Air Pollution and Residential Solid Fuel Policy in Ireland

Working Group on Strategies and Review 56
22 - 25th May 2018
Ireland...the basic facts

- Population 4.7m
- Area 70,273 km
- Capital Dublin
- Electricity
  - 70% fossil fuel,
  - 23% wind
- Home heat - solid fuel
  - <5% energy demand
  - ~50% of PM$_{2.5}$
National Policy Context.

• No measured exceedances of EU clean air limits
  – General narrative ...air quality is good compared to other countries... policy perspective: ‘solved problem’

• However, perspectives are changing, informed by...
  – Better understanding of health impacts - media coverage
    • Quantitative estimates of health impacts (WHO/EEA)
    • Not just local issue but regional and global issue
    • Linked to climate change both policy/science levels
  – Reported exceedance WHO PM health based guidelines
  – Program to upscale monitoring & modelling
Impacts of Air Pollution in Ireland

• **Health Impacts**
  - Premature mortality (2013)
    - **1,600** in Ireland
      - ~1,500 particulate matter
      - ~100 NO₂ and Ozone
    - (~500,000 in EU)
  - Ill health
    - Reduced productivity
    - Increased medical intervention
    - Hospital admissions

• **Economic impacts**
  - ~1.3% GDP in Ireland
  - €2 bn per year
  - 382,000 workdays per year

Source: Air Quality in Europe 2016 (EEA), EU Clean Air Package Impact Assessment
Clean Air Strategy - Consultation

- Clean air vision
- Sectoral issues
  - Transport
  - Energy
  - Industry
  - Residential
  - Agriculture
- Air quality infrastructure
  - monitoring, modelling, research
- Communication and Awareness
Smoky Coal Ban in Dublin

- Severe smogs in Dublin 1980s
  - Breach (then) EEC black smoke limits
- Ban marketing, Dublin 1990
  - Promoted shift to cleaner fuels
  - Low cost to exchequer
  - Fuel poverty - social welfare payments
  - ~350 fewer deaths/year (Lancet 2002)
  - Extended Low Smoke Zones to major cities and towns

Dublin, 4pm November 1988.
Effect of ‘Smoky’ Coal Ban.

Black Smoke Concentrations 1985 - 2003

Source EPA SoE.
PM$_{2.5}$ outside Low Smoke Zones

- PM$_{2.5}$ up to 10 times higher during evening hours

(Source: EPA SAPPHIRE Project (UCC))
PM$_{2.5}$ trend - Gothenburg Protocol

- Power Stations
- Industrial
- Agriculture/Forestry/Fishing
- Transport
- Agriculture
- Residential & Commercial
- Other
- 2020 Reduction commitment
- 2030 Reduction commitment
Residential PM$_{2.5}$ by fuel, energy (2016)

99% emissions from 23% of energy

Fuel

Energy

Coal: 44%
Peat: 48%
Biomass: 1%
Oil & Gas: 7%

9% 10% 4%

77%
Residential sector

• Phase out coal - nationwide Low Smoke Zone
  – 12 month transition - Autumn 2018/19
  – Enforcement important
    • EPA Registration requirements
    • Auditing and labelling scheme

• Promoting cleaner alternatives
  – Links to national energy efficiency programmes
  – Promoting Ecodesign emission standards for stoves from 2019
Ambiguity over wood...

- Carbon ‘neutral’ under UNFCCC
  - Not pollution neutral!
- Renewable heat targets 2020/30
  - National support **excludes residential heat**
- Carbon tax - rebate for biomass blends
  - But only ‘low smoke’ blends
- Voluntary wood fuel quality standard
  - Promote greater uptake

Source EPA SoE.
...and peat
New Builds – no chimneys!
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Thank you for listening

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