Eleanor Denny, Coordinator CONSEED

Policy Workshop, Brussels, 23 May 2018

Presentation Outline

- Brief overview of the CONSEED project

- Objectives, methods

- Preliminary results

- Next steps …

CONSumer Energy Efficiency Decision Making

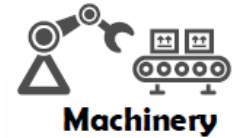- Socio-economic research on consumer's EE behaviour

- Five partners

- Start Dec '16
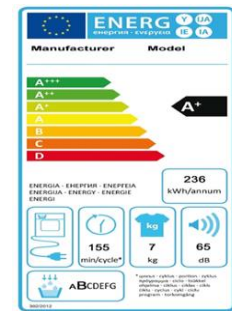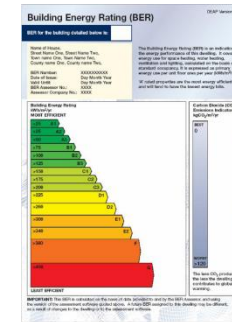
Key objectives of CONSEED

1. How do different consumer groups make investment decisions that involve an energy component?

2. What is the impact of energy labelling policies?
   - How do different consumer groups react?

3. Would energy information in monetary terms increase salience of EE?

Methodology

- Data collection across 5 countries
  - 17 Focus groups and 40 interviews ✅
  - 11 Consumer surveys ✅
  - 3 Randomised Controlled Trials in the field ✅
  - 3 Discrete choice experiments ✅

Focus groups

- 17 focus groups and 40 in-depth interviews across the five countries
    1. What attributes matter most in energy related investment decisions?
    2. How important is energy efficiency (EE) in investment decisions?
    3. Does the current policy on EE information increase the demand for more efficient products?
- Purpose of FGs was to identify the issues and inform the surveys

Consumer surveys

- 11 large scale surveys - deliverable due next week!
  - 5 countries
  - 4 sectors – household, services, agriculture, industry
  - 3 technologies – properties, appliances, transport
- Explore further the results of the focus groups with more representative samples
- Energy efficiency decision making and demographics
- Also behavioural considerations
  - Discounting, Inattention, Search costs
  - Social/network effects
  - Heuristics, bounded rationality
- Results …

Households – Property

- Ireland and Slovenia (500 responses each)
- EE Importance:
  - Approx 55% consider energy efficiency very important when buying a house
  - EE - environmental impact, property comfort and property value
- Demographics:
  - Females: 13 – 16% points more likely to value EE
  - Larger households (and higher energy bills) less likely
  - 25% credit constrained for EE
- Trust:
  - Most households think that EPCs are open to manipulation.

Household – Appliances

- Greece (fridges), Spain (washing machines) (500 responses each)
- EE Importance:
  - EE - #1 for refrigerators and #3 for washing machines
  - Buying a more EE product would help to reduce environmental impact
- Demographics:
  - Females 8 to 9 % more likely than men to value EE very importantly
  - In Greece 60% respondents declare they could not afford an upgrade in EE, in Spain 20% respondents
- Awareness:
  - Aware of electricity prices: 20% in Spain versus 80% in Greece

Household – Transport

- Norway (1,093 responses)

- EE importance
  - Energy efficiency rated very important by 45% of car buyers
  - 91% agree that buying a more energy efficient car would reduce the environmental impact of their household
  - Energy efficiency ranked #4 (behind reliability, safety and price)

- Awareness
  - Only 29% strongly agree that they understand how much fuel they would save if they bought a more fuel efficient car

Services Sector

- Appliances (Hotels, Spain 200 responses and Greece 120)
  - Energy consumption #1 for heating and cooling systems
  - Only 38% of the sample knew their energy consumption or were aware of energy prices
  - 65% of the Greek sample cannot afford to buy an energy efficient cooling/heating system while in Spain the corresponding proportion is 30%

- Properties (Ireland) (187 responses)
  - Just 26% consider energy efficiency 'very important' when buying or renting a property
  - 31% of firms do not have a good understanding of their property's energy consumption
  - 44% do not understand monetary energy savings of higher energy efficiency
  - Credit and financial constraints are preventing EE upgrades for many firms in Ireland

Agriculture & Industry
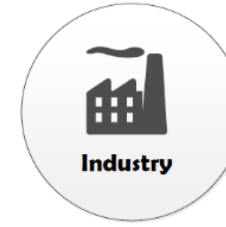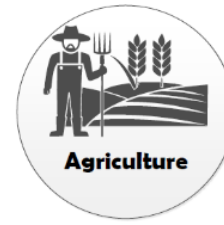
- Tractors (Ireland) (316 responses)
  - Fuel efficiency is a major consideration for most tilage farmers
  - Farmers have a good understanding of fuel consumption, energy prices and monetary savings associated with investment
  - Finance and credit constraints may be reducing investment in energy efficiency

- Industry (Norway, 86 and Slovenia, 83)
  - Reliability is the most important factor in the investment decisions followed by safety
  - Price and ease of operation are important but not crucial factors
  - Government should provide support for companies to invest in energy efficiency

2. Attitudes to Current labels

Household

Appliances

Property

Current Label
- Generally understandable and influences purchasing decision
- Label awareness high for appliances and property
- Labels considered to be open to manipulation

Transport

Current Label
- Generally understandable and influences purchasing decision
- Medium label awareness
- Labels considered to be open to manipulation

Services

Appliances

Current Label
- Informative, understandable and influential
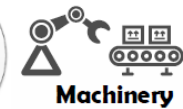
Property

Current Label
- Informative, understandable and influential
- Low shares aware of their current BER rating, but many properties bought or rented prior to...

Agriculture

Current Label
- There are no fuel efficiency labels for tractors
- A label similar to cars would be understandable and influential

Industry   **Machinery**

Current Label
- There are no fuel efficiency labels for machines
- Information provided in technical specifications is not clear

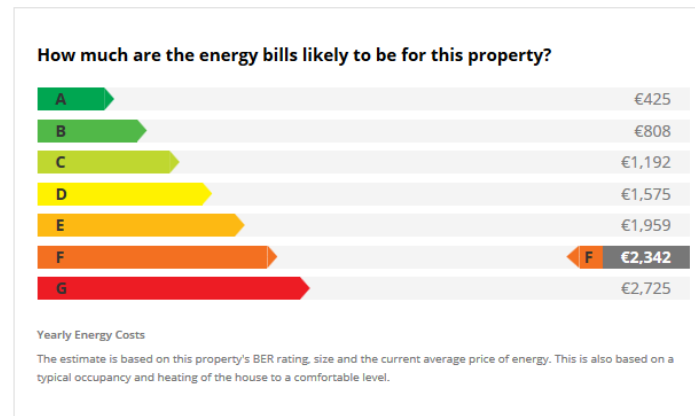# 3. Would energy information in monetary terms increase salience of EE?

- Survey results indicate illustrating monetary usage information:
  - may be more understandable
  - would make it easier to calculate running costs
  - Monetary info is more welcome in some countries than others

- CONSEED is currently examining the impact of monetary information on behaviour in two ways:
  - Randomised control trials
  - Discrete Choice Experiments

Randomised Controlled Trials

- Treatment = annual/10 year information in monetary terms

- Industry support
  - Daft.ie
  - Retailers
  - Volkswagen

Property

How much are the energy bills likely to be for this property?

A	€425
B	€808
C	€1,192
D	€1,575
E	€1,959
F	€2,342
G	€2,725

Yearly Energy Costs

The estimate is based on this property's BER rating, size and the current average price of energy. This is also based on a typical occupancy and heating of the house to a comfortable level.

Appliances

Ahorro energético durante la vida útil:

218,40€

27,30 €/kg

Estimaciones basadas en:
- Consumo energético del producto: 132 kWh/año
- Respecto a la lavadora con mayor consumo energético del mercado (252 kWh/año) de características similares (8 kg)
- Precio máximo de la electricidad: 0,182 €/kWh (año 2017)
- Vida útil: 10 años

Estimaciones realizadas por el BC3 (Basque Centre for Climate Change- Klima Aldaketa Ikergai)

bc³
BASQUE CENTRE
FOR CLIMATE CHANGE
Klima Aldaketa Ikergai

Transport

e-Golf

Driftskostnader per måned er anslått til:

1 370 kr

A B C D E F G

Basert på:
- Inkluderer energi, vedlikehold, service, dekkslitasje og årsavgift
- Strømpris på 1 kr per kWh
- EUs testprosedyre for beregning av energiforbruk (NEDC)
- Kjørelengde 15 000 km per år, dvs. 1250 km per måned
- Øvrige anslag fra IF Forsikring

daft.ie

Volkswagen

14/17

Discrete choice experiments

- Complementing the field trials
- Split sample
  - Property – Slovenia
  - Appliances – Greece
  - Transport – Norway
- Preliminary results:
  - Willingness to pay +20% Car Sales (Norway)
  - Willingness to pay +47% Property Sector (Slovenia)

Example

Next steps and Policy recommendations

- Pooling data, model validation, discount rates
- Analysis of existing policies
- Future recommendations

- **We want to make good and implementable recommendations!**
- What should we be considering?
- How can you help?

Keep in touch with CONSEED's progress

- Joint final conference here in Brussels
  - **July 2019** – CONSEED, PENNY and COBHAM (ERC project)
  - Keynote from Prof Robert Stavins (Harvard)

- www.conseedproject.eu - join our newsletter www.conseedproject.eu/contact
- @EneryWiseEU
- @conseedproject
- Factsheets

Discount rates

1. Direct question in the surveys:

- Imagine that you have the option of installing new advanced heating controls which will reduce your household's heating costs. The controls are an add-on to your existing system and will cost €400/€600/€800 including installation (which takes about 15 minutes). The controls will last for 20 years, but if you move, you can easily reinstall them in your new home.

- In order for you to commit to the €400/€600/€800 investment, what is the minimum you would need to save on heating costs per year? [open text]

- [open text] How did you arrive at this number?

2. DCEs and field trials