The INOGATE Study Tour Dublin
June 2015

TRANSNATIONAL EXCHANGE ON SUSTAINABLE ENERGY AWARENESS-RAISING

www.inogate.org
Workshop
INOGATE Study Tour, Dublin 16-19 June
Objectives of Workshop

Internalize study tour learnings
Generate ideas
Exchange experience
Make initial plans

Aim:
Master Plan your awareness-raising campaign
Concept for sustainable energy info centre

Approach:
Dynamic & interactive
Group work & presentation
Process more than results
There is no bad questions and wrong answers
Everybody wins!
Have fun
Stage 1: Commit

• Group discussion:
  – Why an energy awareness-campaign?
  – Which are the key market segments?
  – Why?
Raising Awareness is

• the process of **informing** a group’s norms, attitudes, beliefs and actions and

• **influencing** the group to change/transform/re-assess them

• towards a **theoretical or a practical issue**.
The 5 steps to energy awareness

1. Commit
2. Identify
3. Plan
4. Take action
5. Review
Stage 1: Commit

- Individual Group work:
  - Pick one market segment per group
  - What are the desired changes?
  - Decide on a target (e.g. % saving)
Primary energy consumption in this sector in 2013: ≈ 44 TWh

<table>
<thead>
<tr>
<th>Measure</th>
<th>PE saving (TWh)</th>
<th>Measure</th>
<th>PE saving (TWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total technical measures</td>
<td>11.05</td>
<td>15. Heat pump</td>
<td>0.30</td>
</tr>
<tr>
<td>3. Energy efficient appliances - &quot;Cold&quot; and &quot;Electrical cooking&quot;</td>
<td>0.67</td>
<td>16. Energy efficient glazing</td>
<td>0.57</td>
</tr>
<tr>
<td>7. Draught proofing</td>
<td>0.38</td>
<td>1. Air dry instead of tumble dry</td>
<td>0.32</td>
</tr>
<tr>
<td>8. Roof insulation</td>
<td>1.21</td>
<td>2. Turn off lights when not in use</td>
<td>0.29</td>
</tr>
<tr>
<td>9. Energy efficient lighting</td>
<td>0.26</td>
<td>4. Reduce room temperature by 1°C</td>
<td>1.14</td>
</tr>
<tr>
<td>10. Cavity wall insulation</td>
<td>0.84</td>
<td>5. Turn off heating in unused rooms</td>
<td>0.25</td>
</tr>
<tr>
<td>11. More efficient boiler with heating control</td>
<td>3.81</td>
<td>6. Use efficient shower head</td>
<td>0.42</td>
</tr>
<tr>
<td>12. Energy efficient appliances - &quot;Wet&quot; and &quot;Consumer electronics&quot;</td>
<td>0.48</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Floor insulation</td>
<td>1.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Solid wall insulation</td>
<td>1.47</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>13.46</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 2-7: Energy efficiency cost curve for the Residential buildings sector
Stage 2: Identify

• Key stakeholders (users, enablers, influencers)
• Size of your target market
• Key factors affecting potential for change
Mapping your target market

Influencers
- Media
- Neighbours

Enablers
- Utility
- Local authority

Target groups
- Householder
- Children
Households as Energy Users

- Energy Suppliers
- Policy Makers
- Construction Industry
- Real Estate
- Professionals/Designers
- Tradesman/Contractors
- Manufacturers/Suppliers
- Trade Associations
- Building Companies
- Professional Education:
  - Third-level
  - Vocational
  - CPD
- Public housing
- Housing associations
- Residents associations
- Local Authorities
- Ministries
- Regulators
- Politicians
- Lobby groups
- Community groups
- Environmental NGOs
- Citizens Groups
- Media
- Youth Groups
- Schools
- Private developers
- Self-builders
- Lenders
- Public housing
- Housing associations
- Residents associations
- Professional Education:
  - Third-level
  - Vocational
  - CPD
- Youth Groups
- Schools
Figure 7  Drivers of Energy Usage and CO₂ Emissions

The Housing Stock
- Number of dwellings
- Type of dwelling
- Period of construction
- Floor area
- Energy rating (BER)

Space Heating
- Penetration of central heating
- External and internal temperatures
- Fuel used
- Building regulations
- Insulation
- Heating controls
- Appliance efficiency

Economic Factors
- Disposable income
- Housing tenure (i.e. renting/ownership)
- Employment status
- Household size
- Age of occupants
- Number of children
- Energy prices

Other Factors
- Location (proximity to gas grid)
- Household occupancy
- Penetration & efficiency of electrical appliances
- Intensity of use of electrical appliances
- Prevalence of energy saving features
- Behavioural factors
- Information (e.g. Smart Meters)
Stage 3: Plan

• Define general campaign strategy
• Motivation themes & messages (3 slogans)
• Awareness activities, media, channels
• Timeline
• Team
• Resources (+ → ++++)
How social change occurs...

Knowledge - Understand the cause
Approval - Accept the cause
Intention - Decision to apply
Practice - Application of the cause in a sustainable manner
Advocacy - Promote the cause to others

Source: OXFAM international
SEAI, 2015. Unlocking the Energy Efficiency Opportunity

Figure 2: Consumer Decision Making Process

- Number of consumers in consumer group
- Consumers aware and engaged
- Consumers making a decision in a given year
- Decision makers with the budget to implement
- Uptake based on costs and savings
- Annual uptake
Stage 4: Take Action

Describe Visually Your Vision for a Sustainable Energy Information Centre to Service your Selected Target Group

You have an open floor plan of unspecified dimensions as your blank canvas
Stage 5: Review

• Define Key Performance Indicators
• Ideas for measuring them
• How would you use the feedback?
Figure 9  Primary, Final and Electricity Intensity

- **Primary Intensity** (kgoe/€constant)
- **Final Intensity** (kgoe/€constant)
- **Electricity Intensity** (KWh/€constant)


- **Primary Intensity** decreases from approximately 0.14 to 0.05
- **Final Intensity** decreases from approximately 0.12 to 0.10
- **Electricity Intensity** decreases from approximately 0.05 to 0.03

Legend:
- Green squares: Primary Intensity
- Blue squares: Final Intensity
- Orange triangles: Electricity Intensity
The 5 steps to energy awareness

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2. Identify
3. Plan
4. Take action
5. Review
Reducing energy waste
Good for us, great for the environment
Raising Awareness: Feedback through Google Power Meter Project

Timely feedback of domestic electrical consumption can contribute in reducing the amount consumed by 5-15%.
Goal setting

Feedback is most helpful when combined with goal setting.
Competitions

Raising Awareness: Competitions
# Table 1: Key Energy Savings Opportunities for All Sectors

<table>
<thead>
<tr>
<th>Sector</th>
<th>Key Opportunities</th>
<th>Primary Energy Savings Potential in 2020 (TWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Buildings</td>
<td>• Energy efficient lighting with controls</td>
<td>1.1</td>
</tr>
<tr>
<td></td>
<td>• Heat pumps</td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td>• Roof insulation</td>
<td>0.7</td>
</tr>
<tr>
<td></td>
<td>• Energy efficient glazing</td>
<td>0.7</td>
</tr>
<tr>
<td>Public Buildings, Transport and Utilities</td>
<td>• Energy efficient lighting with lighting controls</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>• Energy efficient glazing</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>• More efficient boiler with heating controls</td>
<td>0.4</td>
</tr>
<tr>
<td></td>
<td>• Roof insulation</td>
<td>0.2</td>
</tr>
<tr>
<td></td>
<td>• LED street lighting</td>
<td>0.2</td>
</tr>
<tr>
<td>Residential</td>
<td>• Efficient boiler with heating controls</td>
<td>3.8</td>
</tr>
<tr>
<td></td>
<td>• Solid wall insulation</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>• Roof insulation</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>• Energy efficient appliances — “Cold” and “Electrical cooking”</td>
<td>0.7</td>
</tr>
<tr>
<td></td>
<td>• Reducing room temperature by 1°C (behavioural)</td>
<td>1.1</td>
</tr>
<tr>
<td>Industry</td>
<td>• Process integration and heat recovery for low temperature processes</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>• More efficient motor systems</td>
<td>1.1</td>
</tr>
<tr>
<td></td>
<td>• Combined Heat and Power</td>
<td>0.8</td>
</tr>
<tr>
<td>Road Transport (Excl. Public Transport)</td>
<td>• Private cars — EU regulation</td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td>• Private cars — VRT re-balancing</td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td>• Eco-driving</td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td>• Modal shift</td>
<td>1.5</td>
</tr>
</tbody>
</table>
Figure 31  Typical OECD household electricity consumption of major traditional and digital appliances

Source: Gadgets and Gigawatts, IEA
Figure 32  Residential sector estimated electricity end use 2011

Source: SEAI