

Notes on Long Term Monitoring

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Why did UCL decide to create an Energy Institute?

primary objectives of long term monitoring:

- to measure energy use and CO₂ emissions, water use and indoor air quality of the dwelling in use;
- to understand and to detect issues that may arise from the behaviour of dwelling occupants, the performance of the fabric and systems of the dwelling, and the interactions between them;
- to detect possible trends in either occupant behaviour or fabric performance.

strategic aims of long term monitoring

will depend on the perspective of the monitoring organisation, its funders and stakeholders - they may include:

- supporting an informed view on whether regulatory and policy targets for the domestic sector are being met;
- supporting the evaluation of policy instruments;
- laying the foundation for a market in energy efficient new dwellings and retrofits
- supporting technical innovation and learning within the construction and upstream industries
- supporting attempts to change occupant behaviour



GHA key aims

For the GHA, key aims are learning and testing innovation (*above)

stakeholders...

- in practice aims and objectives are inseparable from the interests of stakeholders
- monitoring can be driven top-down by government and government agencies...

stakeholders...

or it can be driven in a more complex way by:

- individual companies
- industry bodies
- end-user organisations, and even
- individuals

GHA's key stakeholders maybe the developers, or maybe the end users

learning

key questions with respect to learning are:

- the topology of feedback and learning loops
- who is in the loop: Government? Academics? Industry? Occupants?
- how to document learning?

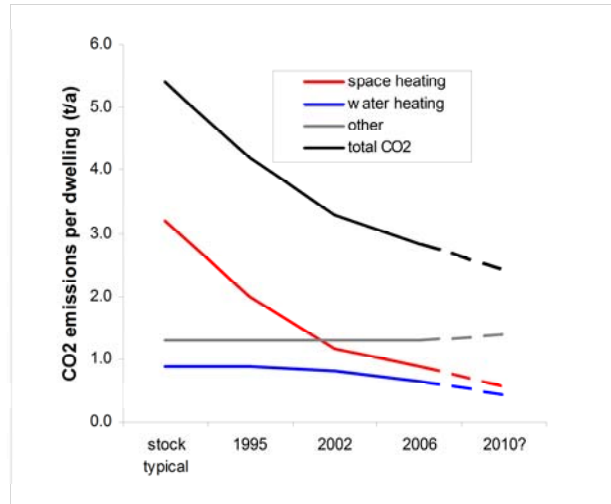
what is monitoring for?

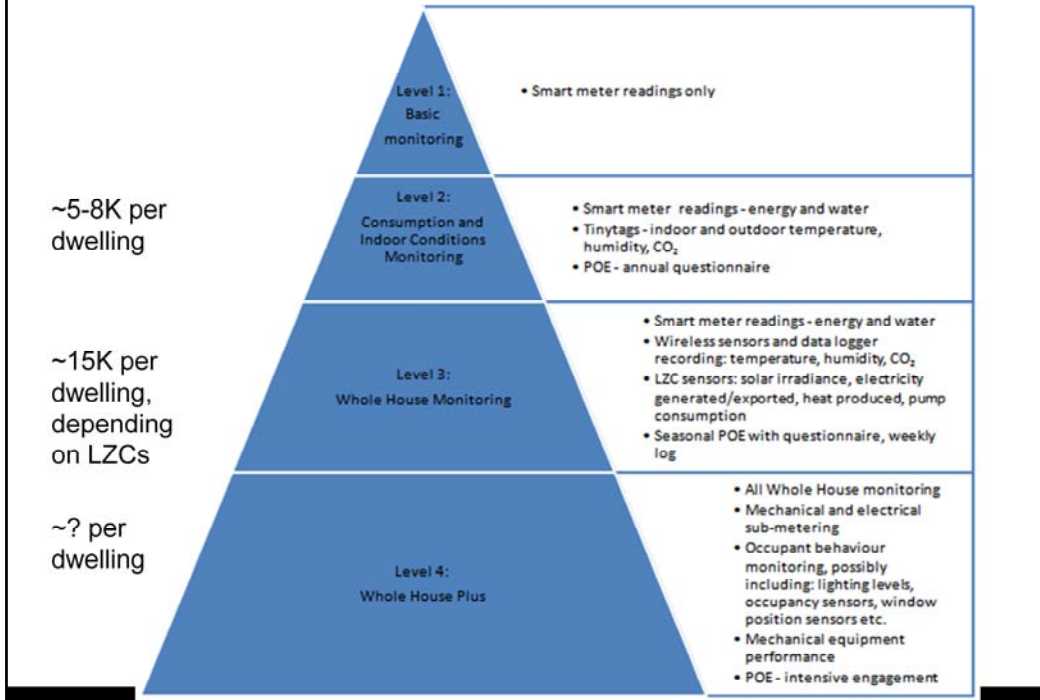
- monitoring is undertaken to facilitate change, through learning about how things really work
- to monitor is to lay oneself open to change.

each new development poses its own set of questions, determined by:

- evolving regulatory frameworks
- evolving technologies
- available skills and knowledge
- evolving occupant behaviour
- stakeholder objectives

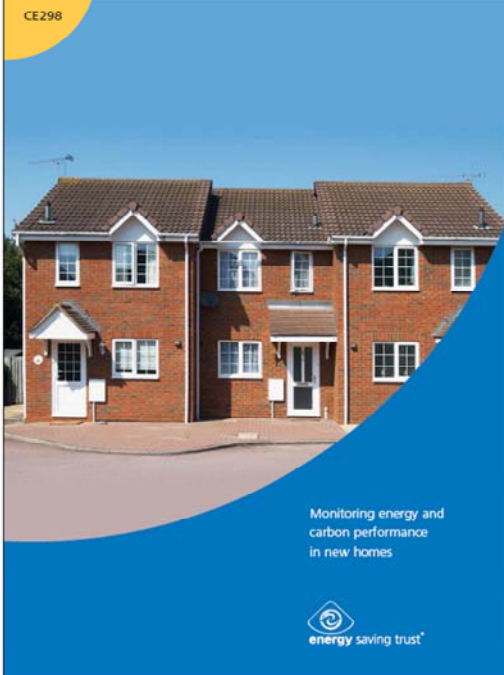
changing patterns of end use





systems may take time to bed in

CE298



Monitoring energy and
carbon performance
in new homes



we still have to learn how to deal with

- communal heating and other new technologies
- measurement errors
- summer overheating
- peak consumption and load diversity
- extended commissioning

systems may take time to bed in