Building Energy Rating (BER) Catalyst for Energy Efficiency in the Residential Sector

Chris Hughes
16 June 2015
Building Energy Rating (BER)

- Building Energy Rating (BER)
- Nearly Zero Energy Buildings (NZEB)
SEAI’s Role in the BER Scheme

• SEAI is designated in Irish legislation as the Issuing Authority with responsibility for administration of the national BER Scheme including:
  – Registering BER assessors and hosting national registers of BER assessors
  – Defining rules for competence and conduct of BER assessors
  – Administering national BER assessor examinations
  – Processing BER assessments
  – Provision of methodologies and calculation software
  – Quality assurance and auditing of BER assessors
  – Administering a BER helpdesk for BER assessors and general public
  – Promoting awareness of BER
  – Advice and support to Government Departments
Building Energy Rating (BER)

- BER – mandatory for buildings for sale or rent from 2009
- Building structure, age, heating, ventilation and lighting
- 15-point scale from A1 to G
- Energy Performance Indicator (EPI) – kWh/m²/yr
- Advisory Report
- Assessors registered with SEAI
- National BER register
- Valid for up to 10 years
- Included in advertisements from 2013
Buying, selling, renting or leasing?

By law, all properties for RENT or SALE must have a Building Energy Rating (BER) Certificate.

What is a BER?
Put simply, a BER shows you the energy performance of a building. Similar to the energy label on kitchen appliances, the scale goes from A1 to G, with A1 being the most efficient.

What are the benefits of a BER?
A BER clearly shows potential tenants or buyers how energy efficient the property is, so make sure you ask the owner or agent for it. This applies to both homes and commercial buildings being constructed, sold or rented.

How do you get a BER?
Only a registered BER assessor can provide you with a BER Certificate. To find one in your area, see the National Register of BER Assessors on our website below. You can also find valid published BERs here.

For more information visit www.seai.ie/ber or call 1890 734 237

Advertisements
BER Scheme Statistics

• Homes
  – 553,288 BERs on public register
  – 110,173 BERs published in 2014
  – 680 BER Assessors

• Other Buildings
  – 32,130 BERs on public register
  – 9,807 BERs published in 2014
  – 180 BER Assessors
## BER Dashboard


### Domestic BER Indicators

<table>
<thead>
<tr>
<th>Energy Rate</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>5,864</td>
</tr>
<tr>
<td>A2</td>
<td>5,370</td>
</tr>
<tr>
<td>A3</td>
<td>7,474</td>
</tr>
<tr>
<td>B1</td>
<td>17,278</td>
</tr>
<tr>
<td>B2</td>
<td>40,060</td>
</tr>
<tr>
<td>B3</td>
<td>59,995</td>
</tr>
<tr>
<td>C1</td>
<td>70,640</td>
</tr>
<tr>
<td>C2</td>
<td>72,960</td>
</tr>
<tr>
<td>C3</td>
<td>74,155</td>
</tr>
<tr>
<td>D1</td>
<td>68,065</td>
</tr>
<tr>
<td>D2</td>
<td>38,282</td>
</tr>
<tr>
<td>E1</td>
<td>30,032</td>
</tr>
<tr>
<td>E2</td>
<td>30,110</td>
</tr>
<tr>
<td>F</td>
<td>40,715</td>
</tr>
<tr>
<td>G</td>
<td>30,110</td>
</tr>
<tr>
<td>Total</td>
<td>653,258</td>
</tr>
</tbody>
</table>

### Non-Domestic BER Indicators

<table>
<thead>
<tr>
<th>Energy Rate</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>3</td>
</tr>
<tr>
<td>A2</td>
<td>220</td>
</tr>
<tr>
<td>A3</td>
<td>699</td>
</tr>
<tr>
<td>B1</td>
<td>2,454</td>
</tr>
<tr>
<td>B2</td>
<td>2,243</td>
</tr>
<tr>
<td>B3</td>
<td>3,986</td>
</tr>
<tr>
<td>C1</td>
<td>3,199</td>
</tr>
<tr>
<td>C2</td>
<td>3,232</td>
</tr>
<tr>
<td>D1</td>
<td>2,221</td>
</tr>
<tr>
<td>D2</td>
<td>1,518</td>
</tr>
<tr>
<td>E1</td>
<td>2,035</td>
</tr>
<tr>
<td>F</td>
<td>3,673</td>
</tr>
<tr>
<td>G</td>
<td>3,673</td>
</tr>
<tr>
<td>Total</td>
<td>32,130</td>
</tr>
</tbody>
</table>

### Average Energy Rating History (% Published)

#### Domestic BERs

- **A**: 2011: 0%, 2012: 25%, 2013: 30%, 2014: 35%, 2015: 40%, 2016: 45%
- **B**: 2011: 10%, 2012: 20%, 2013: 30%, 2014: 40%, 2015: 50%, 2016: 60%
- **C**: 2011: 20%, 2012: 30%, 2013: 40%, 2014: 50%, 2015: 60%, 2016: 70%
- **D**: 2011: 30%, 2012: 40%, 2013: 50%, 2014: 60%, 2015: 70%, 2016: 80%
- **E**: 2011: 40%, 2012: 50%, 2013: 60%, 2014: 70%, 2015: 80%, 2016: 90%
- **F**: 2011: 50%, 2012: 60%, 2013: 70%, 2014: 80%, 2015: 90%, 2016: 100%

#### Non-Domestic BERs

- **A**: 2011: 0%, 2012: 25%, 2013: 30%, 2014: 35%, 2015: 40%, 2016: 45%
- **B**: 2011: 10%, 2012: 20%, 2013: 30%, 2014: 40%, 2015: 50%, 2016: 60%
- **C**: 2011: 20%, 2012: 30%, 2013: 40%, 2014: 50%, 2015: 60%, 2016: 70%
- **D**: 2011: 30%, 2012: 40%, 2013: 50%, 2014: 60%, 2015: 70%, 2016: 80%
- **E**: 2011: 40%, 2012: 50%, 2013: 60%, 2014: 70%, 2015: 80%, 2016: 90%
- **F**: 2011: 50%, 2012: 60%, 2013: 70%, 2014: 80%, 2015: 90%, 2016: 100%

### Yearly Statistics

#### Domestic BERs

- 2015: 41,558, 2016: 42,199
- 2014: 106,923, 2015: 110,173
- 2013: 92,452, 2014: 99,715
- 2011: 95,308, 2012: 107,141
- 2010: 71,903, 2011: 90,380
- 2009: 76,151, 2010: 94,083
- 2008: 2,113, 2009: 3,794
- 2007: 2,113, 2008: 127

#### Non-Domestic BERs

- 2015: 3,617, 2016: 3,739
- 2014: 9,595, 2015: 9,896
- 2013: 8,739, 2014: 8,022
- 2012: 2,675, 2013: 2,745
- 2011: 2,692, 2012: 2,380
- 2010: 2,572, 2011: 2,754
- 2009: 2,819, 2010: 2,771

**Total**: Domestic BERs: 653,258, Non-Domestic BERs: 32,130
• Over 80 data points per domestic BER
## BER Survey Form

**DEAP for NEW-FINAL and EXISTING HOMES SURVEY FORM**

**Client name:**

**Property address:**

**Assessor name / BER reg. no.:**

**Survey Date:**

**Number of occupants:**

- adults
- children

<table>
<thead>
<tr>
<th>Dwelling Type</th>
<th>Age: Dwelling</th>
<th>Age: Extension 1</th>
<th>Age: Extension 2</th>
<th>number of stories</th>
</tr>
</thead>
<tbody>
<tr>
<td>detached house</td>
<td>pre 1900</td>
<td>pre 1900</td>
<td>pre 1900</td>
<td></td>
</tr>
<tr>
<td>semi detached house</td>
<td>1900 - 1929</td>
<td>1900 - 1929</td>
<td>1900 - 1929</td>
<td></td>
</tr>
<tr>
<td>end of terrace</td>
<td>1930 - 1949</td>
<td>1930 - 1949</td>
<td>1930 - 1949</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2005 onwards</td>
<td>2005 onwards</td>
<td>2005 onwards</td>
<td></td>
</tr>
</tbody>
</table>

**Type of Rating**

- new-final dwelling
- existing dwelling

**Purpose of Rating**

- new: owner occupation
- sale
- private letting
- social housing letting
- grant support
- other
Dwelling Energy Assessment Procedure (DEAP)
BER National Administration System (NAS)
Data Protection Act 1998 & Amendment 2003

• Data Protection Act (DPA) was initially enacted to protect personal information that was held on electronic media. Personal information is data that can be directly related to a living individual. In 2003 the scope of the Act was broadened to cover paper-based information and also to expand the information that is covered under the Act. For example an email address is now considered to be a personally identifiable piece of information and is therefore covered under the Act.

• If you have access to personal information you must ensure that it was obtained fairly, is accurate, protected against unauthorised disclosure, used only for the purpose(s) for which it was collected and is held no longer than is necessary for that purpose(s).
Access to BER Databases

- Section 27 of S.I. 243 of 2012 provides the basis for deciding who is permitted access to the BER databases
- Extracts from the register of BER assessors, comprising the name of each current BER assessor, employer and contact details are open to public inspection
- Extracts from the BER register, comprising BER Certificates, provisional BER Certificates where applicable, and accompanying Advisory Reports are open to public inspection on a restricted basis
- The BER Certificate, Advisory Report and Xml data file are normally made available to:
  - 1) The BER assessor who carried out the relevant BER assessment, or his or her then employer
  - 2) A BER assessor undertaking subsequent BER assessment of the relevant building, or his or her employer
  - 3) The building owner or an agent acting on behalf of the owner, via a BER assessor
- Section 10 of the BER Assessor’s Code of Practice details the obligations on BER Assessors in relation to BER data confidentiality and data protection
### Domestic Dwelling Assessors Search

<table>
<thead>
<tr>
<th>Name</th>
<th>Company</th>
<th>Address</th>
<th>County</th>
<th>Areas Covered</th>
<th>Email</th>
<th>Phone</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maxim Markowski</td>
<td>Quirke Estate Agents</td>
<td>Quirke Estate Agents 106 Lower Staggs Street</td>
<td>Dublin 2</td>
<td>Leinster, Dublin</td>
<td><a href="mailto:max@sea.ie">max@sea.ie</a></td>
<td>0988022855</td>
<td><a href="http://www.sea.ie">www.sea.ie</a></td>
</tr>
<tr>
<td>Brian Shannon</td>
<td>Building Envelope Technologies Ltd</td>
<td>Business Envelope Technologies Ltd Unit 5 Hillcrest Ballybay Castleblayney</td>
<td>Co. Wicklow</td>
<td>Leinster, Muster, Dublin</td>
<td><a href="mailto:BRIAN@BTECHNOLOGIES.IE">BRIAN@BTECHNOLOGIES.IE</a></td>
<td>0872266241</td>
<td><a href="http://www.btech.ie">www.btech.ie</a></td>
</tr>
<tr>
<td>Stephen Shine</td>
<td>Steven Shine</td>
<td>Shine Energy Ballyliss Mallows</td>
<td>Co. Cork</td>
<td>Munster</td>
<td><a href="mailto:shineenergy@gmail.com">shineenergy@gmail.com</a></td>
<td>0876465535</td>
<td><a href="http://www.shineenergy.ie">www.shineenergy.ie</a></td>
</tr>
<tr>
<td>John Malvin</td>
<td>John Malvin</td>
<td>House Energy Efficiency Ltd 11 The Old Cottins Malahide</td>
<td>Co. Dublin</td>
<td>Leinster, Muster, Dublin</td>
<td><a href="mailto:JMELVIN@IOL.IE">JMELVIN@IOL.IE</a></td>
<td>019454404</td>
<td><a href="http://www.houseenergy.ie">www.houseenergy.ie</a></td>
</tr>
<tr>
<td>Frank Forsyth</td>
<td>Frank Forsyth</td>
<td>143 Colina Abbey Bray</td>
<td>Co. Wicklow</td>
<td>Leinster, Dublin</td>
<td><a href="mailto:frankforsyth@outlook.com">frankforsyth@outlook.com</a></td>
<td>0876378183</td>
<td></td>
</tr>
</tbody>
</table>
# Extracts from the BER Register

## National BER Register

To find a BER assessment, please enter either the BER number or the MPRN for the relevant building, then press Search.

### BER Details - Dwelling

<table>
<thead>
<tr>
<th>BER</th>
<th>Address</th>
<th>Date Of Issue</th>
<th>Type Of Rating</th>
<th>Date Valid Until</th>
<th>BER Number</th>
<th>MPRN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TEST DUBLIN 15</td>
<td>03-05-2013</td>
<td>New Dwelling (Provisional)</td>
<td>03-05-2015</td>
<td>105249015</td>
<td>0</td>
</tr>
</tbody>
</table>

- **Type Of Rating**
  - New Dwelling (Provisional)
- **Date Valid Until**
  - 03-05-2015
- **BER Number**
  - 105249015
- **MPRN**
  - 0

**Download Advisory Report**

## Dwelling Details

<table>
<thead>
<tr>
<th>Dwelling Type</th>
<th>Floor Area</th>
<th>Main Space Heating Fuel</th>
<th>Main Space Heating Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semi-detached house</td>
<td>132.26 (m²)</td>
<td>Gas</td>
<td>78.7%</td>
</tr>
<tr>
<td>No. of Storeys:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year of Construction:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Main Space Heating Fuel**
  - Gas
- **Main Space Heating Efficiency**
  - 78.7%
BER Awareness

Are you aware of the term BER in relation to homes/buildings?

<table>
<thead>
<tr>
<th>Year</th>
<th>% Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apr-14</td>
<td>76%</td>
</tr>
<tr>
<td>Apr-13</td>
<td>64%</td>
</tr>
<tr>
<td>2011</td>
<td>55%</td>
</tr>
<tr>
<td>2010</td>
<td>41%</td>
</tr>
<tr>
<td>2009</td>
<td>30%</td>
</tr>
</tbody>
</table>

We use arrows to denote an increase or decrease in comparison to the previous years, significant at 95% level of confidence throughout this presentation.

Base: 1,000; All adults
BER Understanding (Spontaneous)

Can you describe what a BER is?

- Energy Rating: 58% (40%)
- Shows how energy efficient homes are: 38% (10%)
- How well the house is insulated: 8% (10%)
- A rating where A is the best: 4% (0%)
- Shows how economical homes are: 2% (0%)
- Certification of energy: 1% (4%)
- Building energy regulations: 1% (29%)
- It’s a requirement when buying/selling: 1% (1%)
- Other: 3% (5%)

Much greater understanding of what BER’s are

Base: 761; All adults aware of BER
Purchase / Rental Decisions

- Price: 20%
- Location: 15%
- Condition of house: 9%
- Condition of heating system: 10%
- BER rating: 6%
- Garden: 8%
- Access to local facilities: 6%
- Age of house: 6%
- Design of house: 4%
- Public transport proximity: 4%
- Number of rooms: 3%
- Parking: 3%
- Access to services: 2%
Target Audiences

All Building Owners

Sellers

Landlords

PUSH

PULL
Messages

• **Renters:** Education, be sure to ask about the BER (it will save you money)

• **Estate Agents:** Reminder of the BER obligation

• **Landlords:** It’s the law

• **Buyers and Sellers:** You can’t buy or sell a home without one
Better Energy Homes

- Better Energy Homes scheme provides grants to homeowners for
  - Roof insulation
  - Wall insulation
  - Boiler and heating control upgrades
  - Solar panels

- Better Energy Warmer Homes Scheme aims to improve the energy efficiency and comfort conditions of homes occupied by vulnerable households in receipt of the National Fuel Allowance Scheme through the installation of
  - Draught proofing
  - Attic insulation
  - Lagging jackets
  - Low energy light bulbs
  - Cavity wall insulation where appropriate

- Terms and Conditions
  - Only for homes built before 2006
  - Approval before works commence
  - Works to SEAI standards by a SEAI registered contractor
  - Works, including published BER, must be completed and paperwork submitted to SEAI within six months of the grant offer
Better Energy Warmer Homes

You or a family member could be eligible for this scheme which provides free energy upgrades in vulnerable homes built before 2006 to make them more comfortable, healthier and cheaper to run.

The upgrades are free to eligible homeowners in receipt of certain benefits including:
- Fuel Allowance
- Job Seekers Allowance for over six months and with children under 7 years of age
- Family Income Support

For more information call 1800 250 204 or visit www.seai.ie/warmerhomes

For more information on the Better Energy Homes grants call us on 1850 927 000 or visit www.seai.ie/betterenergyhomes
## Better Energy Homes Measures Approved and Paid

<table>
<thead>
<tr>
<th>Measures (25/07/2014)</th>
<th>Approved</th>
<th>Completed</th>
<th>Grant value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roof Insulation</td>
<td>161,192</td>
<td>110,695</td>
<td>€25,783,578</td>
</tr>
<tr>
<td>Cavity</td>
<td>133,182</td>
<td>98,012</td>
<td>€35,393,308</td>
</tr>
<tr>
<td>Dry-Lining Insulation</td>
<td>19,740</td>
<td>9,502</td>
<td>€21,128,581</td>
</tr>
<tr>
<td>External Insulation</td>
<td>17,725</td>
<td>11,478</td>
<td>€42,056,942</td>
</tr>
<tr>
<td>Heating Controls Upgrade only</td>
<td>14,751</td>
<td>7,183</td>
<td>€3,365,981</td>
</tr>
<tr>
<td>High Efficiency Gas Boiler with Heating Controls Upgrade</td>
<td>35,202</td>
<td>23,016</td>
<td>€14,804,771</td>
</tr>
<tr>
<td>High Efficiency Oil Boiler with Heating Controls Upgrade</td>
<td>31,257</td>
<td>14,647</td>
<td>€9,724,281</td>
</tr>
<tr>
<td>Solar Heating</td>
<td>10,758</td>
<td>5,718</td>
<td>€4,576,313</td>
</tr>
<tr>
<td>Integral BER</td>
<td>155,081</td>
<td>110,292</td>
<td>€8,445,572</td>
</tr>
<tr>
<td>Before/After BER</td>
<td>19,107</td>
<td>8,367</td>
<td>€1,669,060</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>597,995</strong></td>
<td><strong>398,910</strong></td>
<td><strong>€166,948,388</strong></td>
</tr>
</tbody>
</table>
National BER Research Tool

The BER Research Tool gives researchers access to statistical data from the Building Energy Rating (BER) scheme which is administered by the Sustainable Energy Authority of Ireland. The BER certificate indicates the annual primary energy usage and carbon dioxide emissions associated with the provision of space heating, water heating, ventilation and lighting to the dwelling. This tool provides access to information on all aspects of construction that affect the energy performance of dwellings. Results can be viewed on screen or downloaded in the form of a Microsoft Excel spreadsheet.

https://ndber.seai.ie/BERResearchTool/ber/search.aspx

Data is updated nightly, so search results represent an up-to-date summary of published residential BERs.

A user information guide is available for download following registration. Users are encouraged to read the detail provided in the guide in the context of interpretation of the information made available via the tool. Specific queries can be forwarded to info@ber.seai.ie

- View data onscreen or download in zipped format for use in Excel
- First 3 lines of address and home owner details removed
- Data automatically updated each night
- Reporting is from copy of live data set to prevent impact of complex or large data requests on live system
Ireland’s official statistics office
BER data combined with other data sources including census
Quarterly bulletin
Data delivered by IT service provider via ftp secure file transfer
Price Effect of BERs in Dublin Residential Market

- IEPPE Conference, Berlin 11th September 2014, Sarah Stanley ESRI / SEAI Research Fellow
- Energy efficiency has a significant, positive relationship with list price
- A 50-point improvement (decline) in the Energy Performance Indicator is associated with a 1.5% higher list price (consistent with EC (2013))
- 10% decrease in EPI is associated with 0.86% increase in price
- One-point improvement in BER yields a list price increase of 1% (consistent with national figures (Hyland et al, 2013))
EPISCOPE Mapping Project

- Determine energy refurbishment rate to develop strategy for 2020, 2030 and 2050 energy efficiency targets
BER / EPBD Future Development

• Development considerations
  – Public Service Reform Plan 2014 – 2015
    • Digital mapping and Geographic Information Systems
  – EPBD is significant driver in Ireland fulfilling EU obligations
  – Energy Efficiency Directive will drive changes to Advisory Reports
  – National Energy Efficiency Action Plan (NEEAP II) – BER data key
  – EPBD Recast mandating programme and solution changes including enhanced quality assurance, cost optimal / effective studies, Advisory Reports update and NZEBs

• Critical assessment of EPBD requirements and user needs
• Significant consultation with internal and external stakeholders
Thank You