Green Week 2013
Air Quality and Domestic Heating
IRELAND: A clean airflow ….

….. and limited heavy industry

Enterprise by Sector in EU

Source: CSO 2012
NOx Annual Mean (2011)

SO2 Daily Limit Value (2011)

Cadmium Annual Mean (2011)
A different “driver” for Air Quality

• 20% Effort Sharing Decision

• 16% RES target
  ➢ 40% RES-E

2050 Energy Roadmap: Cost effective CO2 abatement requires electrification of heating and cooling
% Share of Irish Heating Market

2010
- Gas: 39%
- Oil: 41%
- Other: 4%
- Solid fuel: 11%
- Electricity: 5%

2005
- Gas: 28%
- Oil: 49%
- Other: 4%
- Solid fuel: 11%
- Electricity: 8%

Source: Central Statistics Office
Ireland (SEM) Generation Output (Apr 2013)

Source: Eirgrid 2013
Energy Storage is Key

Electric Car

- 10kWh
  - (75km per day)

Smart Water Heating

- 13kWh
  - (210l per day at 65°C)

Smart Space Heating

- 54kWh
  - (80m² home in winter)

Typical Energy Stored per Day
• Smart Electrical Thermal Storage
  – Supply controlled by Supply / Distribution company
  – Energy service level maintained for consumer
  – Pilot projects (Ireland (Dublin), UK (Shetland Islands)) underway
Ireland – Electric Vehicle National Charge points

- Public charge points
  - All towns with population of 1500+
  - National Plan 1000+
  - Approx 650 Installed to date
  - 90% of major towns and cities covered

- Fast Charge points every 60km on interurban routes
  - Original Plan 30
  - Installed approx 40 – plan up to 100

- Home/Workplace
  - First 2000 installed free
  - Over 500 installed to date
A Challenging Future

- Collateral benefit of decarbonising electricity is to drive all other emission reductions below current levels
- 2050 Roadmap vision of a decarbonised economy can be delivered cost effectively:
  - Decarbonise electricity, electrify economy
- The Challenge for delivery is policy coherence, not absence of technology
  - Key policy issue is current concept of energy efficiency
    - (1 kWh wind = 1 kWh coal)
      - Energy Efficiency Directive
      - Eco-design Directive
  - More fundamental is a sustainable investment environment