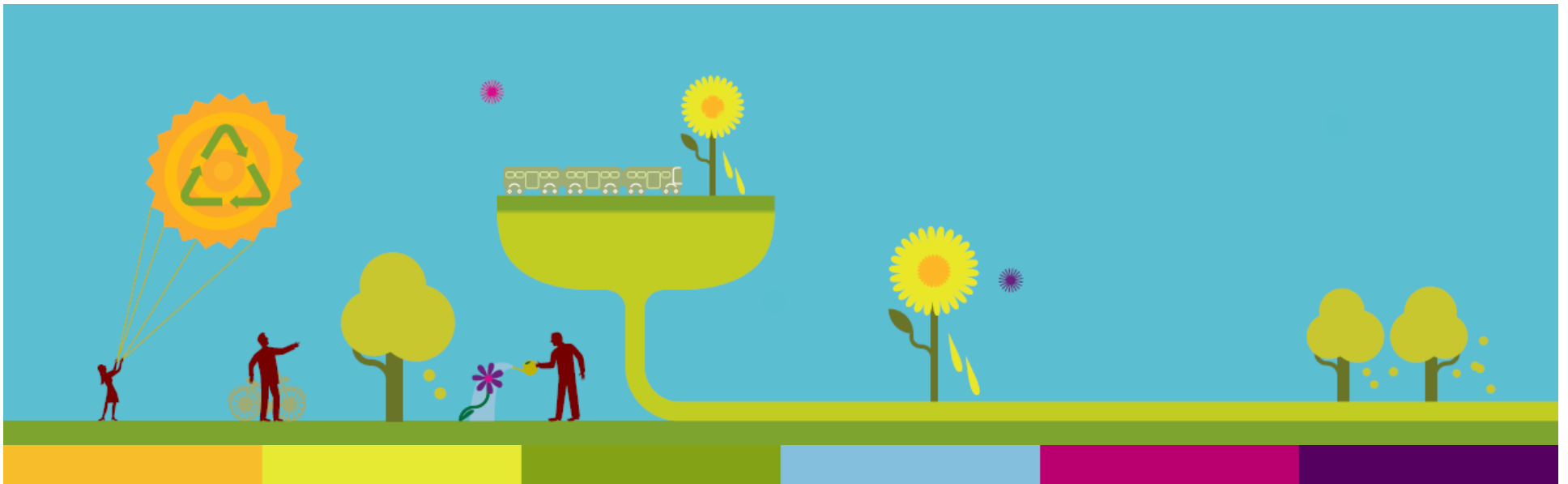


HEMS and the retrofit agenda

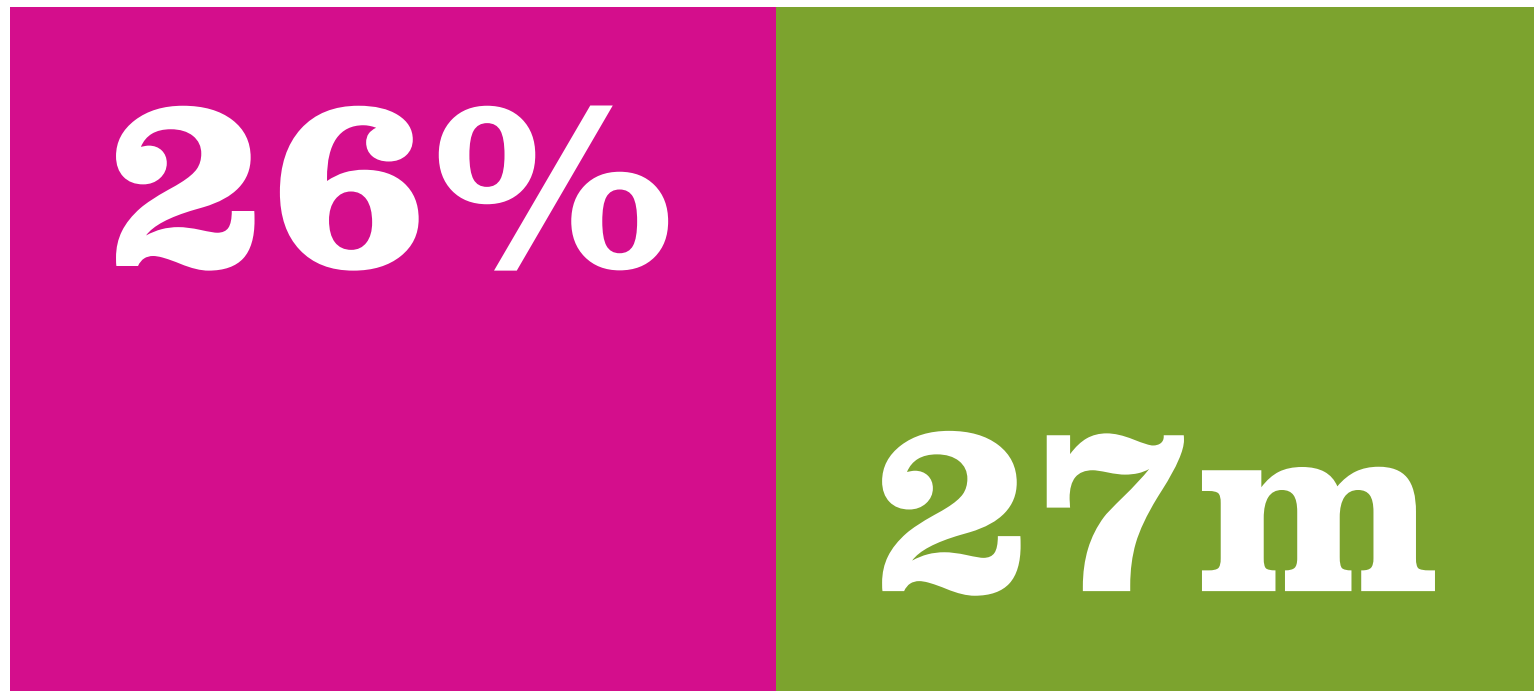
Ben Ross | b.ross@forumforthefuture.org



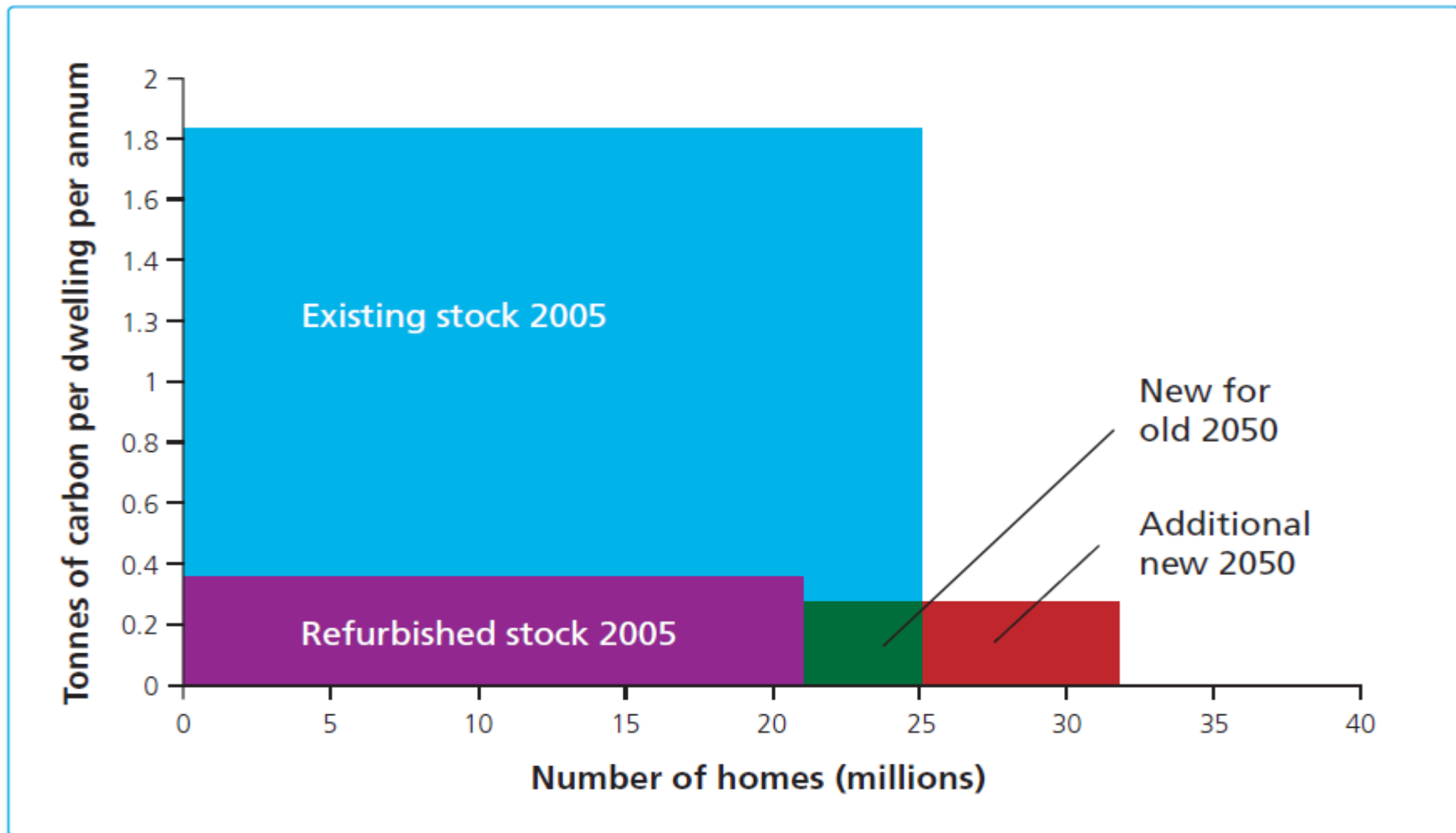
reduction in UK emissions needed



UK carbon emissions from homes



Scenario for reduced carbon emissions from the UK housing stock in 2050¹¹



Royal Commission on Environment Pollution, 2007



HEMS drivers

- Low Carbon Transition Plan – emissions reduction of 29% by 2020.
- Energy Security
- Jobs in product and service industries



HEMS headlines

- All loft and cavity walls done by 2015
- Smart meters & displays installed by 2020
- Private and social landlords will take action to improve building fabric
- More district heating
- 65,000 people employed in manufacturing and delivery, including advice services
- and...



government's refitting ambition

[up to] **7m**
homes

by
2020



and how...

- Community Partnerships and Enhanced Role for LAs
 - Area based programmes to deliver efficiency measures
 - district heating
- Universal Standards for the Rental Sector –
 - ‘Warm Homes’ standard
 - Consult on regulation to address split incentive for private landlords/tenants



and how...

- Invest to Save –
 - CERT/CESP/CERT+
 - Pay as You Save
- Consumer Support – certification for advisers and installers

...but then along comes FITS and RHI...

...and “SHOW ME THE MONEY”



but when...

Until 2015:

- CERT > 2012
- CERT+ 2012 > 2015
- Social housing ‘more ambitious eco-upgrades’

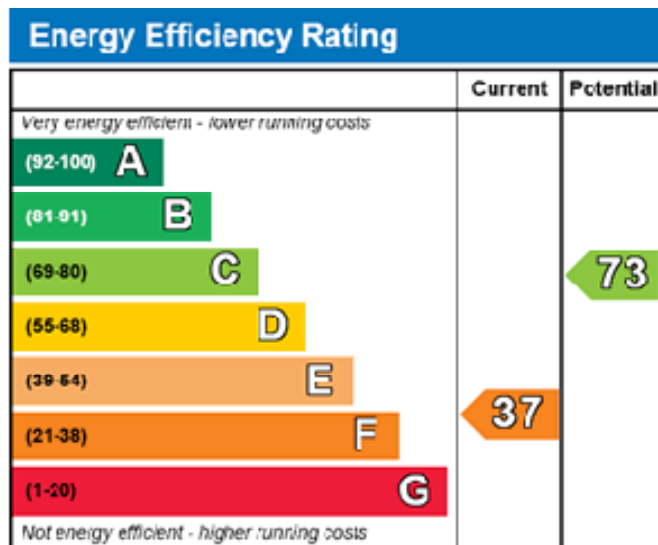
From 2015:

- ‘accelerate roll out of more significant measures such as solid wall insulation and heat pumps’
- PAYS
- District Heating



opportunities for the sector..

- Over £23 billion currently spent on home maintenance
- Opportunity for low carbon retrofit estimated between £3.5 and £6.5 billion a year but potentially much higher



The projects



ARUP



the project identified the potential solutions and opportunities for large scale retro-fit of existing private housing stock – using Bristol city region as a case study

<http://www.forumforthefuture.org/project/retrofit-at-scale-bristol>



ARUP



e21c



Results

- delivery at scale makes sense
- significant savings to be made by working on clusters, the larger the better;
- savings are eroded by increased transport, logistics and staff costs if homes are not within walking distance;
- Retrofitting Bristol at scale could save up to 9% of Bristol's carbon emissions



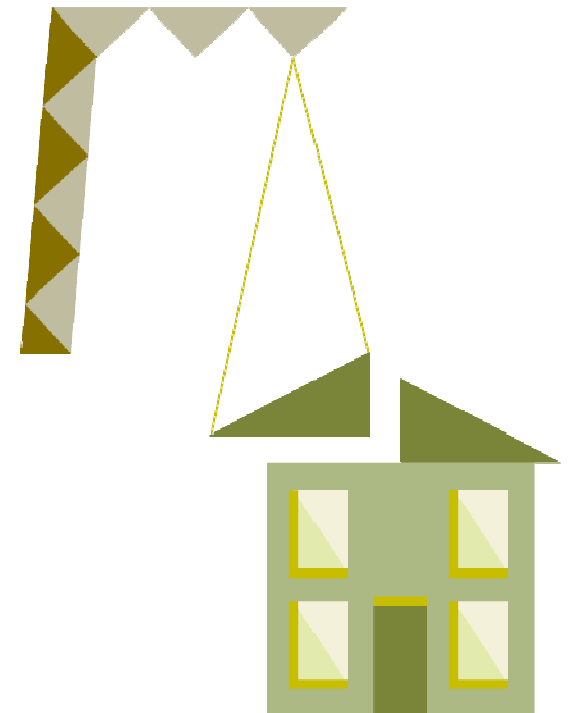


Refit West aims to support private homeowners to retro-fit their properties – demonstrating a scalable delivery mechanism

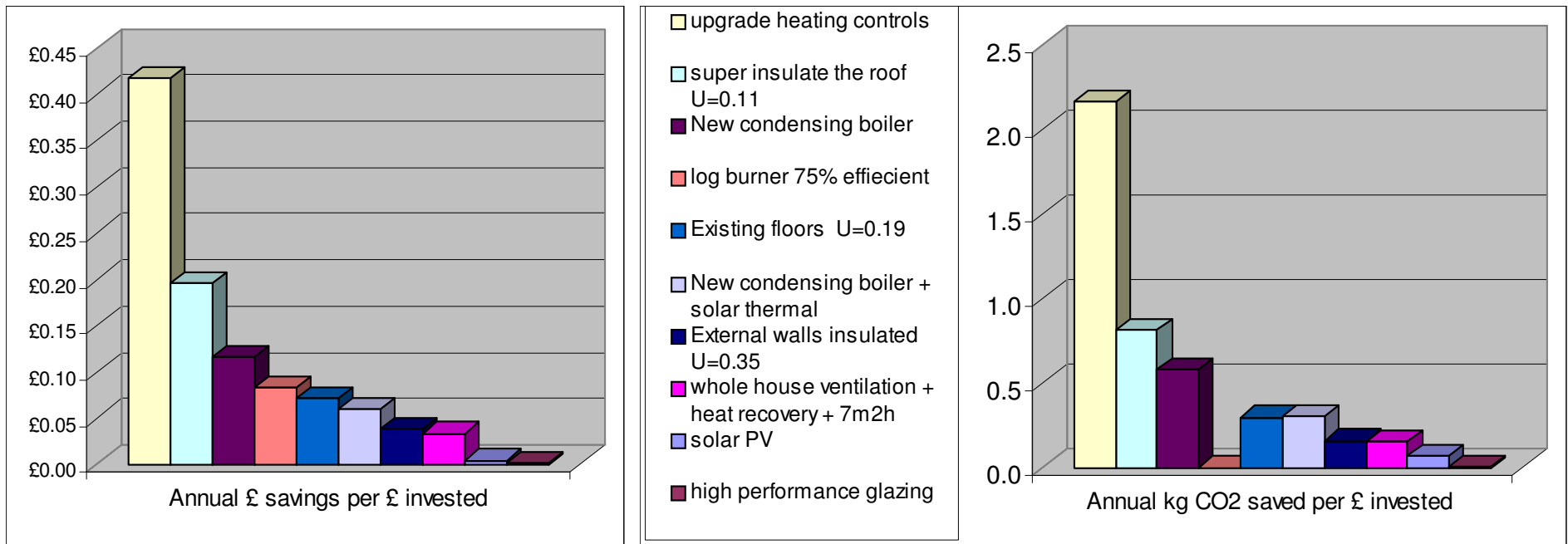


why our focus on private homes..

- social housing making some good progress
- 70% of stock is owner occupied
- a further 10% is private rental
- multiple owners and multiple budgets
- incentive for homeowners isn't strong enough yet



from survey to presenting information...



- The graph above shows the £ savings, left, and annual CO₂ reduction, right, for each pound (£) invested.
- The taller the column the greater the returns on investment.
- These results are modelled on standard occupancy with indicative costs from the Refit West Schedule of Rates, providing rates for approved building contractors.



refit west example finance



A home owner may take a £5,000 loan, secured as a second charge on their property

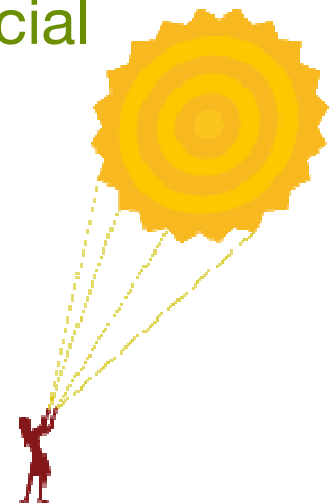
Achieve a 20% reduction in energy and carbon, saving the average family £20 a month (£240 a year) on fuel bills

They would pay £16 a month (£200 a year) on a 4% interest only loan, with the capital repayable on sale of the property, or at end of term



summary

- there is a business case for providing private home refurbishment at scale but it's currently niche business and risky
- finance plans must be low cost and low risk, even for the more cost effective measures
- private homeowners need more than just financial incentives
- it's complex and fine grain



so where next?

- challenges of scaling up delivery
 - business and professions need to provide the skills and process to deliver
 - suppliers need to realise the opportunities and costs need to come down
- challenges of private sector homes
 - effective communication needed to inspire and engage
 - provision of the 'right' information
- and what about the finance?

