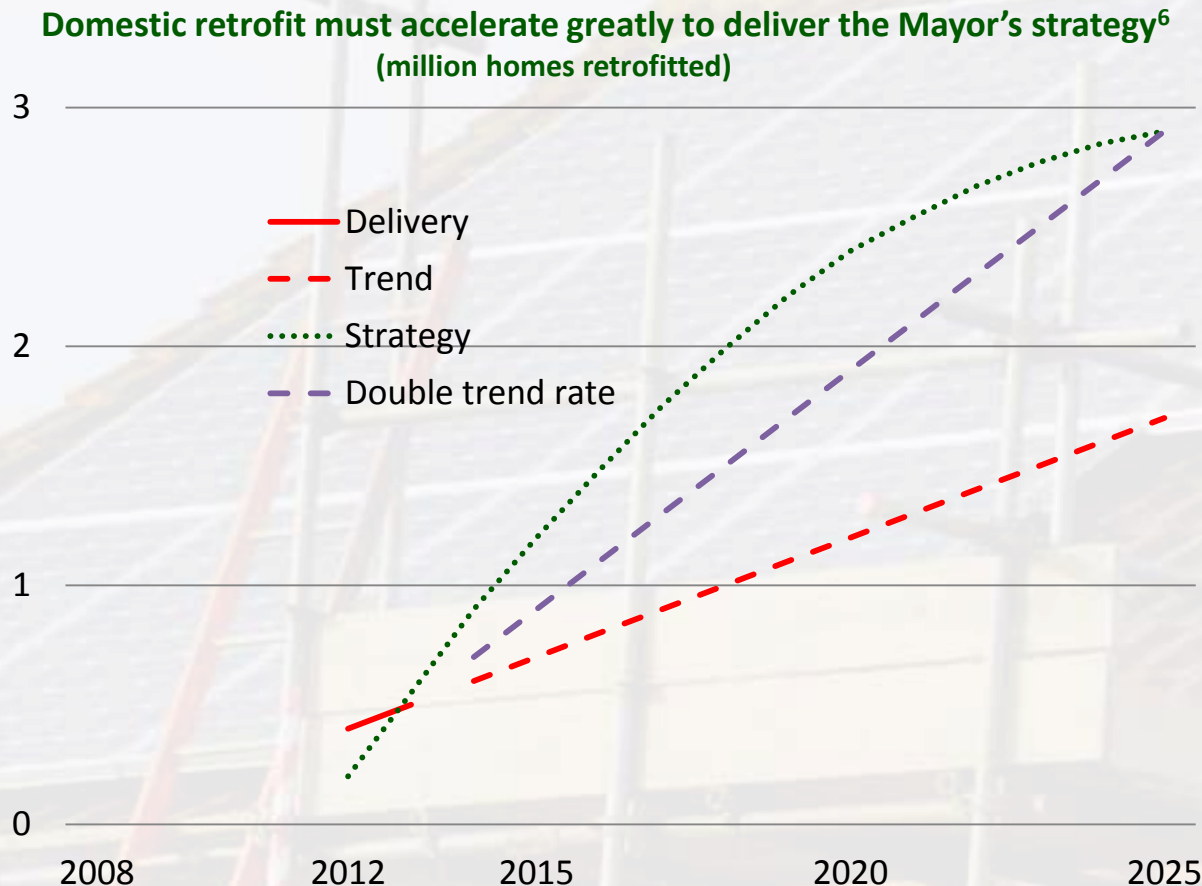
London's domestic emission reductions are lagging behind⁵
(million tonnes per year)



Homes

Most of 2025's homes are already standing, and many have very poor energy efficiency.

Retrofitting them to use less energy is crucial – it cuts carbon, reduces bills and promotes well-being.



From 2008 to 2013 the Mayor's programmes, plus other programmes and the wider market, retrofitted about half a million homes, at about 100,000 per year. As the trend line shows, this is far too slow to deliver the Mayor's strategy.

The current phase of the Mayor's RE:NEW programme aims to double its rate of progress. If it delivers this, and if the wider market also doubles its delivery, and if these rates are maintained even as only harder-to-fit homes remain, then progress could catch up with the strategy in 2025.

Homes

The number of homes reached tells only part of the story – carbon reductions come from the actual measures fitted to each home. Bigger works like loft and wall insulation make more difference than small, easy measures like draught excluders. Therefore the CCMES sets milestones for the number of measures fitted of each main type.

The homes reached by retrofit are not fitting enough, or big enough, efficiency measures⁷
(thousands)

	RE:NEW delivery	Estimated total delivery	Milestone 2015	Milestone 2020	Target 2025
Homes reached	113	500+	1,200	2,400	2,900
Easy measures fitted	80	400	9,000	11,400	15,700
Loft or cavity wall insulation installations	16	80	1,700	1,700	1,700
Solid wall insulation installations	4	20	60	586	731

The GLA has supplied figures for delivery by its RE:NEW programme.

As it is reported that London's whole retrofit market has fitted about five times as many homes as RE:NEW alone, we have used this factor to estimate total delivery for this table.

Changes to the pace of RE:NEW, and to national retrofit programmes such as the Green Deal and ECO, make it hard to know the true figures – but the milestones are clearly some way off.

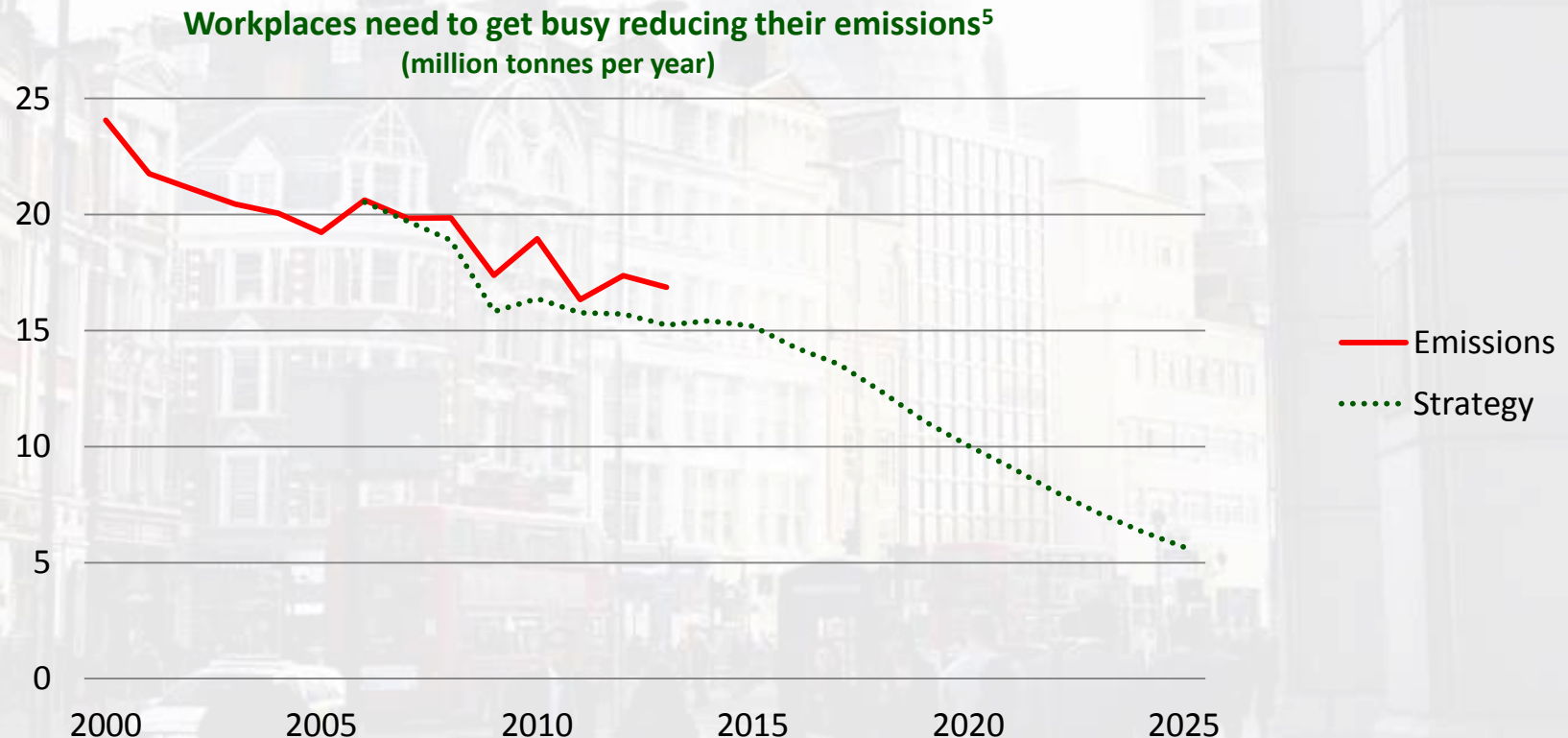
Workplaces

The CCMES says emissions from London's workplaces need to fall by over 70% by 2025.

2013 figures show a reduction of nearly 15%, but against an expectation of nearly 23% by then.

Excess emissions since 2006 amounted to over 9 million tonnes.

Workplaces are London's highest-emitting sector: the next Mayor will need to effectively engage large and small businesses, as well as the public sector.



Workplaces

As with homes, existing workplaces require retrofitting to improve energy efficiency.

As a contribution towards this goal, the GLA's RE:FIT programme seeks to facilitate retrofit to public sector workplaces and in future private businesses. The GLA either has met or still hopes to meet the programme's main targets for 2015.

The RE:FIT programme is meeting, or close to meeting, its main targets so far⁸

	RE:FIT delivery	Of total delivery:		Milestone 2015	Milestone 2020	Target 2025
		Work begun	Secured or committed			
Number of buildings	497	369	128	600		
Public sector floorspace (million m ²)	1.92	Not known	Not known	1.6	6.3	11.0
Private sector floorspace (million m ²)	0	0	0	0	27.0	44.0

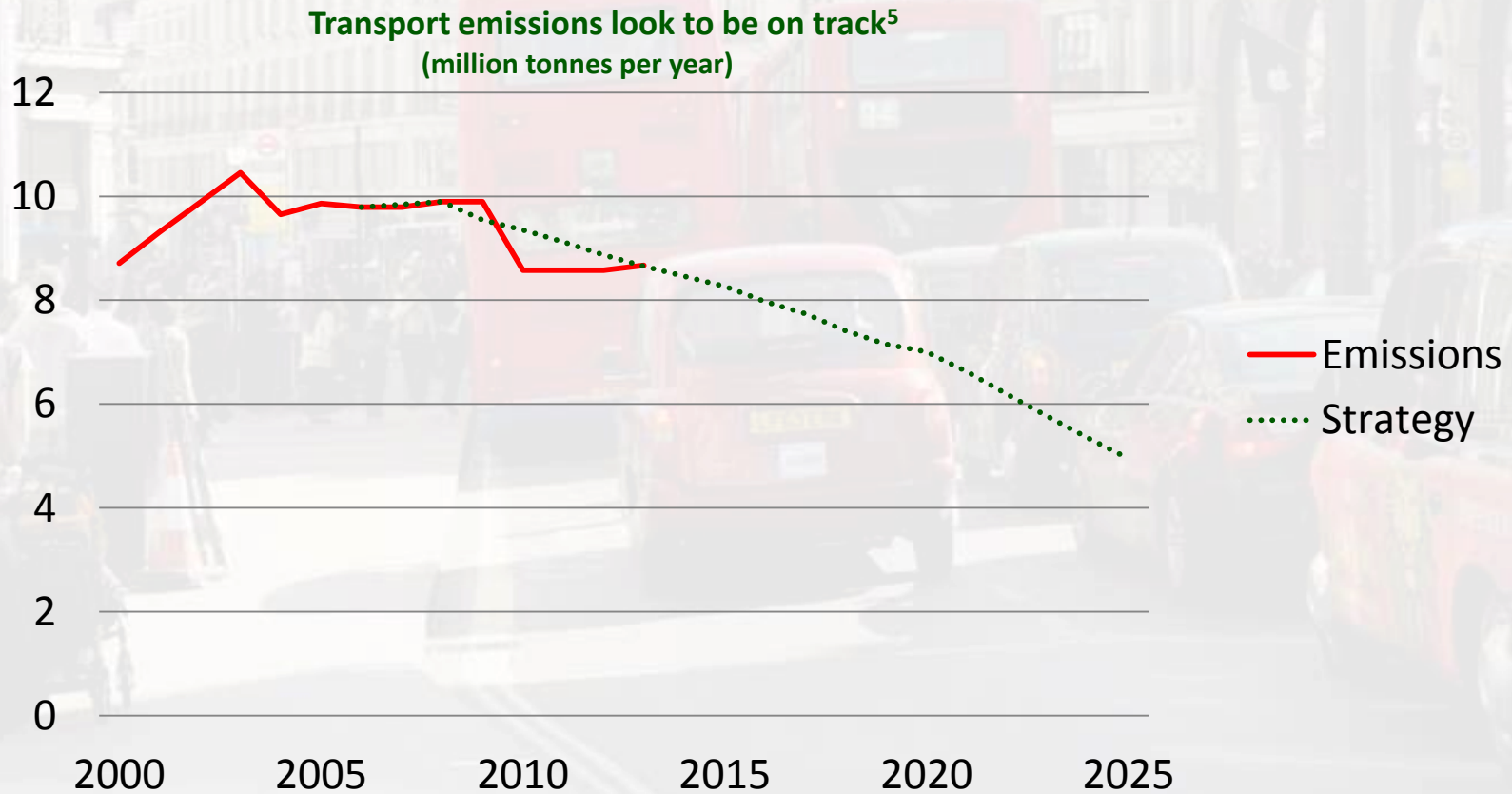
RE:FIT has already brought in commitments to refit more public sector floorspace than its 2015 milestone.

However, the CCMES requires about three times as much again over the next five years, plus a vastly greater extension to the private sector. Also, RE:FIT is just a fraction of what London needs to do.

With overall workplace emissions reductions already behind schedule, this area remains a significant challenge for the next Mayoralty.

Transport

London's transport emissions need to fall by nearly 48% by 2025, according to the CCMES. Figures from 2013 suggest that reductions so far are very near the target, but the lack of 2011 or 2012 data, as well as changes in how the figures are calculated, make it difficult to gauge the current trend or the cumulative emissions difference.



Energy supply

Nearly a quarter of the carbon reductions in the Mayor's strategy rely on national policies to clean up the electricity grid, allowing London to import low-carbon electricity.

There seems to be no consistent trend in grid carbon intensity, so the strategy's expectations are not being met.

Grid decarbonisation needs to begin immediately and make up lost ground.

The national grid needs to start supplying much lower carbon electricity year on year⁹
(kg CO₂ per kilowatt-hour)



References

- ¹ *Could Do Better*, report card by the London Assembly on progress with the Mayor's carbon reduction strategies, July 2014
<http://www.london.gov.uk/mayor-assembly/london-assembly/publications/mayor-missing-carbon-reduction-targets>
- ² *The Mayor's Climate Change Mitigation and Energy Annual Report 2013/14*
<http://www.london.gov.uk/priorities/environment/publications/the-mayors-climate-change-mitigation-and-energy-report>
- ³ Environment Committee meeting of 5 November 2015
<http://www.london.gov.uk/moderngov/ieListDocuments.aspx?CId=305&MId=5684>
- ⁴ *Delivering London's Energy Future*, the Mayor's Climate Change and Energy Strategy (see Appendix A for detailed targets)
<http://www.london.gov.uk/priorities/environment/publications/delivering-londons-energy-future-the-mayors-climate-change>.
- ⁵ London Emissions and Greenhouse Gases Inventory, interim 2013 edition <http://data.london.gov.uk/dataset/interim-leggi--2013>
- ⁶ Delivery figures from the CCMES annual report (see note 2 above and the previous edition at <http://www.london.gov.uk/priorities/environment/publications/mayor-s-climate-change-mitigation-and-energy-annual-report-2011>). Strategy line constructed from 5-yearly milestones in Appendix A to the CCMES (see note 4 above). Trend line based on a continuation of 2008-2013 rates. The double trend line is broadly consistent to 2016/17 with the aims of the current RE:NEW phase and expectations of the wider market set out in the CCMES annual report and at the Environment Committee meeting of 6 February 2014 <http://www.london.gov.uk/moderngov/documents/b9953/Minutes%20-%20Appendix%201%20-%20Transcript%20Thursday%2006-Feb-2014%2010.00%20Environment%20Committee.pdf?T=9>
- ⁷ RE:NEW delivery figures to October 2015 from GLA. Total homes reached from CCMES annual report (see note 2). Total measures figures estimated with a similar ratio, as explained on the slide. Milestone and target figures from CCMES Appendix A (see note 4); note that these targets are for the number of measures fitted, more than one per property.
- ⁸ RE:FIT delivery figures to October 2015 from GLA. Milestone and target figures from CCMES Appendix A (see note 4).
- ⁹ Delivery figures from UK government greenhouse gas conversion factors for carbon reporting <http://www.ukconversionfactorscarbonsmart.co.uk/>. Strategy line constructed from 5-yearly milestones in CCMES Appendix A (see note 4), which are based on a UK Committee on Climate Change 'extended ambition' scenario.

Image on slide 5 from Pixabay <https://pixabay.com/en/houses-facades-homes-chimneys-510514/>

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