Bringing Sustainability into the Construction Industry

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Introduction

- Background
- Forum for Construction Industry
- Programme for Govt.
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• Training

• Retrofit Market

• ‘One Stop Shop’
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- Report to Forum for Construction on Sustainability
- National Construction & Demolition Waste Council
- Policy Related Initiatives
Courses

- Sustainable Construction
- Environmental
- C&D Waste
Sustainability in Construction

- **Regulatory Framework**
- **Parts L & F**
- **Renewable Technologies**
Environmental Management

• Water Pollution

• Land Contamination

• Site Waste

• Biodiversity
C & D Waste

- Waste Prevention
- Monitoring Materials Use
- Planning & Scheduling
‘One – Stop Shop’

• Finance
• Design
• Members
• Government
• Quality Assurance
Energy In Irish Buildings

Residential & Non-Residential Buildings

✓ 50% of Ireland’s Energy Use
✓ Energy Spend €5bn p.a.
✓ 20Mt CO2 emitted/annum
✓ Energy Saving potential > 20%
Building Energy Rating – Key Dates

- **EC Directive 2002/91/EC**
  - December 2002

- **Statutory Instrument SI 666**

- **BUILDINGS REGS PART L 2007**
  - 40% REDUCTION

- **BUILDINGS OTHER THAN DWELLINGS**
  - BER cert required if planning permission applied for after 1st July 2008

- **BUILDINGS REGS PART L 2010**
  - 60% REDUCTION

- **BUILDINGS REGS PART L 2012**
  - PASSIVE HOUSE
  - 80% REDUCTION

- **NEW DWELLINGS**
  - BER cert required if planning permission applied for after 1st Jan 2007

- **ALL BUILDINGS OFFERED FOR SALE OR LEASE**
  - BER cert required after 1st Jan 2009
B.E.R. ‘Ladder’

- Building to ......
  - ’05 regs. equates to C1 rating
  - ’07 regs. equates to B1 rating
  - ’10 regs. equates to A3 rating
  - Beyond equates to A2 +
Potential Retrofit Market

• Pre-1990 Stock
  • 895,783 almost 900,000
  • > 50%

• Most housing of this age has rating of C,D or E(B.E.R.)

• Going from E to C, relatively easy
• For €10,000 a householder could......

 ✓ Fill/line/insulate cavity walls
 ✓ Install new windows (d/g)
 ✓ Weather Strip
✓ Improve heating systems

✓ Install attic insulation

• €10,000 is estimated cost of bringing new house from 2005 regs standard to 2007regs standard
• If this is done for all pre-1990 stock then the market is......

€10,000 \times 893,783
equals
€ 9 bn approx.
• If we use a 6 yr. window then this equates to €1.5 bn/year

• Govt. could incentivise say to level of 10-15% equal to €150 m - €225 m
• Future Proofing:
  Property owners
  Householders
  Investors

• Implications of 2010 Regs. (60%)
  2016 (Zero Carb.)
New Home Energy Scheme (HESS)

• €100m to improve energy performance of existing homes

• Aim is to achieve 2 steps on BER ladder e.g. C3 to C1
• For 100m² house, this amounts to a saving of ......

€450 if using OIL
€256 if using Gas
€398 if using Electricity

• Payback
Retrofit v Part L Upgrade (20%)

- €4,600 Investment
- €256/annum Savings
- 1015kg CO2 saved
- 5.6% R.O.I.

- €11,000 Investment
- €205/annum Savings
- 812kg CO2 saved
- 2% R.O.I.
Drop carbon levy but aid home insulation

The anti-global warming brigades are zealots who question their dogmas as claphamonnians.

...
National Construction & Demolition Waste Council

- **Origin-Changing Our Ways**

- **Panel Composition**

- **Work of Sub-Committees**
Irish Building Environmental Assessment Method

Funded by the EPA Environmental Technologies Masters Programme
Project Partners

**UCD Energy Research Group**
Vivienne Brophy – Project Manager
Paul Kenny - Project Supervisor
Neasa Hourigan – Research Fellow – MArchSc

**Construction Industry Federation (CIF)**
Aidan Burke – Committee Chair

**Office of Public Works (OPW)**
Klaus Unger and Roeland Van Elsen
Industry Committee

- Construction Industry Federation
- Office of Public Works
- Environmental Protection Agency
- Sustainable Energy Ireland
- Local Authorities – SDCC, Fingal CC
- DOEHLG – Building Regulation and Environmental Awareness
- Professional Bodies – RIAI, IEI, CIBSE, SCS
- Property Sector – IEM and IEJ
- Financial Sector – Ulster Bank
- The National Irish Centre for Energy Rating
Forum-Proposed Participants

**CIF**
- Env. Committee
- IHBA
- MBCA
- ECA
- MEBSCA
- Insulators

**GOVERNMENT**
- S.E.I
- DOE (Climate Change)
- DOCEMNR
- C.E.R
- CODEMA
Others Proposed Participants

- U.C.D./E.R.G.
- I.P.&F.M.A.
Energy/Environmental Policy Development

✓ Roundtable

✓ Pre-Qual Workshops

✓ Environmental Conference, Croke Park  Sept. 10

✓ Proposed Energy Forum  Sept. 17
Policy Development (contd)

✓ Renewable Energy Conference, Limerick Oct.17

• Renewable Energy - Opportunities for Contractors Breakfast Briefing Oct.29/30

• Renewable Energy Presentation Breakfast Briefing New Year, by Private Investors
Conclusion