

NATIONAL
ENERGY
FOUNDATION

*Improving the use of
energy in buildings*

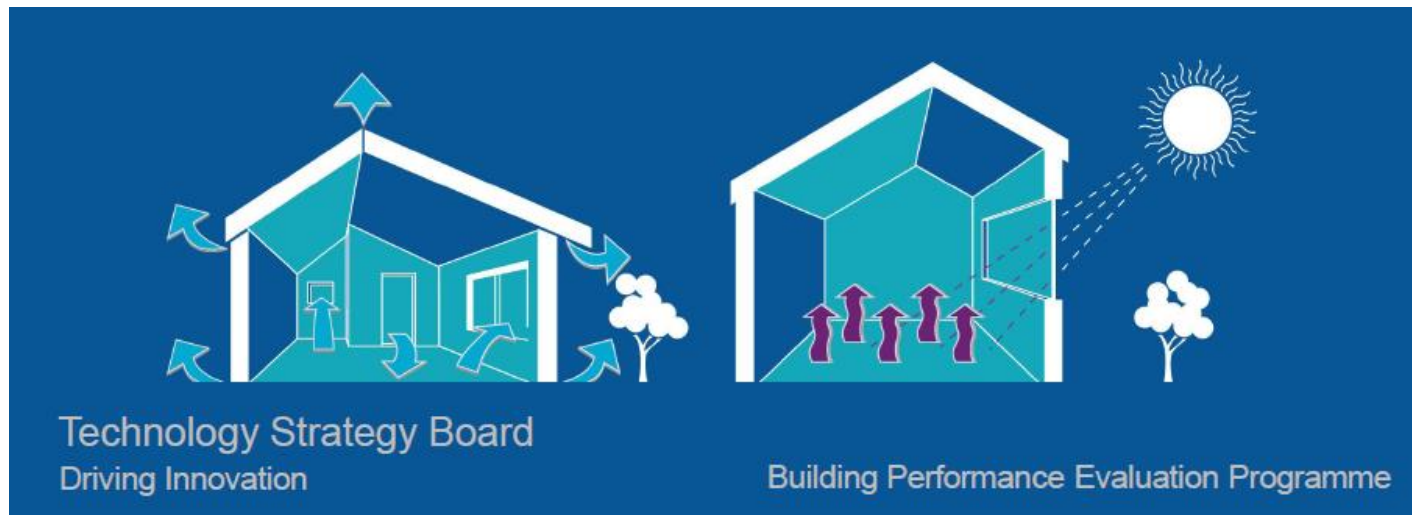
BPE- Maximising the Outcomes

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**Innovate UK: BPE Outcomes
- November 2014**

The BPE Programme

- InnovateUK (previously Technology Strategy Board) in last stages of 4 year BPE programme investigating over 100 new build and retrofit projects.



<https://connect.innovateuk.org/web/building-performance-evaluation>

BPE programme objectives

- Embed BPE in professional practice
- Assemble a suite of ‘fit for purpose’
BPE tools
- Better understand how to deliver high performing buildings

InnovateUK – Building Performance Evaluation Programme



2010 - 2014

- Over 100 new build projects + 3 refurb
- 49 non-domestic studies, 56 buildings
- 366 dwellings (developments 3989 dwellings)
- Completion and early occupation / in-use
- Energy use typically 2.5- 4.5 times predicted

Emerging themes – courtesy Innovate UK

- Fabric thermal performance – specification and construction; overheating; risky design details; thermal bridge and bypass; air tightness
- Modelling discrepancies - non-standard hours & unregulated loads (TM22)
- Commissioning – buildings not fully commissioned
- Sub-meters and reconciliation – poor metering tree; meters not functioning or understood
- BMS – training, complexity, functionality, commissioning
- Controls – complexity, operating instructions and labelling
- Lighting – too much, zoning deficiencies and lack of control
- HVAC – integration and control of multiple systems
- Renewables and MVHR – installation, operation and maintenance

.....so what?

Beyond the BPE programme

- How can the BPE programme outputs be used to transform the market for new buildings? (motive, means and opportunity)
- What progress has been made in embedding BPE in professional practice? How can this be increased?
- BPE tools – what tools and techniques are suitable for which circumstances? Where are the gaps?

Beyond the BPE programme

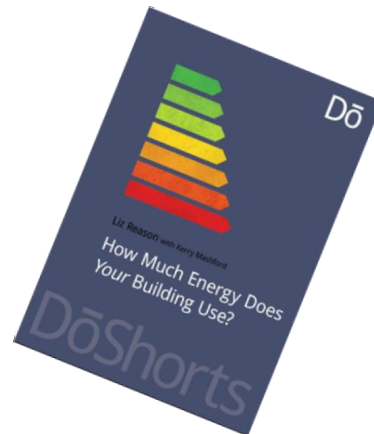
- Who could take action to deliver better performing buildings?
 - Professionals (architects, consultants and specialists)
 - Clients and developers
 - Contractors, builders and installers
 - Construction products manufacturers
 - Government
- How can they access, interpret and act on the findings?
- Why should they? (incentives and consequences)

NEF actions

- Interfacing and interpreting between potential 'game changers' and BPE findings
- Sharing learning - Building Performance Exchange – please share!
<http://www.nef.org.uk/building-performance-exchange/>
- Working with others to develop and test new tools and processes

NEF initiatives

- Improving energy literacy – creating customer ‘pull’
 - DofE Energy Envoys
 - Home Energy Advice for house buyers
 - DoShorts book





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