

CECODHAS

“ Future Delivery Pathways for Retrofitting in Ireland ”

or

Retrofitting in Ireland

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Non-Energy Benefits

Health*

1. Improved Quality of Life: indoor air quality, thermal comfort
2. Improved comfort, happiness, well-being
3. Improved learning capacity
4. Increased productivity at work

5. Reduced lost income due to illness
6. Reduced sick benefits costs for employers
7. **Reduced absenteeism in work and education**
8. Reduced National Health Service costs
9. Reduced personal medical costs
10. Reduced fuel poverty
11. Reduced stress due to ability to pay reduced energy bills
12. Reduced winter fuel payments to elderly and disadvantaged in cold weather
13. Reduced 'excess winter deaths' due to underheated dwellings

***CECODHAS estimates €0.42 savings in health costs for every €1 energy saved**

Non-Energy Benefits

Economic

14. Reduced maintenance costs w reduced condensation, damp and mould
15. **Reduced insurance costs due to insulated pipes (no burst, frozen pipes)**
16. Increased property values supported by better Building Energy Rating
17. Job creation in the retrofit industry
18. Reduction in social benefit costs
20. Increased business activity in EE and RE materials, products and services
21. Developing exportable skills, services and products
22. Increased economic output (GDP)

Non-Energy Benefits

Policy

- 23. Environmental policies and targets: CO₂ emissions reduction
- 24. Addresses and reduces fuel poverty
- 25. Reducing unemployment
- 26. Deep retrofit more efficient and less cost than phased retrofitting
- 27. Reduced cost of heating own buildings

- 28. ***“Doing it now is cheaper than doing it in the future.”***
[UK Stern Report]

Non-Energy Benefits

$$\text{NEB} = 2.4 \times \text{energy savings}^*$$

Tax revenue from retrofitting means
government funding is
cost neutral at $\approx 25\%$ of the costs.

* Reinaud, J. (2012), IEA Workshop: “Evaluating the multiple benefits of EE”

25 years of Retrofitting in Ireland

1988: Energy Action

- Charity providing service to elderly and disadvantaged

2009: “Home Energy Saving”

- Level of grants calculated to be cost neutral to govt.
- 221,000 homes retrofitted with grant support \approx 25%

2011: “Better Energy Homes”

- Grant levels reduced and adjusted

2013: Code of Practice for Retrofitting

- under development

2014: “Better Energy Finance”

- Scheme proposal to Minister in September 2013



Future of Retrofitting in Ireland

Irish Government wants retrofitting to be privately funded.

Not good: 25% funding is cost neutral. By not funding it they are taxing it.

Currently developing a scheme largely based on the **UK's Green Deal** with:

Good: flexible, ambitious approach to developing a new industry

1. Loans attached to **electricity meters**. Energy company **obligations**.

Good: overcomes split incentive problem for HA's; source of finance.

2. Repayments collected by electricity utility and paid to financing organisation.

Risk: if savings not as predicted then non-payment of electricity bill can lead to disconnection and higher finance costs.

3. Use existing national energy rating tool to assess dwellings for measures and savings with additional Review and Assessment procedures.

Not great: existing software for **asset rating**, not **operational rating** and it overestimates the savings. *At least this is recognised now.*

Issues

The interesting issues being discussed in Ireland now are:

1. **Gap** between the predicted and actual energy savings of retrofitting.
2. Impact of **people's behaviour** and how to account for this in energy estimates.
3. Need a retrofit financing scheme which:
 - a) **doesn't accidentally push people into debt**
 - b) reduces the risk for financial institutions.

Not enough actual energy use information.

A Solution

A solution would be **regional databases** of *ex-post facto* **monitored energy use data**.

Detailed energy use data can be collected using wireless heating and electricity control monitors.

[€800 for 3 bed house with possible energy savings of 50%]



Statistical analysis of database would provide **accurate estimates** of energy use.

[Methodology exists for commercial buildings]

Conclusion

The retrofit industry is in its **early stages** of development.
Retrofitting is **not happening** at sufficient scale
to meet targets.

People use energy not buildings

NEB's worth 2.4 x energy savings

Govt. funding at 25% is cost neutral

Accurate detailed energy use data still needed

Thank you for your attention.