

NATIONAL
ENERGY
FOUNDATION

*Improving the use of
energy in buildings*

Closing the Energy Performance Loop

Towards a new Fuel Poverty Strategy- 29th January 2015

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National Energy Foundation

NEF – improving the use of energy in new and existing buildings

Making better buildings

- Management – existing buildings
- Retrofit and refurbishment

- Procurement
- Building delivery and performance verification

Making buildings better

NEF's work with RPs:

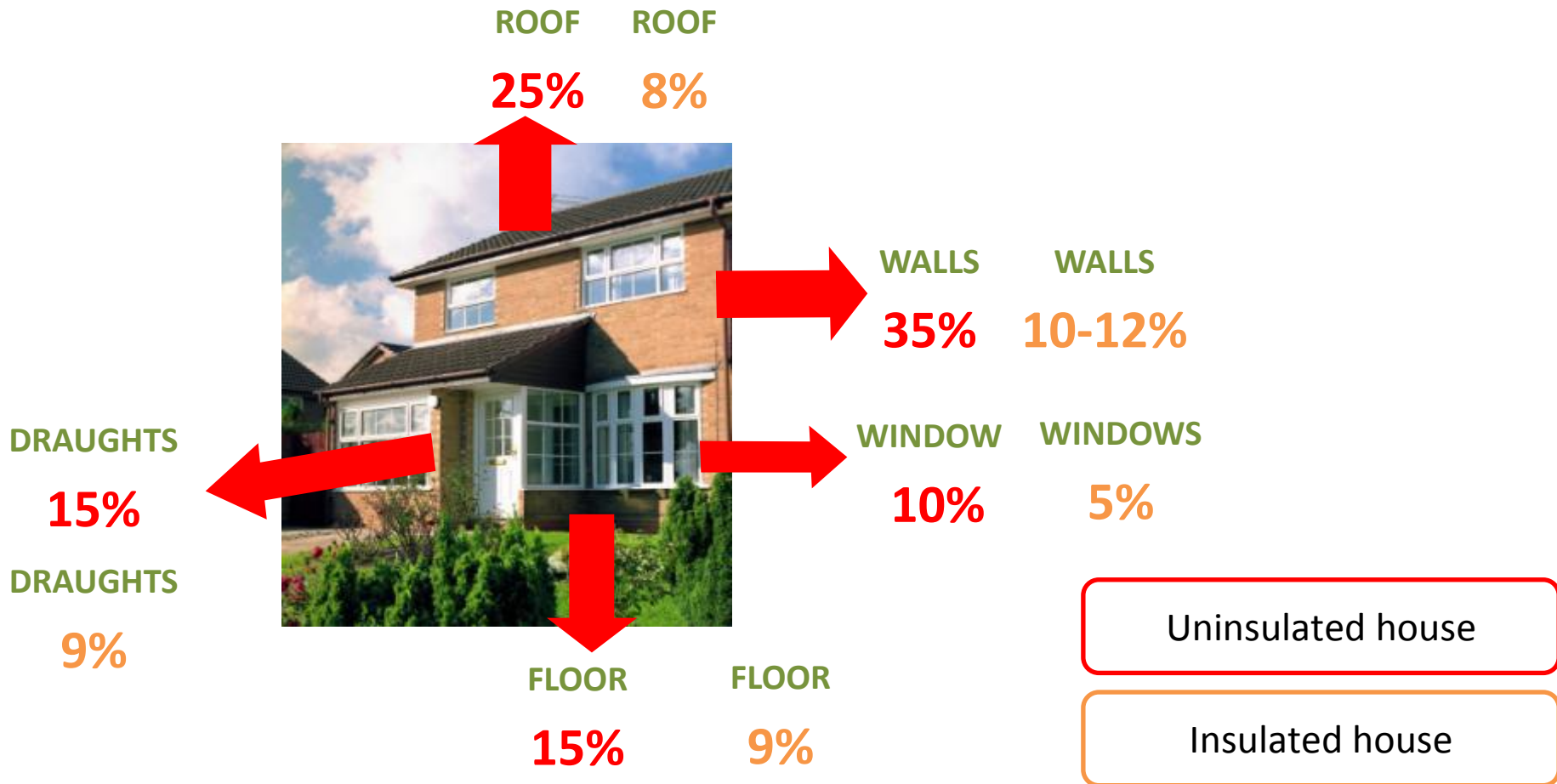


NEF's work in Fuel Poverty –

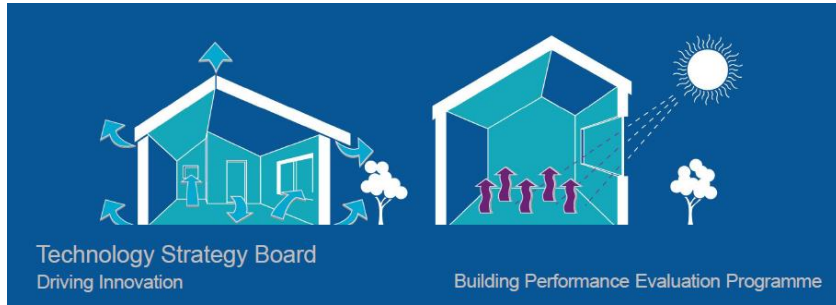
taken from 103/14 annual report

- Worked with 26 local councils
- Wide range of Housing Associations
- 8,300 people at 232 outreach events and via Affordable Warmth helpline
- Facilitated installation of 850 energy efficiency measures
- Research, stock modelling and asset management strategy

Heat/Energy loss from homes



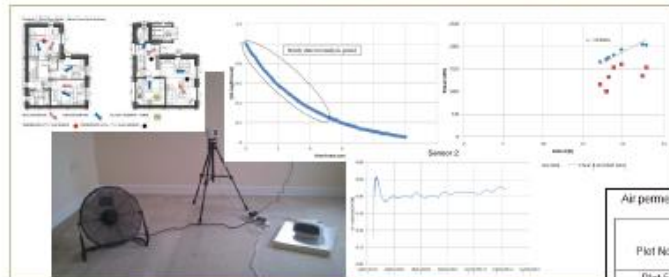
Innovate UK– Retrofit for the Future & Building Performance Evaluation Programme



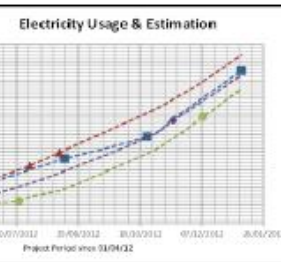
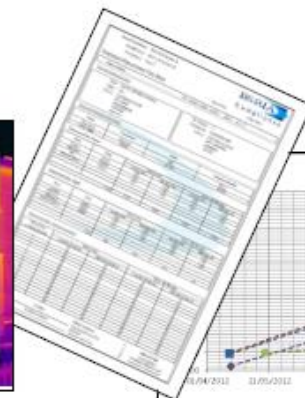
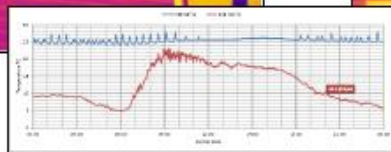
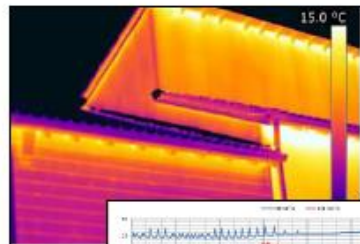
- 86 domestic deep refurbishment projects; 3 non-domestic
- Over 100 new build projects
- 49 non-domestic studies covering 56 buildings
- 59 domestic studies, 366 dwellings (developments 3989 dwellings) – 30+ social housing
- Completion and early occupation / in-use
- Energy use typically 2.5- 4.5 times predicted

Building Performance Evaluation - measuring and verifying performance

TSB-BPE (450079) Key Project Activities



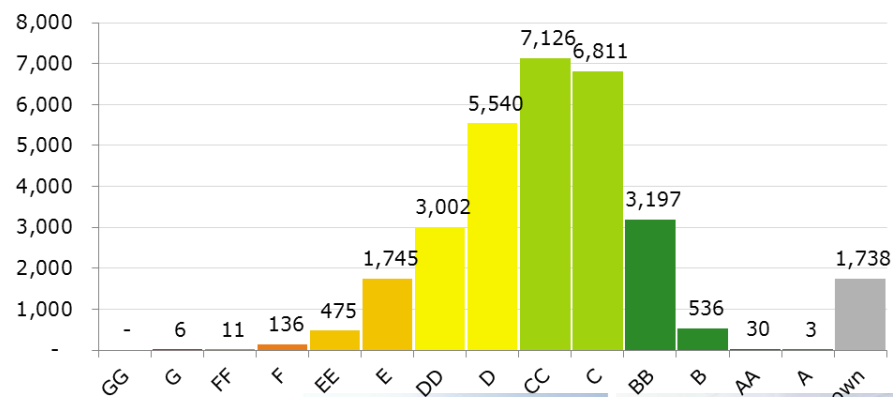
Air permeability @ ±50Pa results comparison (m³/h m²)			
Plot No	Before Co-heating	After Co-heating	Post 10 months
Plot 5	2.18	2.70	3.45
Plot 6	1.96	2.39	4.06



Improving homes to tackle Fuel Poverty

- Incremental vs transformational

- Disruption
- Cost
- Sequencing
- Performance assurance
- Impact verification



- Funding and delivery

- Investor confidence
- Cultural sensitivity
- Housing stock owners
- Closing the loop



Key components

- Bolder - more ambitious targets
- Braver – bigger increments – deeper refurbishments
- Better – measure, improve, verify, assure
- Financeable – some funding for research, innovation and process improvement, modelling based on assured outcomes
- Professionally delivered



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